Pivotal® CRM 6.0.13

Installation and Deployment Guide
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About This Guide

Scope

This guide provides information for planning the deployment of Pivotal CRM platform in a SQL Server or Oracle environment. This guide details system requirements and provides an overview of various deployment scenarios and associated tasks. This guide does not detail the procedure to migrate to Pivotal CRM 6.0.13 from a Pivotal r5.9 system. For more information about migration procedures, see the Pivotal CRM 6.0 Migration Guide. For more information about upgrade procedures such as applying 6.0.13, see the Pivotal CRM 6.0.13 Release Notes and Quick Reference.

Audience

This guide is written for system administrators and customization specialists responsible for installing Pivotal platform software.

Prerequisites

You should have experience installing and maintaining Microsoft BackOffice products, SharePoint Server, SQL Server, or Oracle database management systems for both Unicode and non-Unicode deployments. To administer Pivotal Packaged Client, you should also have experience in installing and maintaining Citrix XenServer and/or Microsoft Systems Management Server.

Pivotal Product Guides, Technical Support, and Education Services

You can access a wide variety of information about Aptean products, see the Aptean Web site.

Documentation updates, product guides, technical support and education services are available from the Aptean Customer Portal and Partner Portal. You will require a valid user name and password to access these sites. Contact SupportReadiness@aptean.com for logon information.


Contact the Aptean Education Services Group at http://www.aptean.com/en/Solutions/By-Product-Name-AZ/Pivotal-CRM/Services/Education.

Send questions, comments or suggestions related to documentation to Documentation@aptean.com
Introducing Pivotal CRM
Overview

The customizable, extensible Pivotal CRM platform is designed for flexibility. It is built using the .NET Framework and provides a client called Pivotal Client, for end user computers to access Pivotal CRM systems.

End users access Pivotal Client to work with Pivotal CRM applications. Pivotal Client has a rich user interface with navigation elements that provide easy access to user tasks and activities. Navigation can be customized to provide the user with contextual tasks. This provides easy access to tasks and activities that are performed frequently. End users can also use Pivotal Client to work with multiple Pivotal CRM systems.

The Pivotal platform also provides close data integration between Pivotal CRM applications and Microsoft Outlook. End users have access to the calendar, e-mail, and tasks stored in Microsoft Outlook, from within Pivotal Client.

The Pivotal platform also provides functionality that integrates with and leverages Microsoft’s SharePoint portal technology. With Pivotal Portal Resources 6.0.13, there is no need for end users to launch a separate browser window to view pages from the Web or from a SharePoint site. Using SharePoint Services 3.0, Standard or Enterprise Edition of Office SharePoint Server 2007, Microsoft SharePoint Foundation 2010, or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, you can design Portal pages that end users can work with from the Pivotal Client interface.

Pivotal CRM CRM Components

Following are the Pivotal CRM platform components that are mandatory:

- **Pivotal Client** (In a ClickOnce deployment)
- **CDC Software Smart Client Framework** (In a ClickOnce deployment)
- **Pivotal Business Server**
- **Pivotal SyncStream**
- **Pivotal Toolkit**
- **Pivotal License Management**
- **Pivotal Integration for Microsoft Outlook**

**Note:** This guide provides information about deploying Pivotal CRM platform components in a SQL Server or Oracle environment. Ensure that you apply all applicable service packs and patches for the version of SQL Server or Oracle that is used.
Introducing Pivotal CRM

Pivotal Client

Pivotal Client is the client component of Pivotal platform developed using the .NET Framework. Pivotal Client replaces the Windows Access and Active Access access methods of working with Pivotal CRM systems. With an interactive, rich and friendly user interface, Pivotal Client provides a flexible structure that can be tailored to meet a company’s business needs. Customizable navigation components enable you to work with new or existing information. Using Pivotal Client, you can access various Pivotal CRM applications for sales, service, marketing, and so on.

Pivotal Client can be deployed using the following methods:

- **ClickOnce Deployment**
  Microsoft’s ClickOnce technology is used to provide a simple initial download of the CDC Software Manager to client computers. The ClickOnce Deployment model of CDC Software Smart Client Framework provides a mechanism for end user initiated installation with minimal administrative intervention on client computers. For more information about Pivotal CRM’s ClickOnce Deployment, see *Pivotal CRM ClickOnce Deployment* on page 10-1.

  **Note:** ClickOnce deployment is not supported for mobile computers.

- **Packaged Client Deployment**
  Using Packaged Client Deployment, Pivotal Administrators can automate the installation of Pivotal Client in environments containing multiple client computers. In the Packaged Client Deployment method, a deployment server is not utilized, and the Pivotal Client application will not contact the SmartUpdater service. The Pivotal Client application will be installed in a shared area of a terminal server. Any changes to the Pivotal Client application will require a reinstallation of Pivotal Client. Alternatively, instead of Pivotal Client installed on a terminal server, a distribution server can be used to push Pivotal Client’s `.msi` installers to client computers. In this case, any updates will mean a reinstallation of Pivotal Client. For more information about Pivotal CRM’s Packaged Client Deployment, see *Pivotal CRM Packaged Client Deployment* on page 11-1.

  **Note:** A Pivotal CRM deployment can consist of client computers that use the ClickOnce deployment method, as well as client computers that use the Packaged Client deployment method. Both types of client computers can connect to the same Pivotal Business Server computer in a deployment. However, both deployment methods cannot exist on the same client computer.
Introducing Pivotal CRM

CDC Software Smart Client Framework

Microsoft's ClickOnce technology is used to provide a simple initial download of the CDC Software Manager to client computers. After the simple deployment initialization, the CDC Software Smart Client Framework is utilized to provide a complete, managed, download and update service for the Pivotal CRM 6.0 platform.

Pivotal Business Server

Pivotal Business Server is the middle-tier service for the Pivotal Platform. It provides a business logic execution context and data retrieval services for Pivotal CRM applications.

Pivotal SyncStream

Pivotal SyncStream provides applications and services for synchronizing data between the master, satellite, and mobile Pivotal systems. Use SyncStream to apply your customization changes to the Offline System, and upgrade the Production System from the Offline System.

Even if you do not plan to deploy satellite or mobile systems, use SyncStream to install the Active Notification Manager (ANM) and the Pivotal Administration Console. You can also use Pivotal Administration Console to backup and restore your Pivotal CRM applications, add users, assign user security, and administer licensing.

Pivotal Toolkit

Pivotal Toolkit is a set of utilities designed to customize and extend the functionality of Pivotal CRM applications.

Toolkit enables definition and customization of the structure of Pivotal databases, client and server-side business logic. Use the Toolkit to define and customize the Pivotal Client end user interfaces.

Toolkit components include:

- Customization Module
  The Customization Module is a set of tools and utilities used to modify Pivotal applications.

- Pivotal OLE Control Extension (OCX)
  Pivotal OCX is used to export data to, or import data from, third-party applications that are written in VB or C++. Pivotal OCX also ensures that all data synchronization tasks are performed when data is modified by third-party applications.

Installing Toolkit also installs Visual Studio 2010 Isolated Shell which is required for designing Pivotal Client forms. For more information about using Toolkit, see the Pivotal Toolkit 6.0.13 Toolkit Guide.
Pivotal License Management

The Pivotal platform enforces license management. Only named and activated users are granted access to Pivotal CRM systems. Licensing is administered from the administrative computer.

A license file added to the Pivotal CRM system is used to track the number of available licenses that can be assigned or unassigned. For more information about licensing, see Setting up License Management on page 6-1.

Pivotal Integration for Microsoft Outlook

Pivotal Integration 6.0 for Microsoft Outlook provides a seamless integration between Pivotal CRM and Microsoft Outlook. Pivotal Integration 6.0 for Microsoft Outlook also enables you to use the Outlook/Lotus Notes interface to perform the following activities from Pivotal CRM:

- Create, send, and view Pivotal CRM e-mail messages.
- Link e-mail messages (with or without attachments), tasks, and appointments to relevant records in Pivotal CRM.
- Schedule, modify, and view Pivotal CRM meetings.
- Create, modify, assign, and view Pivotal CRM tasks.
- Create, view, and modify Pivotal CRM Contacts.

Pivotal Integration 6.0 for Microsoft Outlook can be deployed through the ClickOnce as well as the Packaged Client Deployment methods. For more information about ClickOnce Deployment, see Pivotal CRM ClickOnce Deployment on page 10-1. For more information about Packaged Client Deployment, see Pivotal CRM Packaged Client Deployment on page 11-1.

Pivotal Integration 6.0 for Microsoft Outlook supports Microsoft 2007, and 2010/Lotus Notes 8.5. Mobile users can use the integration functionality when working in the offline mode with Outlook/Lotus Notes and Pivotal Client. For more information about installation, deployment, and customization of Pivotal Integration for Lotus Notes, see Administering Pivotal Integration for Lotus Notes, How To Series.

Additional Pivotal Platform Components

The Pivotal platform also includes the following components:

- Pivotal Portal Resources
- Pivotal Research Services
- Pivotal Diagnostics
- Pivotal Web Services Generator
- Pivotal Synchronization Service for Microsoft Exchange
- Pivotal Driver for Crystal Reports
Pivotal Portal Resources

Create and design portal pages on a SharePoint server using a SharePoint server with Microsoft Windows SharePoint Services 3.0 Service Pack 2, or the Enterprise Edition of Office SharePoint Server 2007 Service Pack 2 or Service Pack 3, Microsoft SharePoint Foundation 2010 Service Pack 1, or Microsoft SharePoint Server 2010 Enterprise Edition Service Pack 1 and Pivotal Portal Resources 6.0.13. End users work with the displayed portal pages from within the Pivotal Client interface. A Portal page consists of many web parts that you can use to display information. Pivotal Portal Resources allows you to use Portal pages to display information from your Pivotal CRM system such as search results lists, or Web pages that you need to access frequently within Pivotal Client. For more information about working with Pivotal Portal Resources, see Chapter 12, *Installing and Working with Pivotal Portal Resources*.

Pivotal Research Services

Research Services provides Microsoft Office users with the ability to quickly access Pivotal CRM information from Microsoft Office applications. This information is displayed in the Research pane of Microsoft Office. Use Pivotal Research Services 6.0 to:

- View Pivotal CRM data from within the Microsoft Office suite of products.
- Insert Pivotal CRM data into your Office document or copy it to the clipboard.
- Open the Web site of a company displayed in the Research pane in the default browser.
- Compose an e-mail message to the contact displayed in the Research pane using Microsoft Outlook.

For more information about installing and configuring Research Services, see *Installing and Configuring Pivotal Research Services* on page 14-1.

Pivotal Diagnostics

Pivotal Diagnostics is a feature used to identify performance issues related to Pivotal Client. This utility allows you to determine which part of your system is causing performance slowdown of Pivotal Client. There could be various causes for the slowdown such as slow processors in your servers, extensive customization of the system, or slow network bandwidth.

The Diagnostics toolbar button is available in Pivotal Client if it has been configured. Users can run the tests on their systems and then mail the results to the system administrator. The system administrator
can analyze the report, understand the duration of the various operations and determine the action to be taken to improve performance.

For more information about working with Pivotal Diagnostics, see the Pivotal Client 6.0.13 Online Help.

### Enabling Pivotal Diagnostics Toolbar buttons

By default, the Diagnostics button is not available in Pivotal Client. Do the following to enable the toolbar buttons on the Pivotal Client computer:

- Edit the iafConfig.xml file
- Start Pivotal Client

#### To edit the iafConfig.xml file

1. On the Pivotal Client computer, browse to the following location based on your deployment
   - For ClickOnce deployment
     ```bash
     ..\Program Files\CDC Software\SmartUpdater\40\Instances\PivotalClient\6.0.13.0\IafConfig.xml.
     ```
     - To enable diagnostics for all users
     - To enable diagnostics for single ClickOnce user
     ```bash
     %userprofile%\AppData\Local\CDC Software\SmartClient\<PivotalClient.ServerName>\exe\IafConfig.xml
     ```
     - For Package Client deployment
     ```bash
     ..\Program\Files\CDCSoftware\PivotalClient\PivotalClient.PerMachine\exe\IafConfig.xml
     ```
   
2. Right-click iafConfig.xml, point to Open With and then click Notepad.

3. In the IafConfig.xml file, locate the following node:
   ```xml
   <WorkbenchAddin name="Toolbar"
   ```

4. Add the attribute `diagnostics="true"` within the node
   ```xml
   </WorkbenchAddin name="Toolbar">
   ```
   as shown in Figure 1-1 on page 1-8.

5. Click File and then click Save to save the edited IafConfig.xml file.

The Diagnostics button can be enabled for all users at a time or on a per user basis.
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To enable diagnostics for all users

>> Edit the IafConfig.xml file on the deployment server.

To enable diagnostics per user

>> Edit the IafConfig.xml file on each user computer.

To start Pivotal Client

1  Click Start, point to All Programs.
2  Select CDC Software, Pivotal CRM and then click Pivotal CRM.
This starts Pivotal Client.
Verify if the Diagnostics toolbar button is available in Pivotal Client.

Pivotal Web Services Generator

Pivotal Web Services Generator is a .NET application that allows customizers and administrators to generate custom Web Services to access Pivotal Data. Pivotal Web Services provides a standard means of interoperability between Pivotal and third party systems. Other systems interact with generated Web Services using standard protocols such as SOAP, HTTP, and HTTPS. For more information about installing and deploying Pivotal Web Services Generator, see Pivotal Web Services 6.0 Installation and Deployment Guide.

Pivotal Synchronization Service for Microsoft Exchange

Using the Pivotal Synchronization Service for Microsoft Exchange, you can make changes to Outlook meetings or tasks using an application such as Microsoft Outlook Web Access (OWA) and have the changes synchronized to Pivotal CRM. For more information, see Installing Pivotal Synchronization Service 6.0 for Microsoft Exchange on page 13-1.
Pivotal Driver for Crystal Reports

If Crystal Reports and Pivotal Driver for Crystal Reports are installed on client computers, end users can design and work with Pivotal CRM reports using Pivotal Client.

Downloading Software for Pivotal CRM Platform

Software for installing components of the Pivotal platform is delivered as zip files. Download the zip files from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the zip files available for download and contents of the various zip files see, Contents of Installation Zip Files on page A-1.

Understanding Pivotal CRM Platform Architecture

The Pivotal CRM platform uses a three-tier architecture that consists of a data layer, business logic layer, and a presentation layer.

Figure 1-2 on page 1-10 shows the three-tier software architecture of the Pivotal platform.
Introducing Pivotal CRM

Client Tier

The client tier includes the CDC Software Smart Client Framework, Pivotal Client, Pivotal Integration 6.0 for Microsoft Outlook, and Pivotal Research Services. Users can access or modify organizational data using the rich user interface of Pivotal Client. The client tier uses Pivotal Client Tasks to implement business logic. The client leverages the Composite Application Blocks technology from Microsoft to enable quick and easy installation and upgrades.

Server Tier

The server tier or middle tier is responsible for retrieving and saving data for the Pivotal CRM system. The Pivotal Business Server is at the core of the server tier and is responsible for user authentication, and user authorization. A part of the server tier, known as the business logic layer uses Server Tasks for executing business logic. The Pivotal Business Server is responsible for running the business logic that is appropriate for any specific activity. The business logic layer or middle tier connects to the SQL Server or the Oracle server in order to retrieve or save data. The middle tier uses Microsoft Internet Information Service (IIS), COM+, MS DTC, ADO, OLE DB, and
ADO.NET. On the server tier, the business logic layer with the server tasks, is built on top of the enabling foundation of the Pivotal Business Server. Pivotal Client uses the Pivotal Business Server's client-side server proxy to access Pivotal Business Server services.

Data Tier

The data tier consists of the Enterprise Data and the Business Module databases. The Enterprise Data stores all the organizational data. The Business Module database contains the Enterprise Data schema definition, system business logic, and group security. You can customize the Business Module database to suit various business requirements. For more information about customizing the Business Module database, see the *Pivotal Toolkit 6.0.13 Toolkit Guide*.

Note: Pivotal Toolkit does not connect to the Pivotal Business Server.

Pivotal CRM Systems

When you plan a Pivotal Platform deployment, depending on your requirements, create some or all the following systems. Each system contains the Business Module and Enterprise Data databases and a FilePath. The various systems are:

- In the production environment:
  - master system
  - satellite system (optional)
  - mobile system (optional)
- In the customization environment:
  - Offline System
  - Customization System
- In the development environment:
  - Development System
  - Development Offline System
  - Development Customization System

The various environments and systems are detailed in this section.

Production Environment

The production environment consists of the master, satellite, and mobile live systems. Live systems are systems that Pivotal CRM users access and modify on an on-going basis. Live systems contain both the customized Business Module and the current Enterprise Data.
Master System

The master system is the primary Pivotal CRM system and is required for any Platform deployment. Satellite and mobile systems can be connected to the master system. The master system is considered as the parent system for connected satellite or mobile systems. In any deployment, there can be only one master system and this master system cannot have a parent system.

The master system consists of the Production Business Module database, Production Enterprise Data database, and the Production FilePath. Set up and configure the master system before configuring any other systems. The data in the Production Business Module database and Production Enterprise Data database is replicated to the satellites and mobiles that are connected to the master system.

Satellite Systems

Satellite systems allow geographical dispersion of data to remote offices. Satellite systems can also be used as a means of local load balancing. A satellite system is installed at a satellite location or at a remote office that is connected either continuously or intermittently via Internet to a master system. The data on a satellite system can be an exact replica, or a subset of the data on the parent master system. A satellite system has the same software architecture as the master system. A satellite system in turn, can be a parent to other connected child satellite and mobile systems. Satellites are child systems, capable of acting as a parent system for other satellites, and for mobile systems.

Mobile Systems

Mobile systems contain a subset of the master or satellite system’s data and can operate without a network connection to a satellite or master system. Mobile systems synchronize when a network connection to a parent system is available. The mobile system receives and sends data changes by connecting to the parent system. Mobile systems are usually installed on laptop computers or other stand-alone computers. The mobile computer also contains software applications to run Pivotal Client when disconnected from the organization’s network.

The subset of data on the mobile system is determined by the user’s data filters. The mobile system does not replicate to other systems and cannot be a parent to another satellite or mobile system.

Note: In this guide, the term Production System is used to indicate the master system in a production environment.
Master and satellite systems use the same SyncStream software components, which are distributed among several computers:

- Active Notification Manager (ANM)
- Data Synchronization Manager (DSM)
- SyncStream Database
- HTTP Message Server
- Administrative Computer

**Customization Environment**

A customization environment consists of an Offline System and a Customization System. A customization environment is for customization specialists. Regular users do not need to access or use the customization environment.

**Offline System**

An Offline System is a copy of the Production System. However, the Enterprise Data of the Offline System can be a subset of the Enterprise Data of the Production System. Use the Offline System to test changes made in the Customization System before upgrading changes to the Production System.

**Customization System**

The Customization System consists of the Offline Business Module database and a Customization Module database. The Offline Business Module database is the Enterprise Data in a Customization System. *Figure 1-3* on page 1-13 shows the relationship between a Customization System and an Offline System.
In the customization environment, make customization changes to the Offline Business Module database. Verify all changes in the Offline System and use the Pivotal Administration Console to execute the **Upgrade From Offline System** command. This replicates changes from the Offline Business Module to the Production Business Module.

**Note:** Before performing an Upgrade from Offline System, you should have created the PivotalCRMUsers and PivotalCRMAdmin groups.

For more information about the Offline System and Customization System, see the *Pivotal Toolkit 6.0.13 Toolkit Guide*.

**Development Environment**

A development environment consists of a Development System, Development Offline System, and a Development Customization System.

The Development System supports satellite and mobile systems. The Development System functions the same way as the master system in a production environment. The advantage of a development environment is that it allows you to test customization changes and also upgrade changes that affect satellite and mobile systems on an on-going basis before you upgrade the Production System. However, the Development System is physically located on separate hardware, and possibly on a different network domain, to ensure that it does not interfere with the synchronization stream of the Production System.

The Development Customization System in a development environment is created by pairing the data sources of the Development Customization Module and the Development Offline Business Module.

The development environment requires additional hardware. However, the cost involved is justified if you customize CRM software on an ongoing basis, and have satellite and mobile systems in your deployment. If you do not plan to deploy satellite or mobile systems, the customization environment is sufficient. *Table 1-1* on page 1-15 summarizes the systems and their purpose in a development environment.
### Table 1-1 Systems in a development environment

<table>
<thead>
<tr>
<th>Property</th>
<th>Development System</th>
<th>Development Offline System</th>
<th>Development Customization System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To verify customization changes that affect satellite and mobile systems before upgrading the Production System.</td>
<td>To verify changes made in the Development Customization System.</td>
<td>To customize and test changes on an on-going basis without disruption to the synchronization stream of the Production System.</td>
</tr>
<tr>
<td>Mirror copy of</td>
<td>Production System (master system in a production environment)</td>
<td>Development System</td>
<td>Customization System</td>
</tr>
<tr>
<td>Enterprise Data</td>
<td>Development Enterprise Data</td>
<td>Development Offline Enterprise Data (copy of the Development Enterprise Data)</td>
<td>Development Offline Business Module</td>
</tr>
</tbody>
</table>
Deployment Scenarios and Tasks
Overview

This chapter outlines a few deployment scenarios and lists the Pivotal software required for each deployment. Additionally, this chapter provides information about the main tasks to be performed for each deployment scenario.

Each type of deployment will require different servers.

The various deployment scenarios detailed in this section are:

- Deploying master systems
- Deploying master and satellite systems
- Deploying master, satellite, and mobile systems

All tasks detailed in this section apply to both Unicode and non-Unicode deployments. For detailed information about installation and any additional or prerequisite procedures, see the referenced sections. This chapter does not provide information about migrating from earlier versions. For more information about migration-specific tasks, see the Pivotal CRM 6.0.13 Migration Guide.

This chapter does not provide information about upgrading Pivotal CRM by applying 6.0.13. For more information about upgrade-specific tasks, see the Pivotal CRM 6.0.13 Release Notes and Quick Reference.

Note: Download installation files for Pivotal software from the Product Downloads area in the Aptean Customer or Partner Portals. For more information, see Contents of Installation Zip Files on page A-1.

Recommendations

1. It is recommended that you maintain separate servers as follows:
   - Deployment server (required to deploy Pivotal Client using the ClickOnce Deployment method)
   - OR-
     Any one of Distribution server, Terminal server, and Citrix server (required to deploy Pivotal Client using the Pivotal Packaged Client Deployment method)
   - Pivotal Synchronization Service for Microsoft Exchange Server
   - Microsoft Exchange Server

2. It is recommended that you use a separate server as the Pivotal Synchronization Service for Microsoft Exchange Server. However, depending on the number of Exchange users that require synchronization, you could install Business Server on the same server as the Pivotal Synchronization Service for Microsoft Exchange Server.
Deploying Master Systems

This section lists the software required to deploy a master system. Depending on the size of your organization you may need to run multiple servers.

To deploy a master system, you need:

- Administrative computer
- Pivotal Business Server
- Deployment server (required to deploy Pivotal Client using the ClickOnce Deployment method)
  - OR -
  - Any one of Distribution server, Terminal server, and Citrix server (required to deploy Pivotal Client using the Pivotal Packaged Client Deployment method)
- Microsoft Exchange Server/Lotus Domino for Pivotal Integration with Microsoft Outlook
- Pivotal Synchronization Service for Microsoft Exchange server
- ANM server
- SharePoint server for Windows SharePoint
- SQL Server or Oracle server

*Figure 2-1 on page 2-4 illustrates a master system deployment.*
Deployment Scenarios and Tasks

Figure 2-1 Deploying Pivotal CRM in a master environment

**Note:** Depending on your deployment plan and requirements, you can combine more than one server on a single computer. It is recommended to have a separate deployment server. If you have a development or testing environment, maintain a dedicated deployment server for each.

*Table 2-1* on page 2-5 lists the main installation tasks to deploy Pivotal CRM in a master environment.
### Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANM server</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add the PCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log on as the PCS user, install and configure the ANM Service.</td>
<td>Pivotal SyncStream 6.0.13 - Server Component</td>
<td>PSS6.0.13.zip</td>
<td>If you have a separate ANM server, also register the ANM server for the master environment on the administration computer.</td>
</tr>
<tr>
<td><strong>SQL Server</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>On SQL Server 2005, apply Service Pack 4. On SQL Server 2008, apply Service Pack 3. On SQL Server 2008 R2 Service Pack 1 Also configure the Microsoft Distributed Transaction Coordinator.</td>
<td></td>
<td></td>
<td>For more information about configuring the Microsoft Distributed Transaction Coordinator, see Configuring the Microsoft Distributed Transaction Coordinator on page 7-16.</td>
</tr>
<tr>
<td></td>
<td>Create PivotalCRMAdmin and PivotalCRMUser groups.</td>
<td></td>
<td></td>
<td>Setting up Microsoft SQL Server on page 3-6.</td>
</tr>
<tr>
<td><strong>Oracle server</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create PivotalCRMAdmin and PivotalCRMUser groups. Create PCS and PBS users.</td>
<td>install.sql</td>
<td>TK6.0.13.zip</td>
<td>Setting up the Oracle Database Instance on page 3-16.</td>
</tr>
<tr>
<td></td>
<td>Set up Oracle Database schema and grant necessary permissions.</td>
<td>install.sql</td>
<td>TK6.0.13.zip</td>
<td></td>
</tr>
<tr>
<td><strong>Administration computer</strong></td>
<td>Install Pivotal Administration Console.</td>
<td>Pivotal SyncStream 6.0.13 - Desktop Components</td>
<td>PSS6.0.13.zip</td>
<td>Installing Pivotal Administration Console on page 4-2</td>
</tr>
</tbody>
</table>
### Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment 1 (Continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Add the PCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set up ODBC connections for the Production, Offline, and Customization Systems.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td><strong>Note:</strong> In synchronization environment, if you do not have a dedicated administration computer, use the DSM server as the administration computer. Creating ODBC Connections on page 7-13</td>
</tr>
<tr>
<td></td>
<td>Install Pivotal Toolkit.</td>
<td>Pivotal Toolkit 6.0.13</td>
<td>TK6.0.13.zip</td>
<td>Installing Pivotal Toolkit on page 5-1</td>
</tr>
<tr>
<td></td>
<td>Install a CRM Application such as Pivotal CMS.</td>
<td>Pivotal CMS</td>
<td>CMS605.zip</td>
<td>Pivotal CMS 6.0.5 Release Notes</td>
</tr>
<tr>
<td></td>
<td>Create the Production, Offline, and Customization Systems. In an Oracle environment additional settings are required, such as specifying the username and password. Specify the FilePath folder.</td>
<td>Pivotal System Manager</td>
<td>PSS6.0.13.zip</td>
<td>Defining Pivotal CRM Systems on page 4-7</td>
</tr>
<tr>
<td></td>
<td>Use the <strong>Restore System</strong> command and restore the Business Module, Enterprise Data .rdf files for the Production System.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Restoring RDF Files and Portal Pages on page 4-9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CMS605.zip for the *.rdf files.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set up the Offline System.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Pivotal Toolkit 6.0.13 Toolkit Guide</td>
</tr>
<tr>
<td></td>
<td>Specify the Pivotal Business Server computer name and the Portal Server details for the Production and Offline Systems.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Pivotal SyncStream 6.0.13 Pivotal Administration Console Help</td>
</tr>
<tr>
<td></td>
<td><strong>Restore TK r6.0.13 - Customization Module.rdf</strong></td>
<td>Pivotal Administration Console</td>
<td>TK6.0.13.zip for the TK r6.0.13 - Customization Module.rdf</td>
<td>Restoring the Customization Module on page 5-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set Table Permissions</td>
<td>Pivotal Toolkit</td>
<td>Not Applicable</td>
<td>Setting Table Permissions on page 5-5</td>
</tr>
</tbody>
</table>

(Sheet 2 of 7)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Set option for Pivotal Integration 6.0 for Microsoft Outlook</td>
<td>Pivotal Toolkit</td>
<td>Not Applicable</td>
<td>Setting Mandatory Interaction Extension Form Options on page 5-5 and Pivotal Toolkit 6.0.13 Toolkit Guide</td>
</tr>
<tr>
<td></td>
<td>Import Language Dictionary Strings</td>
<td>Pivotal Toolkit</td>
<td>TK6.0.13.zip</td>
<td>Importing Language Dictionary Strings on page 5-6</td>
</tr>
<tr>
<td></td>
<td>Apply Customization Changes to the Offline System</td>
<td>Pivotal Administration Console</td>
<td></td>
<td>Applying Customization Changes on page 5-6</td>
</tr>
<tr>
<td></td>
<td>Upgrade from Offline</td>
<td>Pivotal Administration Console</td>
<td></td>
<td>Upgrading from Offline on page 5-6</td>
</tr>
<tr>
<td></td>
<td>Generate the locking code and request for a Production license file</td>
<td>Pivotal SyncStream 6.0.13- Desktop Components</td>
<td>PSS6.0.13.zip</td>
<td>Generating the Locking Code on page 6-4 and Requesting a Production License File on page 6-4</td>
</tr>
<tr>
<td></td>
<td>Install licenses for the Production and Offline Systems.</td>
<td>Pivotal Administration Console</td>
<td></td>
<td>Setting up License Management on page 6-1</td>
</tr>
<tr>
<td></td>
<td>Add users to the Pivotal CRM system, grant security permissions to</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Adding Users to the Pivotal CRM System on page 4-12, Granting Security Permissions to Users on page 4-13</td>
</tr>
<tr>
<td></td>
<td>Assign user licenses.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Assigning Licenses on page 6-7</td>
</tr>
</tbody>
</table>

(Sheet 3 of 7)
### Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment (Continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Business Server</td>
<td>Add the PBS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Preliminary Tasks on page 7-6</td>
</tr>
<tr>
<td></td>
<td>Configure Pivotal Business Server:</td>
<td></td>
<td>PBS6.0.13.zip</td>
<td>Configuring Pivotal Business Server on page 7-12</td>
</tr>
<tr>
<td></td>
<td>• Specify a user account.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Create ODBC connections.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Define a target system.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Configure the Microsoft Distributed Transaction Coordinator.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Configure Scheduled Tasks (required only if there are scheduled tasks to run.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Deployment server | Set the ASP .NET v 4.0 Web Service Extension to allowed in the Internet Information Services (IIS) Manager. | Not Applicable | Not Applicable | It is recommended to have a separate deployment server. If you have a development or testing environment, maintain a dedicated deployment server for each environment.  
**Note:** Deployment server is not required if you are planning to deploy Pivotal Client using the Packaged Client Deployment method. |
## Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment ¹ (Continued)

|-----------------|------|---------------------------|----------|------------------|
|                 | Install CDC Software Smart Client Framework. | CDC Software Smart Client Framework | SCF4.0.4.33.zip | Install .NET Framework 4  
**Note:** Close Microsoft Outlook before installing CDC Software Smart Client Framework, Pivotal Client, and Pivotal Integration 6.0 for Microsoft Outlook. |
|                 | Install Pivotal Client. | Pivotal Client | PC6.0.13.zip | Installing Pivotal Client on the Deployment Server on page 10-13 |
|                 | Install Pivotal Integration 6.0 for Microsoft Outlook. | Pivotal Integration 6.0 for Microsoft Outlook | PIMO6.0.13.zip | Installing Pivotal Integration 6.0 for Microsoft Outlook on the Deployment Server on page 10-16 |
|                 | Configure the deployment server. | Not Applicable | Not Applicable | This is optional and required only if multiple Pivotal CRM systems are defined.  
Adding Multiple Environments on page 10-21 |
| SharePoint server | Install and configure Windows SharePoint. | Not Applicable | Not Applicable | Installing, Setting Up, and Configuring the SharePoint Server on page 12-4 |
|                 | Use SharePoint Products and Technologies Configuration Wizard. | Not Applicable | Not Applicable | Installing, Setting Up, and Configuring the SharePoint Server on page 12-4 |
|                 | Install Pivotal Portal Resources. | Pivotal Portal Resources | PortalResources6.0.13.zip | Installing, Setting Up, and Configuring the SharePoint Server on page 12-4 |
|                 | Specify and set up Portal pages for Pivotal Client. | Not Applicable | Not Applicable | Installing, Setting Up, and Configuring the SharePoint Server on page 12-4 |

(Sheet 5 of 7)
### Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment (Continued)

|------------------------------------------|----------------------------------------------------------------------|------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------|
Pivotal Administration Console  
CMS 6.0.5 for the out-of-the-box Portal page file | TK6.0.13.zip  
PS6.0.13.zip  
CMS605.zip | Working with Portal Pages on page 12-20  
Pivotal CMS 6.0.5 Release Notes  
For more information about specifying Pivotal Portal pages, creating commands, and granting security permissions, see the Pivotal Toolkit 6.0.13 Toolkit Guide. |
|                                          | Specify configuration settings for:  
• Exchange Server  
• Pivotal Synchronization Service for Microsoft Exchange  
• Customization  
• Pivotal Administration Console | Not Applicable | Not Applicable | Specifying Configuration Settings on page 13-3  
**Note:** These tasks are to be done on the computers where the respective components are installed. |

(Sheet 6 of 7)
### Table 2-1 Installation tasks to deploy Pivotal CRM in a master environment (Continued)

|-----------------|----------------------------------------------------------------------|---------------------------|-----------------------|--------------------------------------------------------|
| Client computers| Install Pivotal CRM 6.0.10 Prerequisites or later

**Warning:** This is a mandatory step: before end users install Pivotal CRM, you (deployment administrator) must install all prerequisites on the client computer using the Pivotal CRM 6.0.10 Prerequisites or later installer.

<table>
<thead>
<tr>
<th>Client computers</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR For a Packaged Client deployment, install Pivotal Packaged Client 6.0.13</td>
<td>PivotalPackagedClient6.0.13.zip</td>
</tr>
<tr>
<td>OR For a ClickOnce deployment, send the URL of the CDC Software Manager Client Install Web page to end users.</td>
<td>Preliminary Steps on page 10-41</td>
</tr>
<tr>
<td>OR For a ClickOnce deployment, close the e-mail client.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>OR For a ClickOnce deployment, go to the CDC Software Manager Client Install Web page and install the CDC Software Manager and Pivotal CRM.</td>
<td>Installing Pivotal CRM on Client Computers: End User Tasks on page 10-46</td>
</tr>
<tr>
<td>Install Pivotal Driver for Crystal Reports</td>
<td>Pivotal CRM 6.0.10 Prerequisites</td>
</tr>
</tbody>
</table>

---

1. Before executing the tasks in the order suggested, take into consideration your deployment scenario and any other factors that could influence your deployment.

### Deploying Master and Satellite Systems

This section lists the software required to deploy a master and satellite system.
To deploy a satellite system, you need:

- Administrative Computer
- SQL Server or Oracle server
- HTTP message server
- ANM server
- DSM server
- Pivotal Business Server
- Deployment server (required to deploy Pivotal Client using the ClickOnce Deployment method)
  - OR -
  Any one of Distribution server, Terminal server, and Citrix server (required to deploy Pivotal Client using the Pivotal Packaged Client Deployment method)
- Microsoft Exchange Server
- Pivotal Synchronization Service for Microsoft Exchange Server
- SharePoint server for Microsoft SharePoint Services 3.0

Depending on the size of your organization, you may require multiple servers. *Figure 2-2* on page 2-13 illustrates the deployment of master and satellite systems.
Deployment Scenarios and Tasks

Figure 2-2 Deploying Pivotal CRM in a master and satellite system

Note: Depending on your deployment plan and requirements, you can combine more than one server on a single computer. It is recommended to have a separate deployment server. If you have a development or testing environment, maintain a dedicated deployment server for each environment.

Complete tasks listed in Table 2-2 on page 2-14 and Table 2-3 on page 2-15 for the master and satellite environments.
### Table 2-2 Installation tasks for the master environment when there is a satellite system

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DSM server</td>
<td>Add the PCS user to the local Administrators group.</td>
<td></td>
<td></td>
<td>You can perform the tasks listed for the administration computer in the master environment on the DSM server of the master system. If you require a separate administration computer, then register the master DSM and ANM servers using Pivotal Administration Console on the administration computer.</td>
</tr>
<tr>
<td></td>
<td>Set up ODBC connections for the Production, Offline, and Customization Systems.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Note: In synchronization environment, if you do not have a dedicated administration computer, use the DSM server as the administration computer. Creating ODBC Connections on page 7-13</td>
</tr>
<tr>
<td></td>
<td>Log on as the PCS user, install and configure DSM service.</td>
<td>Pivotal SyncStream 6.0.13 Server Components option</td>
<td>PSS6.0.13.zip</td>
<td>Installing and Configuring the DSM Service on page 9-6</td>
</tr>
<tr>
<td></td>
<td>Create mailbox for the PCS user. (This is optional.)</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>HTTP Message Server</td>
<td>Add the PCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Log on as the PCS user, install and register the HTTP Server.</td>
<td>Pivotal SyncStream 6.0.13 - Server Components</td>
<td>PSS6.0.13.zip</td>
<td>Installing and Configuring the HTTP Message Server on page 8-12</td>
</tr>
<tr>
<td>Administration computer</td>
<td>On the master system's SQL Server or Oracle server: create the SyncStream database.</td>
<td>Add the SatellitePCS user to the master system.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
</tr>
<tr>
<td></td>
<td>Specify the SatellitePCS user properties.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>To specify SatellitePCS user properties on page 9-17</td>
</tr>
<tr>
<td></td>
<td>Assign licenses to the satellite users.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Setting up License Management on page 6-1</td>
</tr>
</tbody>
</table>

1. Before executing the tasks in the order suggested, take into consideration your deployment scenario, and any other factors that could influence your deployment.
**Note:** For the satellite system, it is recommended that you do not use the SharePoint Server of the master system. If you set up a separate SharePoint server for the satellite system, also set up a separate deployment server for the satellite system. However, if performance is not an issue, you can use the SharePoint Server of the master system for the satellite system. In such a scenario, there is no need for a separate deployment server for the satellite system.

Table 2-3 Installation tasks in a satellite environment

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Tasks</th>
<th>Pivotal Software Required</th>
<th>Zip File</th>
<th>More information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANM server</td>
<td>Add the SatellitePCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Log on as the SatellitePCS user, install and configure the ANM service.</td>
<td>Pivotal SyncStream 6.0.13 -Server Components</td>
<td>PSS6.0.13.zip</td>
<td>Installing and Configuring the ANM Service on page 9-5</td>
</tr>
<tr>
<td>DSM server</td>
<td>Add the SatellitePCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Log on as the SatellitePCS user, install and configure DSM service.</td>
<td>Pivotal SyncStream 6.0.13 Server Components</td>
<td>PSS6.0.13.zip</td>
<td>Installing and Configuring the DSM Service on page 9-6</td>
</tr>
<tr>
<td></td>
<td>Create and define the satellite system.</td>
<td>Pivotal System Manager</td>
<td>PSS6.0.13.zip</td>
<td>Defining the Satellite System on page 9-12</td>
</tr>
<tr>
<td></td>
<td>After you create and define the satellite system on the DSM server, set the ANM server and specify the FilePath folder using the Pivotal Administration Console.</td>
<td></td>
<td></td>
<td>Specifying the ANM Server for the Satellite System on page 9-13</td>
</tr>
<tr>
<td></td>
<td>Create mailbox for the SatellitePCS user. (This is optional.)</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Computer/Server</td>
<td>Tasks</td>
<td>Pivotal Software Required</td>
<td>Zip File</td>
<td>More information</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>--------------------------</td>
<td>----------</td>
<td>------------------</td>
</tr>
<tr>
<td>HTTP Message Server (optional)</td>
<td>Add the SatellitePCS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Log on as the SatellitePCS user, install and register the HTTP Server.</td>
<td>Pivotal SyncStream 6.0.13 Server Components</td>
<td>PS6.0.13.zip</td>
<td>Installing the HTTP Message Server on page 9-6</td>
</tr>
<tr>
<td>SQL Server</td>
<td>Create empty SQL Server databases Grant SQL Server permissions.</td>
<td></td>
<td></td>
<td>Setting up Microsoft SQL Server on page 3-6 and Creating Empty SQL Server Databases on page 3-6.</td>
</tr>
<tr>
<td>Oracle server for the satellite environment</td>
<td>Create the SatellitePCS user.</td>
<td>install.sql</td>
<td>TK6.0.13.zip</td>
<td>Setting up the Oracle Database Instance on page 3-16.</td>
</tr>
<tr>
<td></td>
<td>Set up Oracle database schema.</td>
<td>install.sql</td>
<td>TK6.0.13.zip</td>
<td></td>
</tr>
<tr>
<td>Administration computer</td>
<td>Add the SatellitePCS users to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install Pivotal Administration Console and Pivotal System Manager.</td>
<td>Pivotal SyncStream 6.0.13- Desktop Components</td>
<td>PS6.0.13.zip</td>
<td>Installing Pivotal Administration Console on page 4-2</td>
</tr>
<tr>
<td></td>
<td>Connect to the DSM server of the satellite system.</td>
<td>Pivotal Administration Console</td>
<td>PS6.0.13.zip</td>
<td>Connecting to the DSM Server on page 9-14</td>
</tr>
</tbody>
</table>

(Sheet 2 of 5)
### Table 2-3 Installation tasks in a satellite environment (Continued)

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Tasks</th>
<th>Pivotal Software Required</th>
<th>Zip File</th>
<th>More information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pivotal Business Server computer</strong></td>
<td>Add the SatellitePBS user to the local Administrators group.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Log on as the SatellitePBS user, install, and configure Pivotal Business Server.</td>
<td>Pivotal Business Server 6.0.13</td>
<td>PBS6.0.13.zip</td>
<td>Installing Pivotal Business Server on page 7-1</td>
</tr>
<tr>
<td><strong>Deployment server</strong></td>
<td>Set the ASP Web Service Extension to <strong>Allowed</strong> in the Internet Information Services (IIS) Manager.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>To enable ASP.NET on IIS 6.0 on page 10-20</td>
</tr>
<tr>
<td></td>
<td>Note: It is recommended to have a separate deployment server. If you have a development or testing environment, maintain a dedicated deployment server for each environment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install CDC Software Smart Client Framework.</td>
<td>CDC Software Smart Client Framework</td>
<td>SCF4.0.4.33.zip</td>
<td>Installing CDC Software Smart Client Framework on page 10-9</td>
</tr>
<tr>
<td></td>
<td>Note: Close Microsoft Outlook before installing CDC Software Smart Client Framework, Pivotal Client, and Pivotal Integration 6.0 for Microsoft Outlook.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 2-3 Installation tasks in a satellite environment

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Tasks</th>
<th>Pivotal Software Required</th>
<th>Zip File</th>
<th>More information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Warning:</strong> For Pivotal Client to work properly, you must install Pivotal Integration 6.0 for Microsoft Outlook on the deployment server.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Integration 6.0 for Microsoft Outlook.</td>
<td>Pivotal Integration 6.0 for Microsoft Outlook</td>
<td>PIMO6.0.13.zip</td>
<td></td>
<td>Installing Pivotal Integration 6.0 for Microsoft Outlook on the Deployment Server on page 10-16</td>
</tr>
<tr>
<td>Configure the deployment server.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td></td>
<td>Adding Multiple Environments on page 10-21</td>
</tr>
<tr>
<td>SharePoint server of the satellite system</td>
<td>Install and configure Microsoft SharePoint.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Installing, Setting Up, and Configuring the SharePoint Server on page 12-4</td>
</tr>
<tr>
<td></td>
<td>Use SharePoint Products and Technologies Configuration Wizard.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Installing, Setting Up, and Configuring the SharePoint Server on page 12-4</td>
</tr>
<tr>
<td>Install Pivotal Portal Resources: specify the name of the satellite system and the satellite Pivotal Business Server.</td>
<td>Pivotal Portal Resources</td>
<td>PortalResources6.0.13.zip</td>
<td></td>
<td>Installing, Setting Up, and Configuring the SharePoint Server on page 12-4</td>
</tr>
<tr>
<td>Administration computer of the master system</td>
<td>Back up Portal Pages.</td>
<td>Pivotal Administration Console</td>
<td>PS6.0.13.zip</td>
<td>To back up a Pivotal CRM system on page 12-23 and Backing Up a System on page 12-23</td>
</tr>
<tr>
<td>Administration Computer of the Satellite system</td>
<td>Restore Portal Pages.</td>
<td>Pivotal Administration Console</td>
<td>PS6.0.13.zip</td>
<td>To restore a Pivotal CRM System on page 4-10 and Restoring Portal Pages on page 12-21</td>
</tr>
</tbody>
</table>

(Sheet 4 of 5)
### Table 2-3 Installation tasks in a satellite environment (Continued)

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Tasks</th>
<th>Pivotal Software Required</th>
<th>Zip File</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellite client computers</td>
<td>Close the e-mail client.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Install Pivotal CRM 6.0.10 Prerequisites or later.</td>
<td>setup.exe</td>
<td>PREREQ6.0.10.zip</td>
<td>Preliminary Steps on page 10-41</td>
</tr>
<tr>
<td></td>
<td><strong>Warning:</strong> This is a mandatory step: before end users install Pivotal CRM, you must install all prerequisites using the Pivotal CRM 6.0.10 Prerequisites or later installer. After installing Pivotal CRM 6.0.10 Prerequisites or later, restart the computer.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Send the URL of the CDC Software Manager Client Install page to end users.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Preliminary Steps on page 10-41</td>
</tr>
<tr>
<td></td>
<td>Download Pivotal Client by connecting to the URL of the CDC Software Manager Client Install page.</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSM server</td>
<td>Access the Webstore.</td>
<td></td>
<td></td>
<td>Accessing the Webstore on page 9-17</td>
</tr>
<tr>
<td>Administration computer of the master system</td>
<td>Start synchronizing data on the master (parent) system.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Starting Synchronization to the Satellite System on page 9-18</td>
</tr>
<tr>
<td>Administration computer of the satellite system</td>
<td>Start data synchronization on the satellite system.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Starting the Satellite System on page 9-20</td>
</tr>
</tbody>
</table>

1. Before executing the tasks in the order suggested, take into consideration your deployment scenario, and any other factors that could influence your deployment.
Deploying Master, Satellite, and Mobile Systems

This section lists the software required to deploy a master, satellite, and mobile systems. Depending on the size of your organization, you may need to run multiple servers.

To deploy mobile systems you need:

- Pivotal SyncStream mobile components
- Pivotal Business Server (mobile component)
- Pivotal CRM Prerequisites 6.0.10 or later
- Pivotal Packaged Client

*Figure 2-3 on page 2-21 illustrates a deployment of master, satellite, and mobile systems.*
Figure 2-3 Deploying master, satellite, and mobile systems

It is recommended to deploy an HTTP server for a satellite system if the satellite system has child systems. Complete the tasks listed in Table 2-2 on page 2-14 and Table 2-3 on page 2-15 for the master and satellite environments. On each mobile computer, complete the tasks listed in Table 2-4 on page 2-22.
### Table 2-4 Tasks to deploy Pivotal Client on a mobile computer

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Task</th>
<th>Pivotal Software</th>
<th>Zip file</th>
<th>For more information</th>
</tr>
</thead>
</table>
| Administration computer of the master system | Prepare the parent system:  
- Add users to the Pivotal CRM system  
- Assign licenses to mobile users  
- Add user to Pivotal CRM security  
- Specify user properties | Pivotal Administration Console | PSS6.0.13.zip | Preparing the Parent System on page 16-4 |
| | Configure the Microsoft Distributed Transaction Coordinator. | | | Configuring Pivotal Business Server on page 7-12 |
| | Install Pivotal SyncStream mobile components. | Pivotal SyncStream 6.0.13 | PSS6.0.13withSQL.zip | Installing Pivotal Mobile Software on page 16-7 |
| | Install the mobile component of Pivotal Business Server. | Pivotal Business Server 6.0.13 | PBS6.0.13.zip | Installation on page 7-9 |
| | Close Microsoft Outlook. | | | |
| | Install Pivotal CRM 6.0.10 Prerequisites or later.  
**Warning:** This is a mandatory step: before end users install Pivotal CRM, you must install all prerequisites on the mobile computer using the Pivotal CRM 6.0.10 Prerequisites or later installer. | setup.exe | PREREQ6.0.10.zip | Preliminary Steps on page 10-41  
**Note:** Microsoft Outlook is also required. Close Microsoft Outlook before installing Pivotal CRM 6.0.10 Prerequisites and Pivotal Client. |
| | Use the Packaged Client Deployment. | Pivotal Packaged Client 6.0.13 | PivotalPackagedClient6.0.13.zip | Installing Pivotal Packaged Client on page 11-6 |
| | Access the Webstore. | Not Applicable | Not Applicable | Accessing the Webstore on page 16-21 |
### Table 2-4 Tasks to deploy Pivotal Client on a mobile computer¹ (Continued)

<table>
<thead>
<tr>
<th>Computer/Server</th>
<th>Task</th>
<th>Pivotal Software</th>
<th>Zip file</th>
<th>For more information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration computer of the master system</td>
<td>Start mobile synchronization.</td>
<td>Pivotal Administration Console</td>
<td>PSS6.0.13.zip</td>
<td>Mobile Synchronization with SQL Server on page 16-22 and Mobile Synchronization with Oracle on page 16-23</td>
</tr>
<tr>
<td>Mobile computer</td>
<td>Download synchronization messages.</td>
<td>Mobile Synchronization Status</td>
<td>PSS6.0.13withSQL.zip</td>
<td>Downloading Synchronization Messages on page 16-24</td>
</tr>
<tr>
<td></td>
<td>Restore data.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Restoring Data on page 16-25</td>
</tr>
</tbody>
</table>

¹ Before executing the tasks in the order suggested, take into consideration your deployment scenario, and any other factors that could influence your deployment.
3

Preparing for Deployment
Overview

This chapter details the preliminary procedures that you need to perform for a Pivotal Platform deployment. Ensure that you have completed your deployment plan. The servers must meet the system requirements listed in Chapter 2, *Deployment Scenarios and Tasks*.

Complete the following tasks before installing Pivotal Platform components and setting up Pivotal CRM systems:

1. **Create Windows domain users**
2. **Create mailboxes and e-mail profiles** (optional)
3. In a SQL Server environment:
   - **Set up the Microsoft SQL Server**
   - **Create Empty SQL Server Databases**
   - **Grant SQL Server Permissions**
   For more information about tasks to be performed in the SQL Server environment, see *Setting up Microsoft SQL Server* on page 3-6 and *Creating Empty SQL Server Databases* on page 3-6.
4. In an Oracle environment:
   - **Set up the Oracle database instance**
   - **Create table spaces, users, user roles, and schema owners**

   **Note:** For Unicode deployments, use AL16UTF16 as the National Character Set and AL32UTF8 as the Database Character Set. Also set NLS_LENGTH_SEMANTICS to CHAR.

   For more information about tasks to be performed in an Oracle environment, see *Setting up the Oracle Database Instance* on page 3-16.

Pivotal CRM Database Structures

The logical structure of the Oracle database instance for Pivotal CRM data is determined by the table spaces and schema objects created within it.

**Note:** It is recommended that you create two table spaces per schema, one for data and one for indexes. This allows flexibility and future restructuring. However, you can choose to design your system differently for improved performance and scalability.

*Figure 3-1* on page 3-3 illustrates the Oracle database instance structure for the Production, Customization, and Offline Systems.
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Figure 3-1 Oracle Database structure for Production, Customization, and Offline Systems

Manage Oracle database security through the roles and privileges you assign to your database users and schema owners.

Figure 3-2 on page 3-4 illustrates the SQL database structure for the Production, Customization, and Offline Systems. Manage security through roles and privileges you assign to the users and owners of the SQL databases.
Creating Windows Domain Users

Create the Pivotal CRM Services (PCS) and SatellitePCS users within Active Directory. Also create users with the same functions, roles, and user names, for the SQL Server or Oracle server. Create the following users:

- PCS
- SatellitePCS
- PBS
- SatellitePBS
PCS User Account

The PCS user is a domain account designated to administer and run Pivotal services on the master system. Add the PCS user as a member of the local Administrator’s group on the servers designated to run the DSM, ANM, HTTP message server.

SatellitePCS User Account

Create the SatellitePCS user if you plan to deploy satellite systems. The SatellitePCS user account is created to perform the same duties as the PCS user. Ensure that the SatellitePCS user is a member of the local Administrator’s group on the servers designated to run the satellite DSM, ANM, HTTP message server, and Pivotal Business Server.

Note: Create a SatellitePCS account for every satellite system. Ensure that each SatellitePCS account is named uniquely. For example, assign account names such as Satellite1PCS, Satellite2PCS, and so on.

PBS User Account

The Business Server (PBS) user is a domain user account created to run Pivotal Pivotal Business Server. Ensure that the PBS user is a member of the local Administrator’s group on the server designated to run Business Server.

SatellitePBS User Account

Create the SatellitePBS user if you plan to deploy satellite systems. It is not mandatory to create a separate SatellitePBS user, and the satellite systems can use the same PBS user as the main system. The SatellitePBS user account is created to perform the same duties as the PBS user. Ensure that the SatellitePBS user is a member of the local Administrator’s group on the server designated to run Pivotal Business Server for the satellite system.

Note: Create a SatellitePBS account for every satellite system.

Creating Mailboxes and E-mail Profiles

You can optionally choose to create an e-mail profile in a messaging application for the PCS user on the DSM server. If you do not have an administrative computer and need to create an e-mail profile for the PCS account on the DSM server, ensure the DSM server has the messaging application installed.
Setting up Microsoft SQL Server

It is recommended that you have a dedicated SQL Server computer.

Installation Factors

If you are installing SQL Server for the first time, use the following guidelines:

- Select the default character set, sort order (dictionary order, case insensitive), and Unicode collation so that all SQL Server databases in your organization are compatible.
- Select the SQL Server services account and grant the appropriate local user rights.
- Register the SQL Server computers.
- Assign a password to the SQL Server System Administrator.

When SQL Server is installed, either Named Pipes or TCP/IP is selected by default, based on the priority.

Creating Empty SQL Server Databases

Create separate SQL Server databases for the Production, Offline, and Customization systems. Also create databases for satellite systems.

The names you specify for your databases must indicate whether the database stores the Business Module or the Enterprise Data. Table 3-1 on page 3-6 lists examples for the names of databases for the various systems.

Table 3-1 Examples for Names of Databases

<table>
<thead>
<tr>
<th>System</th>
<th>Names of Databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>ProductionBM, ProductionED</td>
</tr>
</tbody>
</table>
Preparing for Deployment

If you are setting up a development environment, also create databases for the development system.

<table>
<thead>
<tr>
<th>System</th>
<th>Names of Databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satellite</td>
<td>SatelliteBM, SatelliteED</td>
</tr>
<tr>
<td>Offline</td>
<td>OfflineBM, OfflineED</td>
</tr>
<tr>
<td>Customization</td>
<td>CM</td>
</tr>
</tbody>
</table>

Table 3-1 Examples for Names of Databases

If you are setting up a development environment, also create databases for the development system.

**Note:** Store your database and log files on separate disk drives. This improves overall performance and reduces the extent of data loss in the event of system failure.

To create databases, you must have system administrator rights on the SQL Server computer.

Setting the initial size of the Business Module database to 100 MB is sufficient to accommodate the out-of-box Pivotal Business Module. If you are upgrading a system, specify the size of the existing Business Module database.

The initial size of Enterprise Data database differs for each organization. Estimate the space required based on an existing Enterprise Data database, or a comparable database in your organization. Set the initial size of the log file to approximately one-quarter the size of its database.

**To create empty Pivotal databases**

1. For SQL Server 2005, click **Start**, point to **Programs**, click **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.

2. In the **Connect to Server** dialog box:
   a) Select **Database Engine** from the **Server type** drop-down list.
   b) Select the appropriate server from the **Server name** drop-down list.

   For SQL Server 2008, click **Start**, point to **Programs**, click **Microsoft SQL Server 2008** and then click **SQL Server 2008 Management Studio**.

   For SQL Server 2008 R2, click **Start**, point to **Programs**, click **Microsoft SQL Server 2008 R2** and then click **SQL Server 2008 R2 Management Studio**.

   For SQL Server 2012, click **Start**, point to **Programs**, click **Microsoft SQL Server 2012** and then click **SQL Server 2012 Management Studio**.
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3) In the **Object Explorer** pane, expand the Server Name and then expand the **Databases** folder.

4) Right-click the **Databases** folder and then click **New Database**.

5) In the **New Database** window, type `ProductionBM` in the **Name** box.

6) Specify the owner of the database or accept the default.

7) In the **Data** row of the **Database Files** area:
   a) In the **Logical Name** column, type or modify the name of the database file.
   b) Click in the **Initial Size (MB)** column and type a file size to specify the initial size of a database.
      
      
      If you are using the out-of-box Pivotal Applications Business Module, specify the size of the Business Module database as 100 MB.
      
      If you are upgrading an existing system, set the initial size to the size of your company Business Module.
      
      For the Enterprise Data databases, type the estimated file size.
   c) Click in the **Autogrowth** column. Select **Enable Autogrowth** in the **Change Autogrowth** dialog box.
   d) Accept the default path for the database files in the **Path** column. If required click and browse to the desired location.
   e) Click **OK**.

8) In the **Log** row of the **Database files** area:
   a) Type a name for the log file in the **Logical Name** column. By default, the name of the log file is `<database name_log>`.
   b) Type a file size that is at least a quarter of the database size in the **Initial Size (MB)** column.
   c) Click in the **Autogrowth** column. Select **Enable Autogrowth** in the **Change Autogrowth** dialog box.
   d) Accept the default path for the log files in the **Path** column. To change the path of the log file, click and browse to the desired location.

   **Note:** For better performance, place the log file on a different drive than the SQL databases.

9) Click **OK**.

10) Repeat steps 2 to 9 for the Production Enterprise Data, Offline Business Module, Offline Enterprise Data, and the Customization Module databases. If you plan to deploy a satellite system, create
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the Satellite Business Module and Satellite Enterprise Data databases.

Depending on the location of the satellite system and the size of your databases, you may want to use a separate server from the master SQL Server.

After creating the databases, specify the database properties.

**To specify properties for Pivotal databases**

1. In the Databases folder, right-click the Production Business Module database, and then click Properties.

2. In the Database Properties window for the Production Business Module database box, click Options in the Select a page pane.

   a) Select Simple from the Recovery model drop-down list.

   b) For SQL Server 2005, select SQL Server 2005 (90) from the Compatibility level drop-down list. For SQL Server 2008 or SQL Server 2008 R2, select SQL Server 2008 (100) from the Compatibility level drop-down list.

   c) In the Automatic area, set the following to True:
      - Auto Update Statistics
      - Auto Create Statistics

   d) In the Recovery area, select the CHECKSUM option in the Page Verify drop-down list.

3. Click OK.

**Note:** For more information about data recovery and a description of all the properties and their default settings, see the Microsoft SQL Server 2005 or 2008 documentation.

4. Repeat steps 1 to 3 for the Production Enterprise Data, Offline Business Module, Offline Enterprise Data, and the Customization Module databases.

The properties for the Pivotal databases are specified.

**Enabling SQL Server's read-committed snapshot option for the Enterprise Data**

Enabling the read-committed snapshot option is optional (not required by Pivotal 6.0.13), but doing so can improve the performance of PBS 6.0.13 by speeding up some queries on systems which are heavily loaded.

**Warning!** The read-committed snapshot option should not be enabled for the Business Module and Customization Module, as Pivotal CRM does not support the read-committed snapshot Option for the Business Module and Customization Module. Also, the Enterprise Data should not have any other connections when enabling the read-committed snapshot option.
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- To turn on the **read-committed snapshot** option for the Enterprise Data run the following command using SQL Server Management Studio:
  ```sql
  ALTER DATABASE <Enterprise Data> SET READ_COMMITTED_SNAPSHOT ON
  ```

- To turn off the **read-committed snapshot option** for the Enterprise Data, run the following command using SQL Server Management Studio:
  ```sql
  ALTER DATABASE <Enterprise Data> SET READ_COMMITTED_SNAPSHOT OFF
  ```

- To check the current setting of the **read-committed snapshot option** for the current database run the following command using SQL Server Management Studio:
  ```sql
  SELECT is_read_committed_snapshot_on FROM sys.databases WHERE database_id = DB_ID()
  ```

**Granting SQL Server Permissions**

The PBS user account uses Integrated Windows authentication. For Integrated Windows authentication, a Windows user account is necessary.

**Creating SQL Server Local Groups**

Create the following local groups on the SQL Server:
- PivotalCRMUsers
- PivotalCRMAadmin
- PivotalCRMPowerUsers

**Note:** Alternatively, the local groups can be global groups within Active Directory.

These groups will be used later to create SQL logins, which control permissions to the Pivotal CRM databases. You can create these Windows Integrated Authentication user groups and add domain users to the groups. When you create the corresponding local groups on SQL Server, the corresponding SQL Server logins are created which are linked to these groups. The required database permissions such as db_datareader, db_datawriter, and so on are assigned to these SQL Server logins.

**Note:** Before performing an Upgrade From Offline System or a Restore System operation, ensure that PivotalCRMUsers and PivotalCRMAadmin groups have been created in SQL Server Enterprise Manager.

**PivotalCRMUsers Group**

Pivotal Client users need not be added to this group. Customization specialists and Pivotal CRM administrators must belong to the PivotalCRMAadmin Group only.
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The PivotalCRMUsers group has the public database role in SQL Server.

The PivotalCRMUsers group is also used for the following:

- **Upgrade From Offline process**
  Permissions are automatically granted for new tables to the PivotalCRMUsers login.
- **Load Database Users command**
  The bulk import of user accounts from the PivotalCRMUsers group occurs when a corresponding SQL Server login exists. The Load Database Users command will enumerate the users in the PivotalCRMUsers group and add them to the Pivotal CRM system’s database. Use the command to add a large number of users without having to add them one by one.

**PivotalCRMAdmin Group**

Create the PivotalCRMAdmin group to enable customization specialists and Pivotal CRM administrators to administer the Pivotal databases without having access to other SQL databases. The PivotalCRMAdmin group is granted database owner rights to the databases in SQL Server. Add the PCS user to the PivotalCRMAdmin local group on the master SQL Server. Add the SatellitePCS user to the PivotalCRMAdmin local group on the satellite SQL Server.

**PivotalCRMPowerUsers Group**

Creation of the PivotalCRMPowerUsers group is optional. Create this group to enable Power Users with reduced administration capabilities to perform tasks in Pivotal Administration Console which do not involve direct access to data. The Power User will not have access to certain commands in Pivotal Administration Console, and these commands are grayed out. These commands will be available only to Pivotal CRM administrators who belong to the PivotalCRMAdmin group.

Add Power Users to the PivotalCRMPowerUsers local group on the master SQL Server, and on the satellite SQL Server computers that the user is allowed to administer. For more information about the PivotalCRMPowerUsers role, see Oracle Prerequisites on page 8-3.

**Creating SQL Server Logins**

To set up Windows Authentication, complete the following tasks in sequence:

1. Create valid SQL Server login accounts for PivotalCRMAdmin, PivotalCRMUsers, and PivotalCRMPowerUsers Windows groups.
2. Grant PivotalCRMAdmin SQL Server login executable rights for the xp_logininfo stored procedure in the SQL Server master database.
To create the PivotalCRMUsers SQL login account

1. Log on to the SQL Server computer with sufficient rights to create users.

2. For SQL Server 2005, click Start, point to Programs, click Microsoft SQL Server 2005, and then click SQL Server Management Studio.

   For SQL Server 2008, click Start, point to Programs, click Microsoft SQL Server 2008 and then click SQL Server 2008 Management Studio.

   For SQL Server 2008 R2, click Start, point to Programs, click Microsoft SQL Server 2008 R2 and then click SQL Server 2008 R2 Management Studio.

   For SQL Server 2012, click Start, point to Programs, click Microsoft SQL Server 2012 and then click SQL Server 2012 Management Studio.

3. In the Connect to Server dialog box:
   a) Select Database Engine from the Server type drop-down list.
   b) Select the appropriate server from the Server name drop-down list.
   c) Select Windows Authentication from the Authentication drop-down list.
   d) Click Connect.

4. Expand the Server Name in the Object Explorer.

5. Right-click the Security folder, click New, and then click Login.

6. In the Login - New dialog box, select General in the left pane, and:
   - Type the login name in the Login name box. Type the login name in the format <domain\username>. If required, click Search to search for the PivotalCRMUsers group. The PivotalCRMUsers group must either be a local group on the SQL Server computer, or a domain group in Active Directory.
   - Select the Windows Authentication option.
   - Ensure that master is selected as the default database.
   - Select the default language for the database.

**Note:** As the master database cannot be deleted, it is recommended that you make the master database the default database for the PivotalCRMUsers SQL login. An ODBC error is displayed if a default database no longer exists for a SQL Server login.
7 Click **User Mapping**.
   
a) In the **Users mapped to this login** area:
   
   • Select the **Map** check boxes for the Production Business Module and Production Enterprise Data databases.

   The **PivotalCRMUsers** group is assigned the **public** database role by default.

   b) In the **Database role membership for**: `<name of database>` area:

   • Select the **db_datareader** role for the each of the Production Business Module and Production Enterprise Data databases. Select the **db_datawriter** role for the Production Enterprise Data database.

8 Click **Status**.
    
a) Select the **Grant** permission to connect to the database engine

b) Select Enabled to specify the login access.

9 Click **OK**.

**To create the PivotalCRMAdmin SQL login account**

1 Log on to the SQL Server computer with an account that has been granted sufficient rights to create SQL login accounts.

2 For SQL Server 2005, click **Start**, point to **Programs**, click **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.

   For SQL Server 2008, click **Start**, point to **Programs**, click **Microsoft SQL Server 2008** and then click **SQL Server 2008 Management Studio**.

   For SQL Server 2008 R2, click **Start**, point to **Programs**, click **Microsoft SQL Server 2008 R2** and then click **SQL Server 2008 R2 Management Studio**.

   For SQL Server 2012, click **Start**, point to **Programs**, click **Microsoft SQL Server 2012** and then click **SQL Server 2012 Management Studio**.

3 In the **Connect to Server** dialog box:
   
a) Select **Database Engine** from the **Server type** drop-down list.

   b) Select the Server name from the **Server name** drop-down list.

   c) Select **Windows Authentication** from the **Authentication** drop-down list.

   d) Click **Connect**.

4 Expand the Server Name.

5 Right-click the **Security** folder, click **New**, and then click **Login**.
6 In the **Login- New** dialog box, select **General** in the left pane, and:
- Type the login name in the Login name box. Type the login name in the format `<domain\username>`. If required, click Search to search for the PivotalCRMAdmin group. The PivotalCRMAdmin group must be a local group on the SQL Server computer, or a domain group in Active Directory.
- Select the Windows Authentication option.
- Ensure that `master` is selected as the default database.
- Select the default language for the database.

**Note:** As the master database cannot be deleted, it is recommended that you make the master database the default database for the PivotalCRMAdmin SQL login. An ODBC error is displayed if a default database no longer exists for a SQL Server login.

7 Click **User Mapping**.
   a) In the **Users mapped to this login** area:
      - Select the Map check boxes for the Production Business Module and Production Enterprise Data databases. In the **Database role membership for:** `<name of database>` area:
        - Select the `db_owner` role for the databases. Table 3-2 on page 3-14 lists the database roles for the PivotalCRMAdmin group.
        - The PivotalCRMAdmin group is assigned the public database role by default.

**Table 3-2 Database Roles for Pivotal CRMAdmin Group**

<table>
<thead>
<tr>
<th>Components</th>
<th>Pivotal CRM Database</th>
<th>Database Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>PivotalCRMAdmin</td>
<td>• ProductionBM&lt;br&gt;• ProductionED&lt;br&gt;• OfflineBM&lt;br&gt;• OfflineED&lt;br&gt;• CustomizationModule</td>
<td><code>db_owner</code></td>
</tr>
<tr>
<td>PivotalCRMAdmin</td>
<td>master</td>
<td><code>public</code></td>
</tr>
</tbody>
</table>

8 Click **Status**.
   a) Select the **Grant** permission to connect to the database engine
   b) Select Enabled to specify the login access.

9 Click **OK**.

**Note:** On the SQL Server computer, create a SysAdmin login with server-level administrators rights (sysadmin role). Add yourself to this Windows group to manage SQL Server security.
To create the PivotalCRMPowerUsers SQL login account

1. Log on to the SQL Server computer with an account that has been granted sufficient rights to create SQL login accounts.

2. For SQL Server 2005, click Start, point to Programs, click Microsoft SQL Server 2005, and then click SQL Server Management Studio.

   For SQL Server 2008, click Start, point to Programs, click Microsoft SQL Server 2008 and then click SQL Server 2008 Management Studio.

   For SQL Server 2008 R2, click Start, point to Programs, click Microsoft SQL Server 2008 R2 and then click SQL Server 2008 R2 Management Studio.

   For SQL Server 2012, click Start, point to Programs, click Microsoft SQL Server 2012 and then click SQL Server 2012 Management Studio.

3. In the Connect to Server dialog box:
   a) Select Database Engine from the Server type drop-down list.
   b) Select the Server name from the Server name drop-down list.
   c) Select Windows Authentication from the Authentication drop-down list.
   d) Click Connect.

4. Expand the Server Name.

5. Right-click the Security folder, click New, and then click Login.

6. In the Login- New dialog box, select General in the left pane, and:
   a) Type the login name in the Login name box. Type the login name in the format <domain\username>. If required, click Search to search for the PivotalCRMPowerUsers group.
   b) Select the Windows Authentication option.
   c) Ensure that master is selected as the default database.
   d) Select the default language for the database.

7. The PivotalCRMPowerUsers group is assigned the public database role by default.

Note: As the master database cannot be deleted, it is recommended that you make the master database the default database for the PivotalCRMPowerUsers SQL login. An ODBC error is displayed if a default database no longer exists for a SQL Server login.

8. Click Status.
   a) Select the Grant permission to connect to the database engine
   b) Select Enabled to specify the login access.

9. Click OK.
Setting up the Oracle Database Instance

To run the sample scripts described in this section, obtain the latest scripts located in the Script Templates sub folder. The Script Templates sub folder is located in the folder with the extracted contents of the installation files for Pivotal Toolkit 6.0.13 (TK6.0.13.zip file). For troubleshooting information, see Troubleshooting on page 17-1.

To set up the Oracle database instance

- Define script variables
- Create Tablespaces
- Create Tablespace Tables and Indexes (Optional)
- Create User Roles
- Create Schema Owners
- Create Pivotal CRM Users
- Run the install.sql script file

Defining Script Variables

The install.sql script uses the script variables you define to create names for tablespace tables and indexes, Pivotal CRM users, and schema owners. Define each of the following variables in the install.sql script file:

- FilePaths for the Business Module, Enterprise Data, and Customization datafiles
- Names for tablespace tables and indexes
- User name and password for the PCS user
- User name and password for the SatellitePCS user, if required
- User names and passwords for additional Pivotal CRM users, if required
- User name and password for the PBS user
- Name of the Oracle service to which the servers will connect
- User names and passwords of schema owners for the Business Module, Enterprise Data, and Customization System
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Table 3-3 on page 3-17 and Table 3-4 on page 3-17 list the variables used in install.sql.

Table 3-3 Variable definitions for tablespaces

<table>
<thead>
<tr>
<th>Description</th>
<th>Variable in sample script</th>
</tr>
</thead>
<tbody>
<tr>
<td>master system:</td>
<td></td>
</tr>
<tr>
<td>Business Module tablespace</td>
<td>BM</td>
</tr>
<tr>
<td>Business Module index tablespace</td>
<td>BMIN</td>
</tr>
<tr>
<td>Enterprise Data tablespace</td>
<td>ED</td>
</tr>
<tr>
<td>Enterprise Data index tablespace</td>
<td>EDIN</td>
</tr>
<tr>
<td>Customization System:</td>
<td></td>
</tr>
<tr>
<td>Business Module tablespace</td>
<td>CM</td>
</tr>
<tr>
<td>Business Module index tablespace</td>
<td>CMIN</td>
</tr>
</tbody>
</table>

Table 3-4 Variable definitions for Pivotal CRM users and the Oracle service

<table>
<thead>
<tr>
<th>Description</th>
<th>Variable in sample script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Platform administrative user</td>
<td>PCS</td>
</tr>
<tr>
<td>Pivotal Pivotal Business Server administrative user</td>
<td>PBS</td>
</tr>
<tr>
<td>Oracle service</td>
<td>TNS_Service</td>
</tr>
<tr>
<td>DSM User for satellite systems</td>
<td>SATPCS</td>
</tr>
</tbody>
</table>

The sample script provides definition statements for the Production System and Customization Systems only. To create definitions for additional systems such as the Offline System, repeat the rows provided for the Customization System and modify the values.

The install.sql file is available along with the installation files for Pivotal Toolkit 6.0.13 (TK6.0.13.zip file).

Download the TK6.0.13.zip file from the Product Downloads area in the Aptean Customer Portal and Partner Portal.

To define variables

1. Log on to the Oracle server computer, or the administrative computer, with database administrator (DBA) rights.
2. Extract the contents of the TK6.0.13.zip file to any folder.
3. Browse to the directory with the contents of the extracted files. Open the ..\Script Templates folder.
4. Open the install.sql script file using any text editor.
5 Type the file path values for the Business Module, Enterprise Data, and Customization tablespaces by replacing the current values in the sample script.

For example, the current value for the file path to the Business Module tablespace is specified as '/oradata/BM.dbf'. The sample script is as follows:

```
DEFINE BM_file_path = '/oradata/BM.dbf' -- datafile path for BM tablespace
DEFINE BMIN_file_path = '/oraindex/BMIN.dbf' -- datafile path for BM Index tablespace
DEFINE ED_file_path = '/oradata/ED.dbf' -- datafile path for ED tablespace
DEFINE EDIN_file_path = '/oraindex/EDIN.dbf' -- datafile path for ED Index tablespace
DEFINE CM_file_path = '/oradata/CM.dbf' -- datafile path for Customization tablespace
DEFINE CMIN_file_path = '/oraindex/CMIN.dbf' -- datafile path for Customization Index tablespace
```

6 Type the tablespace table and index names for the Business Module, Enterprise Data, and Customization Systems by replacing the current values in the sample script.

For example, the current value for the Business Module tablespace is specified as BM. The sample script is as follows:

```
DEFINE BM_TabSpaceTable = 'BM'
DEFINE BM_TabSpaceIndex = 'BMIN'
DEFINE ED_TabSpaceTable = 'ED'
DEFINE ED_TabSpaceIndex = 'EDIN'
DEFINE Cust_TabSpaceTable = 'CM'
DEFINE Cust_TabSpaceIndex = 'CMIN'
```

**Warning!** Specify all values in uppercase letters. If you use any other format when you modify the sample scripts, you could encounter serious system conflicts.

7 Type the user name and password for the Pivotal CRM administrative user. The name of the PCS Windows user you specify here must be the same name specified when you created the PCS user. The PCS user is the user designated to run the ANM and DSM services within the Active Directory. For more information about domain users, see *Creating Windows Domain Users* on page 3-4. In the sample script, identify the following lines and replace PCS with the name of the PCS user.

```
DEFINE PCSUser = 'PCS' -- PCS user name
DEFINE PCSPass = 'PCS' -- PCS user password
```

8 Type the Pivotal Business Server user name and password. For example, identify the following lines in the sample script and
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Replace **PBS** with the name of the Business Server user name and password:

```
DEFINE PBSUser = 'PBS' -- PBS user name
DEFINE PBSPass = 'PBS' -- PBS user password
```

**Note:** If you add other Pivotal CRM users, define user names and passwords for the additional users.

9. Replace the value **TNS_SERVICE** with the name of your Oracle service in the script that reads:

```
DEFINE Service = 'TNS_SERVICE' -- Oracle TNS name to connect to
```

10. Type names and passwords for the Business Module, Enterprise Data, and Customization System schema owners by replacing the current values in the sample script.

```
DEFINE onBM = 'BM'
DEFINE onBMpass = 'bm'
DEFINE onED = 'ED'
DEFINE onEDpass = 'ed'
DEFINE onCM = 'CM'
DEFINE onCMPass = 'CM'
```

11. Save `install.sql`.

The variables for the Production, Offline and Customization Systems are defined.

**Creating Tablespaces**

When `install.sql` is executed, tablespaces for the Business Module and Enterprise Data tables and indexes are created for each of the systems specified in the variable definitions. Use **SECTION 2** of `install.sql` to create tablespaces. Comment this section if you do not want to create tablespaces for the Business Module and Enterprise Data tables and indexes.

See **Listing 3-1 on page 3-20** for the sample script.
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Creating Tablespaces for the Customization Module (Optional)

The install.sql file has sections in commented text for the creation of tablespaces for the Customization module's tables and indexes, and the schema owner for the Customization module. To create the schema owner for the Customization module and tablespaces for the Customization module's tables and indexes, first uncomment the sections to make them a part of the executed script.

To create tablespaces for the Customization Module's tables and indexes

1. In any text editor, open install.sql, and then delete the dashes at the beginning of each line to remove the comments from the following lines of SECTION 2.

    ```sql
    -- SECTION 2: Tablespace Creation
    CREATE TABLESPACE &BM_TabSpaceTable LOGGING DATAFILE
    'BM_file_path' SIZE 60M AUTOEXTEND ON NEXT 30M MAXSIZE UNLIMITED;
    CREATE TABLESPACE &BM_TabSpaceIndex LOGGING DATAFILE
    'BMIN_file_path' SIZE 30M AUTOEXTEND ON NEXT 20M MAXSIZE UNLIMITED;
    CREATE TABLESPACE &ED_TabSpaceTable LOGGING DATAFILE
    'ED_file_path' SIZE 50M AUTOEXTEND ON NEXT 30M MAXSIZE UNLIMITED;
    CREATE TABLESPACE &ED_TabSpaceIndex LOGGING DATAFILE
    'EDIN_file_path' SIZE 30M AUTOEXTEND ON NEXT 20M MAXSIZE UNLIMITED;
    -- If you want to create separate tablespaces for the customization system, uncomment the following CREATE TABLESPACE
    -- CREATE TABLESPACE &CM_TabSpaceTable LOGGING DATAFILE
    -- 'CM_file_path'
    -- SIZE 40M AUTOEXTEND ON NEXT 20M MAXSIZE UNLIMITED;
    -- CREATE TABLESPACE &CM_TabSpaceIndex LOGGING DATAFILE
    -- 'CMIN_file_path'
    -- SIZE 30M AUTOEXTEND ON NEXT 20M MAXSIZE UNLIMITED;
    ```

Listing 3-1 Sample script for creating Production and Customization System tablespaces
Preparing for Deployment

-- SIZE 40M AUTOEXTEND ON NEXT 20M MAXSIZE 1024M
-- default storage (initial 1M NEXT 1M PCTINCREASE 0 maxextents unlimited);
-- CREATE TABLESPACE &CM_TabSpaceIndex LOGGING DATAFILE
    ' &MIN_file_path'
-- SIZE 30M AUTOEXTEND ON NEXT 20M MAXSIZE 1024M
-- default storage (initial 1M NEXT 1M PCTINCREASE 0 maxextents unlimited);

2 Do not close install.sql. Follow the steps detailed in To create the schema owner for the Customization Module on page 3-21.

To create the schema owner for the Customization Module

1 In install.sql, delete the dashes at the beginning of each line to remove the comments from the following lines of SECTION 4:

   -- CREATE USER &onCM PROFILE DEFAULT IDENTIFIED BY &onCMPass
       DEFAULT TABLESPACE &CM_TabSpaceTable
   -- TEMPORARY TABLESPACE TEMP ACCOUNT UNLOCK;
   -- ALTER USER &onCM QUOTA UNLIMITED ON &CM_TabSpaceTable;
   -- ALTER USER &onCM QUOTA UNLIMITED ON &CM_TabSpaceIndex;
   -- GRANT CREATE SESSION, ALTER SESSION, CREATE TABLE, CREATE
       PROCEDURE, CREATE SEQUENCE, CREATE TRIGGER, QUERY REWRITE TO
       &onCM;

2 Save and close install.sql.

Creating User Roles

Execute the install.sql script file to create the PivotalCRMAdmin, PivotalCRMUsers, and PivotalCRMPowerUsers user roles and also grant the user roles a minimum set of rights.
Table 3-5 on page 3-21 lists the recommended minimum user rights.

Table 3-5 Recommended minimum user rights

<table>
<thead>
<tr>
<th>User Role</th>
<th>User Rights</th>
</tr>
</thead>
</table>
| PivotalCRMUser       | • create session
                      | • alter session
                      | • create table          |
| PivotalCRMAdmin      | • create session
                      | • alter session
                      | • create table
                      | • select on DBA_TABLESPACES
                      | • select on DBA_ROLE_PRIVS |
| PivotalCRMPowerUsers | NA                                               |

Section 3 of install.sql creates Pivotal CRM user roles. See Listing 3-2 for the sample script.
Preparing for Deployment

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List 3-2 Sample script for creating user roles

```
-- SECTION 3: Roles Creation
--
--Create PivotalCRMUsers:
CREATE ROLE PivotalCRMUsers NOT IDENTIFIED;

--Create PivotalCRMAdmin:
CREATE ROLE PivotalCRMAdmin NOT IDENTIFIED;

--Create PivotalCRMPowerUsers:
CREATE ROLE PivotalCRMPowerUsers NOT IDENTIFIED;

-- grant minimal set of privileges to the roles:
GRANT CREATE SESSION, ALTER SESSION,
CREATE TABLE -- Create Table is required to create temporary
tables for Setup Offline, Upgrade From Offline..., and for
Bulk Import operation
TO PivotalCRMAdmin, PivotalCRMUsers;

GRANT
SELECT ON DBA_TABLESPACES -- required to select tablespaces in
Pivotal Administration Console
TO PivotalCRMAdmin;

GRANT
SELECT ON DBA_ROLE_PRIVS -- required for Load Database Users
operation
TO PivotalCRMAdmin;
```

**PivotalCRMUsers User Role**

All Pivotal CRM users must be members of the PivotalCRMUsers user role. Add business users to the PivotalCRMUsers user role. The PivotalCRMUsers user role is given the minimum user rights, as recommended in Table 3-5 on page 3-21.

The Pivotal Platform automatically grants permissions for new tables to the PivotalCRMUsers role.

**PivotalCRMAdmin User Role**

All administrators or customizers must be members of the PivotalCRMAdmin group. The PivotalCRMAdmin group is granted the minimum rights as recommended in Table 3-5 on page 3-21.
Preparing for Deployment

PivotalCRMPowerUsers User Role

Creation of the PivotalCRMPowerUsers role is optional. Comment this section if you do not want to create the PivotalCRMPowerUsers role.

Users who are granted this role have reduced administration capabilities, and can perform tasks in Pivotal Administration Console which do not involve direct access to data. The Power User will not have access to certain commands in Pivotal Administration Console, and these commands are grayed out. These commands will be available only to Pivotal CRM administrators who belong to the PivotalCRMAadmin group.

To prevent the creation of the PivotalCRMPowerUsers role

1. In install.sql, add two dashes at the beginning of the following line in SECTION 3:
   ```sql
   CREATE ROLE PivotalCRMPowerUsers NOT IDENTIFIED;
   ```

2. Save and close install.sql.

Creating Schema Owners

When the install.sql script is executed, schema owners are created according to the variables defined under Section 4 in install.sql. See Listing 3-3 on page 3-24 for the sample script.
Listing 3-3  Sample script for creating schema owners

-- SECTION 4: Create the BM, ED, and Customization Schemas
--
-- Create the BM schema:
CREATE USER &onBM  PROFILE DEFAULT IDENTIFIED BY &onBMpass
DEFAULT TABLESPACE &BM_TabSpaceTable
TEMPORARY TABLESPACE TEMP ACCOUNT UNLOCK;
ALTER USER &onBM QUOTA UNLIMITED ON &BM_TabSpaceTable;
ALTER USER &onBM QUOTA UNLIMITED ON &BM_TabSpaceIndex;

-- GRANT Connect, Resource, PivotalCRMAdmin, PivotalCRMUsers to &onBM; -- uncomment if necessary.
ALTER USER &onBM quota unlimited on USERS;
GRANT ALTER SESSION to &onBM;
GRANT CREATE CLUSTER to &onBM;
GRANT CREATE DATABASE LINK to &onBM;
GRANT CREATE INDEXTYPE to &onBM;
GRANT CREATE OPERATOR to &onBM;
GRANT CREATE PROCEDURE to &onBM;
GRANT CREATE SEQUENCE to &onBM;
GRANT CREATE SESSION to &onBM;
GRANT CREATE SYNONYM to &onBM;
GRANT CREATE TABLE to &onBM;
GRANT CREATE TRIGGER to &onBM;
GRANT CREATE TYPE to &onBM;
GRANT CREATE VIEW to &onBM;
GRANT GLOBAL QUERY REWRITE to &onBM;
-- PivotalCRMAdmin role to perform data synchronization
-- operation
-- and to access schema objects

GRANT PivotalCRMAdmin TO &onED;

-- To run Pivotal Business Server components

GRANT PivotalCRMUsers TO &onED;

-- Create the Customization schema:
-- Uncomment the following lines if you want to create a
-- customization schema.

-- CREATE USER &onCM PROFILE DEFAULT IDENTIFIED BY &onCMPass
DEFAULT TABLESPACE &CM_TabSpaceTable
-- TEMPORARY TABLESPACE TEMP ACCOUNT UNLOCK;

-- ALTER USER &onCM QUOTA UNLIMITED ON &CM_TabSpaceTable;
-- ALTER USER &onCM QUOTA UNLIMITED ON &CM_TabSpaceIndex;

-- GRANT CREATE SESSION, ALTER SESSION, CREATE TABLE, CREATE
PROCEDURE, CREATE SEQUENCE, CREATE TRIGGER, QUERY REWRITE TO
&onCM;

-- GRANT Connect, Resource, PivotalCRMAdmin, PivotalCRMUsers to
&onCM;
-- ALTER USER &onCM quota unlimited on USERS;
-- GRANT ALTER SESSION to &onCM;
-- GRANT CREATE CLUSTER to &onCM;
-- GRANT CREATE DATABASE LINK to &onCM;
-- GRANT CREATE INDEXTYPE to &onCM;
-- GRANT CREATE OPERATOR to &onCM;
-- GRANT CREATE PROCEDURE to &onCM;
-- GRANT CREATE SEQUENCE to &onCM;
Creating Pivotal CRM Users

When the install.sql script is executed, Pivotal CRM users are created according to the variables defined. Users are created with Section 5 and Section 6 in install.sql.

See Listing 3-4 on page 3-27 and Listing 3-5 on page 3-29 for the sample script.

Execute install.sql to create the following users:

- PCS user
- SatellitePCS user, if specifically defined
- PBS user
- Additional Pivotal CRM users, if specifically defined

PCS User

Run install.sql to automatically grant the PCS user the PivotalCRMAdmin user role. The PCS user has the same function and role as the PCS Windows user. See Creating Windows Domain Users on page 3-4 for instructions to create the Windows PCS user. See Listing 3-4 on page 3-27 for the sample script.

---

Listing 3-3 Sample script for creating schema owners  (Continued)

-- GRANT CREATE SESSION to &onCM;
-- GRANT CREATE SYNONYM to &onCM;
-- GRANT CREATE TABLE to &onCM;
-- GRANT CREATE TRIGGER to &onCM;
-- GRANT CREATE TYPE to &onCM;
-- GRANT CREATE VIEW to &onCM;
-- GRANT GLOBAL QUERY REWRITE to &onCM;

(Sheet 3 of 3)
Listing 3-4 Sample script to create the PCS user

```sql
-- SECTION 5: Create the PCS user
--
-- PCS user requires PivotalCRMAdmin role to perform data synchronization operation
-- and to access schema objects

CREATE USER &PCSUser
    PROFILE DEFAULT
    IDENTIFIED BY &PCSPass
    DEFAULT TABLESPACE USERS
    TEMPORARY TABLESPACE TEMP
    ACCOUNT UNLOCK;

GRANT PivotalCRMAdmin TO &PCSUser;

ALTER USER &PCSUser QUOTA UNLIMITED ON USERS;
--ALTER USER &PCSUser QUOTA UNLIMITED ON TEMP;

ALTER USER &PCSUser QUOTA UNLIMITED ON USERS;
ALTER USER &PCSUser QUOTA UNLIMITED ON TEMP;

ALTER USER &PCSUser QUOTA UNLIMITED ON &BM_TabSpaceTable;
ALTER USER &PCSUser QUOTA UNLIMITED ON &BM_TabSpaceIndex;

ALTER USER &PCSUser QUOTA UNLIMITED ON &ED_TabSpaceTable;
ALTER USER &PCSUser QUOTA UNLIMITED ON &ED_TabSpaceIndex;

ALTER USER &PCSUser QUOTA UNLIMITED ON &CM_TabSpaceTable;
ALTER USER &PCSUser QUOTA UNLIMITED ON &CM_TabSpaceIndex;
```
SatellitePCS User

Create the SatellitePCS Windows user if you plan to deploy a satellite system. The SatellitePCS user account is created to perform the same duties as the PCS user. The SatellitePCS user runs services on the satellite system and not the master system. To create a SatellitePCS user, you must define the necessary variable before you run install.sql. For more information about defining variables, see Setting up the Oracle Database Instance on page 3-16.

PBS User

The PBS user is a domain user account created to run Pivotal Business Server. It is recommended that you create this account so that anyone who administers Pivotal CRM systems has access to this account and can run Pivotal Business Server. Use SECTION 6 of install.sql to create the PBS user. See Listing 3-5 on page 3-29 for the sample script.

Note: The name specified for the Oracle user does not have to match the name of the PBS user’s domain user account under which the Pivotal Business Server COM+ application runs.
Listing 3-5  Sample script to create the PBS user

```
--
-- SECTION 6: Create the PBS user
--
--
-- PBS is the user who runs Pivotal Business Server components
CREATE USER &PBSUser
    PROFILE DEFAULT
    IDENTIFIED BY &PBSPass
    DEFAULT TABLESPACE USERS
    TEMPORARY TABLESPACE TEMP
    ACCOUNT UNLOCK;
GRANT Connect, Resource, PivotalCRMAdmin, PivotalCRMUsers TO &PBSUser;
-- grant privileges required for dynamic package and procedure creation
-- ANY is required to create packages under BM/ED schemas
GRANT CREATE ANY PROCEDURE, ALTER ANY PROCEDURE, EXECUTE ANY PROCEDURE, DROP ANY PROCEDURE TO &PBSUser;
ALTER USER &PBSUser QUOTA UNLIMITED ON USERS;
--ALTER USER &PBSUser QUOTA UNLIMITED ON TEMP;

ALTER USER &PBSUser QUOTA UNLIMITED ON &BM_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &BM_TabSpaceIndex ;

ALTER USER &PBSUser QUOTA UNLIMITED ON &ED_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &ED_TabSpaceIndex ;

ALTER USER &PBSUser QUOTA UNLIMITED ON &CM_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &CM_TabSpaceIndex ;

GRANT SELECT ANY TABLE to &PBSUser ;
GRANT SELECT ANY DICTIONARY to &PBSUser ;
--Grant CREATE ANY PROCEDURE to &PBSUser ;
--Grant DROP ANY PROCEDURE to &PBSUser ;
-- This is required by PBS, to create procedures in ED Schema..
-- If you connect as ED instead of PBS, then you don’t need this.
```
PivotalCRMPowerUsers Users

The PivotalCRMPowerUsers role is granted to users to allow them to perform tasks in Pivotal Administration Console with restricted access to data.

See Listing 3-6 on page 3-30 for a reference script. This is not included in the install.sql script, and is only provided as an example.

Listing 3-6 Script for granting the PivotalCRMPowerUsers role to a user

```
-- PivotalCRMPowerUsers are users who have restricted access to commands in Pivotal Administration Console
-- Grant PivotalCRMPowerUsers role to user JSmith
GRANT PivotalCRMPowerUsers TO JSmith;
```

Additional Pivotal CRM Users

Create additional Pivotal CRM users with either the PivotalCRMAdmin or PivotalCRMUser user roles.

- To create users with the PivotalCRMAdmin user role, run addadmin.sql
- To create users with the PivotalCRMUser user role, run adduser.sql

For more information about creating additional users, see Pivotal CRM 6.0 Administration Guide.

Running install.sql

Run install.sql to create Tablespaces, Tablespace Tables and Indexes, User Roles, Schema Owners, and Pivotal CRM Users on the Oracle server:

```
Note: You can also run the install.sql script remotely from the administrative computer.
```

To run install.sql

1. Log on to the administrative computer as the default Oracle system administrator, and then open SQL*Plus.
2. Log On to the Oracle Server.
3. At the SQL > prompt, type @ followed by the location of the install.sql file. For example type: @ c:\Program Files\Pivotal\Scripts\install.sql.
4 Press ENTER, and then do the following:
   • After **Enter the DBA username:**; type the user name of the default Oracle system administrator (who has the DBA role), and then press ENTER.
   • After **Enter the Oracle administrator login:**; type the user name of the Oracle administrative user (who has sysdba privileges), and then press ENTER.
   • After **Enter the Oracle administrator password:**; type the password for this user, and then press ENTER.

5 Close SQL*Plus.
4

Administrative Tasks
Overview

This chapter details the administrative tasks you need to perform for a Pivotal CRM deployment. You need not maintain a separate administration computer. You can also perform administrative tasks on a computer with installations of either Pivotal SyncStream Server Components or Pivotal SyncStream Desktop Components. In a synchronization environment, if you require a separate administration computer, then register the DSM and the ANM servers on the administration computer.

If you need to conduct customization tasks, install Pivotal Toolkit 6.0.13 on the administration computer. For more information about the Customization and Offline Systems, see Pivotal Toolkit 6.0.13 Toolkit Guide.

To perform administrative tasks

1. Install Pivotal Administration Console
2. Add the Administrative User to the Oracle Database Server (Oracle only)
3. Setting Up Pivotal CRM systems

Installing Pivotal Administration Console

The Pivotal Administration Console is the interface for the central administration of Pivotal CRM systems. From the Pivotal Administration Console you can administer systems locally or remotely from your computer, across the network or through a dial-up connection. Use Pivotal Administration Console to:

- Configure services
- Manage licenses
- Manage security
- Manage Pivotal CRM systems
- Manage synchronization

For more information about Pivotal Administration Console see Pivotal SyncStream 6.0.13 Administration Guide and Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.

To install Pivotal Administration Console, download the files for Pivotal SyncStream 6.0.13 (PSS6.0.13.zip file), from the Product Downloads area in the Aptean Customer Portal and Partner Portal. For more information about the contents of the PSS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.
To install Pivotal Administration Console

1. Log on to the administration computer with administrator rights.
2. Extract the contents of the PSS6.0.13.zip file to any folder on the administration computer.
3. Browse to the folder with the contents of the PSS6.0.13.zip file and double-click the setup.exe file.
4. In the Pivotal SyncStream 6.0 (v6.0.1300) - InstallShield Wizard click Next.
5. Select the option to accept the license agreement and click Next.
6. Type the User Name and Organization, and then click Next.
7. Select Desktop Components, and then click Next.
8. Click Next to install to the default location. To specify a different location for installation, log files, and temporary files click Change, browse to the folder location, click OK, and then click Next.
9. Click Install.
10. Click Finish.

Pivotal Administration Console is installed. Installing Pivotal Administration Console also installs Pivotal System Manager.

Adding the Administrative User to the Oracle Database Server (Oracle only)

Before the administrative user can log on to the Pivotal CRM system, create a user on the Oracle database server. You can do this by running the addadmin.sql script in SQL*Plus. Running this script creates users and grants them the necessary permissions. Oracle scripts are available along with the installation files for Pivotal Toolkit 6.0.13 (TK6.0.13.zip), in the Script Templates directory.

Before running this script, you should edit it so that the default and temporary tablespaces for the user are the desired ones. If not edited, users are created with default tablespace = USERS and temporary tablespace = TEMP.

To add the administrative user to the Oracle Server

1. On the administrative computer, start SQL*Plus.
2. Log on to the Oracle Server.
3. At the SQL> prompt, type @ c:\filepath\addadmin.sql, replacing filepath with the path to the local folder storing the Oracle scripts, and then press ENTER.
4. When prompted to specify a user name, type the same name that is to be displayed in Pivotal CRM security. This is generally the Windows user account.
5 When prompted, specify a password.

6 When prompted, specify the logon credentials for the System user or another user who has sysdba privileges. For the Oracle service name, type `OracleService`, replacing `OracleService` with the name of your Oracle service.

The administrative user is added to the Oracle server.

Setting Up Pivotal CRM Systems

End users use Pivotal Client to access Pivotal CRM systems that are created using the Pivotal System Manager. Each Pivotal CRM system is created by pairing of databases. Of the two databases, one contains Pivotal Enterprise Data, the other, known as the Pivotal Business Module, contains metadata for forms and tables, as well as business logic. The sample Pivotal Enterprise Data and Pivotal Business Module `.rdf` files are in non-Unicode format. If you are deploying a Unicode system, then both sample and customer data must be migrated to Unicode. For more information about migrating to Unicode, see Pivotal CRM 6.0 Migration Guide.

The following are the components of a Pivotal CRM system:

• Pivotal Business Module
  The Business Module database stores metadata information and contains the Enterprise Data schema definition, system business logic, and group security.

  The Pivotal Business Module contains:
  • Data dictionary
  • Table, field, and form definitions
  • Queries
  • Reports
  • LetterExpress templates
  • Client Tasks
  • Subjects and Topics
  • Task Pads, Task Groups, and Tasks
  • Portal Pages

• Pivotal Enterprise Data
  The Enterprise Data stores all the organizational data.

  The Pivotal Enterprise Data contains:
  • Operational data
  • User-defined queries, reports, LetterExpress templates
  • User choice lists
  • Security group memberships
  • FilePath folder
**Administrative Tasks**

**Table 4-1** on page 4-5 details the recommended Pivotal CRM systems.

**Table 4-1 Pivotal CRM systems**

<table>
<thead>
<tr>
<th>Pivotal System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production System</td>
<td>Contains operational data, such as contacts, companies, and opportunities, as well as user-defined reports, and queries.</td>
</tr>
</tbody>
</table>
| Customization System | Enables the user to customize the Business Module, that is, the business logic and the look and feel of the system. A Customization System uses the Customization Module as its Business Module, and the Business Module from the Offline System as the Enterprise Data. Use the Customization System to:  
  - Create new or modify the existing forms, searches, table structures, and business logic  
  - Create commands, create business concepts in subjects and topics  
  - Create task pads, task groups, and tasks to group relevant activities depending on the center area  
  - Define Portal pages  
  - Define Server Tasks and Client Tasks                                                                                                               |
| Offline System       | An Offline System is a copy of the Production System. However, the Enterprise Data of the Offline System can be a subset of the Enterprise Data of the Production System. Use the Offline System to test changes made in the Customization System before upgrading changes to the Production System. For more information about setting up the Offline System, see *Pivotal Toolkit 6.0 Toolkit Guide*. |

**Note:** Do not define and create Offline and Customization Systems for a satellite or mobile environment.

**Note:** For more information about procedures to modify the Pivotal Business Module to suit your requirements, see *Pivotal Toolkit 6.0 Toolkit Guide*.

Set up Pivotal CRM systems such as the Production System, Offline System, and the Customization System.

**To set up Pivotal CRM systems**

1. *Create Pivotal CRM Databases*
2. *Create ODBC connections*
3. *Define Pivotal CRM systems*
4. *Specify System Properties for the Pivotal CRM System*
5. *Restore RDF files and Portal pages*
6. *Add users to Pivotal CRM systems*
7. *Grant security permissions to users*
8 Assign licenses

Creating Pivotal CRM Databases

To create Production, Offline, and Customization System databases, create databases in your Microsoft SQL Server or Oracle RDBMS and specify permissions. In SQL Server, name the databases OfflineBM, OfflineED, Customization Module, ProductionBM, and ProductionED. In Oracle, name the instance Pivotal and create schemas with the names OfflineBM, OfflineED, CustomizationModule, ProductionBM, and ProductionED. For more information about creating Pivotal CRM databases in Microsoft SQL Server or Oracle RDBMS, see Preparing for Deployment on page 3-1.

Creating ODBC Connections

After creating the databases, create the ODBC connections. For more information about creating databases, see Chapter 3, Preparing for Deployment. To create ODBC connections, MDAC 2.8 or later must exist on the administrative computer.

Create system data sources (system DSNs) to connect to the OfflineBM, OfflineED, Customization Module, ProductionBM, and ProductionED databases. Table 4-2 on page 4-6 lists the data sources and their properties for SQL Server.

Table 4-2 Properties for SQL Server ODBC Data Source Names

<table>
<thead>
<tr>
<th>Properties</th>
<th>Suggested database source name</th>
<th>Type</th>
<th>Database</th>
<th>Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>OfflineBM</td>
<td>System DSN</td>
<td>OfflineBM</td>
<td>OfflineBM</td>
<td>Designated SQL Server</td>
</tr>
<tr>
<td>OfflineED</td>
<td>System DSN</td>
<td>OfflineED</td>
<td>OfflineED</td>
<td>Designated SQL Server</td>
</tr>
<tr>
<td>Customization Module</td>
<td>System DSN</td>
<td>Customization Module</td>
<td>Designated SQL Server</td>
<td></td>
</tr>
<tr>
<td>ProductionBM</td>
<td>System DSN</td>
<td>ProductionBM</td>
<td>ProductionBM</td>
<td>Designated SQL Server</td>
</tr>
<tr>
<td>ProductionED</td>
<td>System DSN</td>
<td>ProductionED</td>
<td>ProductionED</td>
<td>Designated SQL Server</td>
</tr>
</tbody>
</table>

Table 4-3 on page 4-7 lists the data sources and their properties for Oracle.
Table 4-3 Properties for Oracle ODBC Data Source Names

<table>
<thead>
<tr>
<th>Suggested Data Source Name</th>
<th>Type</th>
<th>Schema</th>
<th>Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal.OfflineBM</td>
<td>System DSN</td>
<td>OfflineBM</td>
<td>Oracle</td>
</tr>
<tr>
<td>Pivotal.OfflineED</td>
<td>System DSN</td>
<td>OfflineED</td>
<td>Oracle</td>
</tr>
<tr>
<td>Pivotal.CustomizationModule</td>
<td>System DSN</td>
<td>CustomizationModule</td>
<td>Oracle</td>
</tr>
<tr>
<td>Pivotal.ProductionBM</td>
<td>System DSN</td>
<td>ProductionBM</td>
<td>Oracle</td>
</tr>
<tr>
<td>Pivotal.ProductionED</td>
<td>System DSN</td>
<td>ProductionED</td>
<td>Oracle</td>
</tr>
</tbody>
</table>

For more information about creating ODBC connections, see Creating ODBC Connections on page 7-13.

Defining Pivotal CRM Systems

Use the Pivotal System Manager to create Pivotal CRM systems. Pivotal client users can connect to a system that is defined by pairing the ODBC data sources of the Business Module and Enterprise Data databases.

To define a Pivotal CRM system

1. On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator.

   For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.

2. In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.

3. In the Pivotal System Manager dialog box, click New.

4. In the New System dialog box, type a system name for the target system in the System Name box. It is recommended that you type the system name in uppercase, with no spaces.

   Note: Ensure that the name of the Pivotal CRM systems is the same as the name provided for the environment on the deployment server. For more information about environments, see Environment on page 10-7.

5. Select the name of the Business Module database from the Business Module drop-down list.

6. Select the name of the Enterprise Data database from the Enterprise Data drop-down list.
7 In the This system definition is available for area, select the **Anyone who uses this computer (all users)** check box. This ensures that the system definition is visible to the Business Server user as well as other users who log on to the computer hosting Business Server.

8 For Oracle, in the **DBMS Login** tab, do the following:
   - In the **User Name** box, type the PBS user name.
   - In the **Password** box, type the PBS user’s password.
   - Do not select the **Use OS Authentication** check box.

9 Click **OK**.

10 In the **Pivotal System Manager** dialog box, click **Close**.

The Pivotal CRM system is defined.

**Specifying System Properties for the Pivotal CRM System**

Use the System Properties command in Pivotal Administration Console to configure properties for the Pivotal CRM system to which you are connected. You can specify most of these settings when you set up a Pivotal CRM system.

**To configure the system properties**

In the Pivotal Administration Console, expand a server under Data Synchronization and connect to the Pivotal CRM system that you want to configure.

1 Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2 In the Pivotal Administration Console window, expand **Data Synchronization**, then expand the registered DSM server until the Pivotal CRM systems are displayed.

**Note:** For the target system you define, ensure that the ODBC data sources connect to the correct databases.
3  Right-click the system name and select **System Properties**. The **Properties** dialog box has the following tabs:
- System
- Database
- Configuration
- DSM
- Business Server
- Portal Server
- Exchange Server
- License

This section details only a few of the options available in the **Properties** dialog box. For more information about the **Properties** dialog box, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

### Specifying Licensing Details

For each Pivotal CRM system, install a license file. You can assign licenses only after the license file is installed for each Pivotal CRM system. You can complete this step only after setting up the administrative computer. For more information about setting up the administrative computer, see *Setting up License Management* on page 6-1.

**Note:** You do not need to install a license file for satellite and mobile systems. The Customization System does not require a license file either.

### Restoring RDF Files and Portal Pages

Use the **Restore System** command in Pivotal Administration Console to restore out-of-the-box Business Module and Enterprise Data .rdf files and Portal pages (*.ppf files). Use the **Restore System** command only on the master system and not on a satellite or mobile system.

For a Pivotal CRM system after you type the URL in the **Portal Server** box, click **Test** to test the URL. If the test fails, add the URL of the portal server in the Local Intranet zone on the **Security** tab in the **Internet Options** dialog box in Internet Explorer.
After adding the URL of the portal server to the Local Intranet zone, test the URL again:

- For a SyncStream 6.0 Server Components installation, exit Pivotal Administration Console, restart the DSM service, restart Pivotal Administration Console, and click the Test button on the Portal Server tab.
- For a SyncStream 6.0 Desktop Components installation, exit Pivotal Administration Console, wait for the msync.exe process to end, restart Pivotal Administration Console, and click the Test button on the Portal Server tab.

For more information about the System Properties dialog box in Pivotal Administration Console, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help. For more information about Portal pages, see Installing and Working with Pivotal Portal Resources on page 12-1 and the Pivotal Toolkit 6.0.13 Toolkit Guide.

**To restore a Pivotal CRM System**

1. Log on to the administration computer where Pivotal Administration Console is installed.
2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console, expand Data Synchronization, and then expand the server to which the system is connected.
3. Right-click the name of the Pivotal CRM system and select Restore System.

**Note:** Use the Restore System command only on the master system and not on a satellite or mobile system. For more information about the Restore System command, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.

4. In the Restore System dialog box:
   a. Select the Restore Business Module check box to restore the Business Module.
   b. Click Browse to select the name and location of the *.rdf file to be restored.
   c. Select the Restore Enterprise Data check box to restore the Enterprise Data.
   d. Click Browse to select the name and location of the *.rdf file to be restored.
   e. Select the Restore Portal Pages check box to restore Portal pages.

**Note:** Install Pivotal CMS 6.0.5 to obtain the out-of-the-box Business Module and Enterprise Data *.rdf files and the Portal page *.ppf file. For more information about installing Pivotal CMS 6.0.5, see the Pivotal CMS 6.0.5 Release Notes. If you use Pivotal CMS 6.0.5, you must apply the latest hot fix for Pivotal Foundation Library 6.0 Service Pack 1.
Administrative Tasks

f) Click **Browse** to select the Portal page *.ppf* file to be restored.

5 Click **Restore** to restore the system.
   The time taken for the restore process depends on the size of the databases being restored. A progress bar is displayed, indicating the type of database being restored. If you click **Close**, the progress dialog box is not visible but the restore process continues.

6 When the restore process is complete, right-click the Pivotal CRM system and click **Disconnect**, and then **Connect**.
   You need to reconnect for Pivotal CRM to be able to determine the type of system that you have restored when it reads the system table.

   The system is restored.

   For more information about the restore process, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

**Specifying the ANM Server**

Specify the ANM Server for the Pivotal CRM system.

**Warning!** Do not specify the ANM Server for a Customization System. If you do so, Pivotal Toolkit functionality will be affected.

To specify the ANM Server

1 Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2 In the Pivotal Administration Console window, expand **Data Synchronization**, then expand the registered DSM server until the Pivotal CRM systems are displayed.

3 Right-click the system name and select **System Properties**.

4 In the **Properties** dialog box, click **Change**.

5 In the **Change ANM** dialog box, click **Browse**.
   From the **Server** drop-down list, select the ANM server and click **OK**.
Specifying the FilePath Folder

Pivotal CRM systems cannot share FilePath folders. Create separate FilePath folders for the Production, Offline, and Customization Systems, and specify the location of the folders in the Properties dialog box of each Pivotal CRM system.

To specify the FilePath folder

1. Create the following folders on a shared volume on any server in the Pivotal deployment:
   - Production FilePath
   - Offline FilePath
   - Customization FilePath

2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

3. In the Pivotal Administration Console window, expand Data Synchronization, then expand the registered DSM server until the Pivotal CRM systems are displayed.
   This step assumes that you have registered the DSM server. If not, right-click the Data Synchronization branch and click Register Server, then specify the name of the DSM Server to be registered and click Register.

4. Right-click a Pivotal CRM system and click System Properties.

5. In the Properties dialog box, click Browse beside the File Path box to specify the path to FilePath folders.

6. Repeat step 4 and step 5 for each Pivotal CRM system.

   The FilePath is specified.

Adding Users to the Pivotal CRM System

Use Pivotal Administration Console to add users to the Pivotal CRM system.

To add users to the Pivotal CRM system

1. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

2. In the Servers pane of the Pivotal Administration Console window, expand the appropriate server listed under Data Synchronization, and then select the Pivotal CRM system.

3. Right-click the Pivotal CRM system name and select Connect.

4. Right-click in the Users pane and select New User.

5. Type the name of the user in the New User dialog box and click OK. The user name must be identical to the user's network user ID, although it is not case-sensitive.
6. Repeat steps 4 and 5 for each user.
7. Close the **Pivotal Administration Console** window.

Users are added.

For each user, specify user properties such as the language. For more information about specifying user properties, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

## Granting Security Permissions to Users

Add users to appropriate security groups. Security groups determine what information Pivotal CRM users can read, modify and delete. If a Pivotal CRM user is also a synchronizing user, security groups determine what information is synchronized to that user's replica system.

### To grant security permissions to users

1. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2. In the **Servers** pane, expand **Data Synchronization**, and then expand the registered DSM server until you see the name of the Pivotal CRM system to which you want to connect.

3. Right-click the system, and then click **Connect**. The right pane displays the Pivotal CRM users.

4. In the right pane, do one of the following:
   - Select the **Groups** option from the **View** panel to display the Pivotal CRM security groups. Right-click a security group, point to **Add User**, and then click the user that you want to add to the security group. Only users who are not members of the highlighted security group are displayed.
   - Select the **Users** option from the **View** panel to display Pivotal CRM users. Right-click a User ID, point to **Add to Group**, and click the security group to which you want to add the user. Only security groups that the user is not a member of are displayed.

5. Close the **Pivotal Administration Console** window.

The user is added to the security group. For more information about using Pivotal Administration Console to add or remove users from security groups, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

## Assigning Licenses

Only named and activated users are granted access to Pivotal CRM systems. Named users are the users added to the Users table. Activated users are the named users who are specifically assigned a
license to access a Pivotal CRM system. Assign a license to each user. For more information about licensing, see Chapter 6, Setting up License Management.

**Working with Pivotal CRM Systems**

End users can access and work with Pivotal CRM systems using the rich navigational user interface of Pivotal Client. The Pivotal Client interface includes the following navigational elements:

- The main menu and toolbar items, which cannot be customized.
- The following elements, which can be customized:
  - Subjects and their topics, which provide access to business data such as Sales, Support, and Companies.
  - Task pads consisting of task groups and tasks, which provide access to operations on business data, such as generating reports, creating new records, defining static lists, and performing searches.

Content items such as Search Results Lists, Portals pages, forms, reports, and static lists are displayed in the main Pivotal Client window. For more information about working with Pivotal Client, see Pivotal Client 6.0.13 Help.

Before end users can work with Pivotal CRM systems:

- Set up the Offline System.
  For more information about setting up the Offline System, see the Pivotal Toolkit 6.0.13 Toolkit Guide.
- Customize the Pivotal CRM system using Pivotal Toolkit 6.0.13.
  You can create commands, subjects, topics, task pads, and other content items. For more information about customizing the Pivotal CRM system, see the Pivotal Toolkit 6.0.13 Toolkit Guide.

**Working with Microsoft Office 2007 or Microsoft Office 2010**

Microsoft Office 2007 or Microsoft Office 2010 does not allow third party add-ins to be installed, without providing a trust for the add-ins. To install the Pivotal CRM Add-in on Microsoft Outlook 2007 or Microsoft Outlook 2010 do either one of the following:

- Administrators can import the CDC.Cer certification authority into the Enterprise NTAuth store. The CDC.Cer is provided in the PIM06.0.13.zip.
  For more information on how to import the CDC.Cer certification authority into the Enterprise NTAUTH store, see http://support.microsoft.com/kb/295663.
• End Users can click **Install** in the **Microsoft Office Customization Installer** dialog box, which is displayed on launching Microsoft Outlook 2007 or Microsoft Outlook 2010 the first time after launching Pivotal Client. The **Microsoft Office Customization Installer** dialog box is a Trust Prompt. *Figure 4-1* on page 4-15, displays the **Microsoft Office Customization Installer** dialog box. After clicking **Install**, end users will have to relaunch Microsoft Outlook 2007 or Microsoft Outlook 2010.

*Note:* If the **CDC.Cer** certification is not imported by the administrator, then a Trust Prompt will be displayed to the end users on launching Microsoft Outlook 2007 or Microsoft Outlook 2010 for the first time after launching Pivotal Client.
5
Installing Pivotal Toolkit
Installing Pivotal Toolkit

Overview

Toolkit is a set of utilities for customizing and extending the functionality of the Pivotal CRM applications.

System Requirements

For more information about the system requirements for the computer on which Toolkit is installed, see *Pivotal CRM 6.0 Compatibility Guide*.

Prerequisites

Before installing Toolkit, complete all tasks listed in Chapter 3, *Preparing for Deployment* and *Pivotal CRM 6.0 Compatibility Guide*.

Installing Pivotal Toolkit

The installation files for installing Pivotal Toolkit 6.0.13 are available in the *TK6.0.13.zip* file.

Download installation files for Pivotal Toolkit 6.0.13 (*TK6.0.13.zip* file) from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the *TK6.0.13.zip* file, see Appendix A, *Contents of Installation Zip Files*. For more information about installing or upgrading Pivotal Foundation Library 6.0 Service Pack 1, see the *Pivotal Foundation Library 6.0 Service Pack 1 Release Notes*.

To install Toolkit

1. On the administration computer, log on with administrator rights.
2. Extract the contents of the *TK6.0.13.zip* file to any folder on the administration computer.
3. Browse to the folder with the contents of the *TK6.0.13.zip* file and double-click the *setup.exe* file.
4. Microsoft .NET Framework 4 and Visual Studio 2010 Isolated Shell are required for Toolkit functionality, and if the installer detects that Visual Studio 2010 Isolated Shell is not installed, you are prompted to install Visual Studio 2010 Isolated Shell. Click *Install* to install Visual Studio 2010 Isolated Shell.
5. In the *InstallShield Wizard* dialog box, click *Next*.
6. In the *License Agreement* dialog box, select the *I accept the terms in the license agreement* option and click *Next*.
7. Click *Next* in the *Warning* dialog box. The installation program will uninstall any previous version of Windows Access or Toolkit.
If the **Program Maintenance** dialog box is displayed instead of the **Warning** dialog box, the installation program has detected a previous installation of Toolkit or Windows Access.

8 In the **Custom Setup** dialog box:
   a) To install Pivotal Toolkit, select the **This feature will be installed on local hard drive.** from the **Pivotal Toolkit** drop-down list.
   b) To install the OCX, select the **This feature will be installed on local hard drive.** from the **OCX** drop-down list.

To change the directory to which files are installed, click **Change**.

In the **Change Current Destination Folder** dialog box, click **Look in** to select the destination folder and click **OK**.

Visual Studio 2010 Isolated Shell is installed to the default location and this installation location cannot be changed.

The `TK r6.0.13 - Customization Module.rdf` and `TK r6.0.13 - Customization Module - Unicode.rdf` are installed in the `..\CDC Software\Pivotal CRM\Pivotal Toolkit\Customization` folder.

**Note:** The OCX folder with `relOCX.ocx` and `rn1resOCX.dll` is installed in the `\Program Files\CDC Software\Pivotal CRM\Pivotal Toolkit\OCX` folder.

9 In the **Ready to Install the Program** dialog box, click **Install**.

10 Click **Finish**.

Toolkit is installed.

**Warning!** You may encounter issues with importing operations in Toolkit, if it is not running in administrator mode.

The **Pivotal Toolkit 6.0.13 Toolkit Guide** is available after you install Pivotal Toolkit. Click **Help** in the Customization System to access the **Pivotal Toolkit 6.0.13 Toolkit Guide**. For more information about using the contents of the `TK6.0.13.zip` file, see **Pivotal Toolkit 6.0.13 Toolkit Guide**.

**Note:** Visual Studio 2010 does not provide the Help Viewer required to view the Pivotal Form Designer Help. Ensure to install Visual Studio 2010 Service Pack 1 (http://www.microsoft.com/downloads/en/details.aspx?FamilyID=75568aa6-8107-475d-948a-ef22627e57a5) for accessing the Pivotal Form Designer Help.
Restoring the Customization Module

To restore the Customization Module

1. Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Administration Console**.

2. In the **Pivotal Administration Console** window, expand **Data Synchronization**, and then expand the machine name.

3. In the list of Pivotal systems, right-click the Customization System and click **Restore System**.

4. In the **Restore System** window, select the **Restore Business Module** check box.

5. Click **Browse** and then navigate to \CDC Software\Pivotal CRM\Pivotal Toolkit\Customization folder and select the **TK r6.0.13 - Customization Module.rdf** OR **TK r6.0.13 - Customization Module - Unicode.rdf**.

6. Click **Restore**. A progress bar indicating the progress of the procedure is displayed.

7. After the restoration is complete, right-click the Customization System, and click **Apply Customization Changes**. A dialog box indicating the progress of the procedure is displayed.

8. Click **Close** when the dialog box displays a message indicating the completion of the process.

9. Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Toolkit**.

10. In the **Pivotal Login** dialog box, select the Customization System from the **System** drop-down list.

11. Click **OK**.

12. When prompted to upgrade the Business Module, click **Continue** to begin the upgrade.

13. Click **Close** when the dialog box displays a message indicating the completion of the process.

For more information about restoring data and working with the Customization Module, see the **Pivotal Toolkit 6.0.13 Toolkit Guide**.
Setting Table Permissions

In Pivotal Toolkit, do the following:

1. Grant the Client connection type the following permissions:
   - **Read**, **Create**, and **Modify** permissions for the `User_Personalization` table, for the security groups that require access to the History/Shortcuts feature.
   - **Read**, **Create**, **Modify**, and **Delete** permissions for the `User_Active_Search_Pages` table, for the security groups that require access to the Active Search Page personalization feature.
   - **Read**, **Create**, and **Modify** and **Delete** permissions for the `User_Workflows` table, to execute the metquery commands of type Workflow.

2. Grant the Mobile connection type **Read** permissions for the `GLD` table, for the security groups that are used by synchronizing users. Ensure that there are no View Filters or Sync Filters active on the `GLD` table.

Setting Mandatory Interaction Extension Form Options

In the **Set Global Options** dialog box in Pivotal Toolkit, set the **Mandatory Interaction Extension Form Options** for the required interaction items.

To set Mandatory Interaction Extension Form Options

1. Click **Start**, point to **Programs**, and then point to **CDC Software**.
2. Point to **Pivotal CRM**, and then click **Pivotal Toolkit**.
3. Log on with administrator rights to the Customization System.
4. On the **eTab**, click **Security**, and then click **Set Global Options**.
5. In the **Set Global Options** dialog box, do the following:
   - To ensure that a Client Form is selected for a meeting or appointment in Microsoft Outlook before it is saved to Pivotal CRM, select the **Meetings** check box. An error message is displayed in Outlook on trying to save a meeting or appointment without selecting a Client Form, if the **Meetings** check box has been selected.
   - To ensure that a Client Form is selected for a task in Microsoft Outlook before it is saved to Pivotal CRM, select the **Task** check box. An error message is displayed in Outlook on trying to save a task without selecting a Client Form, if the **Task** check box has been selected.
   - To ensure that a Client Form is selected for an e-mail message in Microsoft Outlook before it is saved to Pivotal CRM, select the **E-mails** check box. An error message is displayed in Outlook on trying to save an e-mail message without selecting a Client Form, if the **E-mails** check box has been selected.
The Mandatory Interaction Extension Form Options are set.

Importing Language Dictionary Strings

Use the Import System Strings agent to import rlangdict.csv or rlangdict - Unicode.csv (for a Unicode system) to the Language Dictionary after you have entered translations.

To import System Strings

1. Click Start, point to Programs, CDC Software, Pivotal CRM, and then Pivotal Toolkit.
2. In the Pivotal Login dialog box, select the Customization System from the System drop-down list.
3. On the etab, click Pivotal Agents, and then click List of Agents.
4. In the Agents window, double-click Language, double-click Import and Export, then click Import System Strings.
5. In the Instruction dialog box, click OK.

A message box is displayed when the System strings are imported. Click OK.

Applying Customization Changes

Apply customization changes to the Offline System.

To Apply Customization Changes

1. Click Start, point to Programs, CDC Software, click Pivotal CRM, and then Pivotal Administration Console.
2. In the Pivotal Administration Console window, expand Data Synchronization, and then expand the machine name.
3. In the list of Pivotal systems, right-click the Offline system and click Apply Customization Changes.
4. Click Close when the dialog box displays a message indicating the completion of the process.

The customization changes are applied to the Offline System.

Upgrading from Offline

Upgrade the Production System from the Offline System after all customization tasks have been completed.
To Upgrade from Offline

1. Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Administration Console**.
2. In the **Pivotal Administration Console** window, expand **Data Synchronization**, and then expand the machine name.
3. In the list of Pivotal systems, right-click the Production system and click **Upgrade From Offline**.
4. Click **Close** when the dialog box displays a message indicating the completion of the process.

The Production System is upgraded from the Offline System.

Modifying, Repairing, or Uninstalling Toolkit 6.0.13

The Toolkit installer detects previously installed components of Toolkit. When components are detected, one of the following conditions could apply:

- Toolkit has already been installed.
  - In this case, use the installer to either install optional features that were not previously installed, or uninstall Toolkit altogether.
- Toolkit has already been installed but is not functioning correctly.
  - If this is the case, use the installer to repair Toolkit.
- Toolkit will uninstall any previous versions of Windows Access.

To modify Toolkit installation

1. Log on as the administrative user to the computer on which Toolkit is installed.
2. Extract the contents of the **TK6.0.13.zip** file to any folder on the administration computer.
3. Browse to the folder with the contents of the **TK6.0.13.zip** file and double-click the **setup.exe** file.
4. In the **Welcome** dialog box, click **Next**.
5. In the **Program Maintenance** dialog box, select the **Modify** option and click **Next**.
6. In the **Custom Setup** dialog box, select **This feature will be installed on local hard drive** from the drop-down list for the feature you want to install. The features available are:
   - Toolkit
   - OCX
7. Click **Next**.
8. Click **Install**.
9 Click **Finish** when the process is complete.
The Toolkit installation is modified.

**To repair Toolkit**

1 Log on as the administrative user.
2 Extract the contents of the TK6.0.13.zip file to any folder on the administration computer.
3 Browse to the folder with the contents of the TK6.0.13.zip file and double-click the setup.exe file.
4 In the **Welcome** dialog box, click **Next**.
5 In the **Program Maintenance** dialog box, select the **Repair** option and click **Next**.
6 Click **Install**.
7 Click **Finish** when the process is complete.

Toolkit is repaired.

**To uninstall Toolkit**

1 Log on as the administrative user.
2 Extract the contents of the TK6.0.13.zip file to any folder on the administration computer.
3 Browse to the folder with the contents of the TK6.0.13.zip file and double-click the setup.exe file.
4 In the **Welcome** dialog box, click **Next**.
5 In the **Program Maintenance** dialog box, select **Remove** and click **Next**.
6 Click **Remove**.
7 Click **Finish** when the process is complete.

Toolkit is uninstalled.

**Note:** You can also uninstall Toolkit using Add/Remove Programs in the Control Panel.

**Additional Installation Methods**

This section details additional methods for installing Toolkit, including specific instructions for installing Toolkit silently. You can run the Pivotal Toolkit 6.0.13 installation program without any user
Installing Pivotal Toolkit

Installing Toolkit Using Command-Line Parameters

You can run the Toolkit installation program using command-line parameters. Use a combination of switches to run the Toolkit installation program in either a silent, logged, or silent-logged mode for a typical or custom installation.

To invoke setup.exe from the command prompt

At the command prompt, change the directory to the folder containing the Toolkit installation files, and type `setup.exe`.

To run the installation program in various modes, type the additional switches listed in **Table 5-1** on page 5-9 and **Table 5-2** on page 5-10 at the command prompt.

**Note:** Installation switches are case-sensitive.

**Table 5-1** on page 5-9 details parameters passed to `setup.exe`.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>/v</td>
<td>Sends arguments to <code>MsiExec.exe</code>, the Microsoft Windows Installer engine. Possible arguments are listed in <strong>Table 2-2</strong> on page 2-3.</td>
</tr>
<tr>
<td>/s</td>
<td>Runs the installation in a silent mode and suppresses the <code>setup.exe</code> initialization window.</td>
</tr>
</tbody>
</table>

**Table 5-2** on page 5-10 details the parameters passed to `MsiExec.exe`. 
Installing Pivotal Toolkit

Command-Line Parameters for Custom Installation

The ADDLOCAL property stores a list of features, separated by commas, that are to be installed locally.

Table 5-3 on page 5-10 lists the various feature names for a custom installation with the ADDLOCAL command-line parameter.

Table 5-3 Feature Display Names

<table>
<thead>
<tr>
<th>Component</th>
<th>Feature name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customization Modules</td>
<td>CustomizationModule</td>
</tr>
<tr>
<td>Pivotal OCX</td>
<td>OCX</td>
</tr>
</tbody>
</table>

Use the ADDLOCAL command-line parameter to install specific components of Toolkit.

- To install only the **Customization Modules**, at the command prompt change the directory to the folder with the installation files, and type the following:
  
  `setup.exe /vADDLOCAL="CustomizationModule"`

- To install only the **Pivotal OCX**, at the command prompt change the directory to the folder with the installation files, and type the following:
  
  `setup.exe /vADDLOCAL="OCX"`

Examples of Installation Switches

Table 5-4 on page 5-11 provides examples of the commands that you can use to run the installation program from the command prompt. Change the directory to the folder containing the installation file before typing the command at the command prompt.
Listing Code Based Tasks in Workflows

You can use code file based Client and Server Task methods within workflows, to select a method and run the method as a part of a workflow. For more information on how to use the code file based Client and Server Task methods, see Code Based Tasks in Workflow.

Uninstalling Toolkit Using Command-Line Parameters

Uninstall Toolkit using silent uninstall commands.

To uninstall using command-line parameters

```bash
>> At the command prompt, type
msiexec.exe /x {14F1F25C-AF3D-4CB2-8705-82E8E82FA102} /qn
```

Toolkit is uninstalled.

Installing Toolkit Using JavaScript Files

You can use out-of-the-box JavaScript files provided in TK6.0.13.zip install the Toolkit. Extract the contents of the TK6.0.13.zip file to any folder on the administration computer. Double-click one of the JavaScript files depending on the mode of installation required.

Table 5-5 on page 5-12 details the JavaScript files provided for installing Toolkit.

<table>
<thead>
<tr>
<th>Command Line Syntax</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>setup.exe /v&quot;L*V\$TEMP\PivotalToolkit.log&quot;</code></td>
<td>Runs the installation program and creates a log file: (PivotlToolkit.log) in the defined temporary folder.</td>
</tr>
<tr>
<td><code>setup.exe /s /v/qn /L*V\$TEMP\PivotalToolkitSilentInstall.log&quot;</code></td>
<td>Runs the installation program in a silent mode without displaying dialog boxes, and creates a log file: (PivotlToolkitSilentInstall.log) in the defined temporary folder.</td>
</tr>
<tr>
<td><code>setup.exe /v&quot;ADDLOCAL=CustomizationModule&quot;</code></td>
<td>Installs the Toolkit Customization Module.</td>
</tr>
</tbody>
</table>
Installing Pivotal Toolkit

You can also place the JavaScript and `setup.exe` files on a network computer and e-mail the network location of the JavaScript file to users. For example, if a remote file server `FileServer01` has the `SilentInstall.js` and `setup.exe` files in the `Toolkit 6.0.13\Install` folder, send an e-mail to users containing a shortcut to the JavaScript file at the following network location:

```
\FileServer01\Toolkit 6.0\Install\SilentInstall.js
```

Run this file to install Toolkit.

### Table 5-5 JavaScript Files Provided for Toolkit Installation

<table>
<thead>
<tr>
<th>File name</th>
<th>Function</th>
<th>Command-line Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoggedInstall.js</td>
<td>Installs Toolkit and creates a verbose log file, <code>PivotalToolkit.log</code> in the defined temporary folder.</td>
<td><code>setup.exe /v&quot;/L*V \&quot;%TEMP%\PivotalToolkit.log\&quot;&quot;</code></td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td>Installs Toolkit silently without displaying any dialog boxes, and creates a verbose log file: <code>PivotalToolkitSilentInstall.log</code> in the defined temporary folder.</td>
<td><code>setup.exe /s /v&quot;/qn /L*V \&quot;%TEMP%\PivotalToolkitSilentInstall.log\&quot;&quot;</code></td>
</tr>
</tbody>
</table>

**Note:** Backslash and double quotation mark characters in the `/L*V` switch argument must be preceded by a backslash in order to pass these parameters to `MsiExec.exe` properly.
Setting up License Management
License Management Terminology

*Table 6-1* on page 6-2 describes the terms used in this chapter.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activated users</td>
<td>Activated users are the named users who are assigned a license to access a Pivotal CRM system.</td>
</tr>
<tr>
<td>License file</td>
<td>A file that stores information about licensing such as the total number of licenses that can be assigned to users. The license file is used to track the number of available licenses that can be assigned or unassigned.</td>
</tr>
<tr>
<td>Locking code</td>
<td>A code generated specifically for the Pivotal system. Use Pivotal Administration Console to generate the locking code.</td>
</tr>
<tr>
<td>Named users</td>
<td>Users added to the Users table in Pivotal CRM.</td>
</tr>
<tr>
<td>Production license file</td>
<td>A license file to be used for a Production System. Depending on the licensing agreement, the production license file allows only a specified number of licenses to be assigned to users. Production license files are perpetual, with no expiration date.</td>
</tr>
<tr>
<td>Demo license file</td>
<td>A license file is to be used for those Pivotal Systems that do not require a production license file. The demo license file grants access to only 70 named and activated users, of which 20 are mobile users. Demo license files are not perpetual, and have an expiration date.</td>
</tr>
</tbody>
</table>

Overview

Pivotal CRM enforces license management. Only named and activated users are granted access to Pivotal CRM systems. Named users are the users added to the Users table. Activated users are the named users who are specifically assigned a license to access a Pivotal CRM system.

Information about licensing, such as the total number of licenses that can be assigned to users, is stored as encrypted data in a license file.

Differences Between Old and New Licensing Solutions

As of Service Pack 8, Pivotal License Manager 6.0 Service Pack 3 is no longer required. Licensing functionality is contained in Pivotal CRM 6.0 Service Pack 8. *Table 6-2* on page 6-3 lists the differences between the old and new licensing solutions.
Setting up License Management

Table 6-2 Difference between old and new licensing solutions

<table>
<thead>
<tr>
<th>Pivotal License Manager 6.0</th>
<th>New Licensing Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses third-party licensing components</td>
<td>Does not depend on any third-party components</td>
</tr>
<tr>
<td>Separate server required</td>
<td>Does not require a separate server. All licensing operations are administered from the administrative computer.</td>
</tr>
<tr>
<td>Licensing functionality required installation of Sentinel RMS License Manager and Pivotal License Manager.</td>
<td>No separate software required. Licensing functionality is built into Pivotal CRM 6.0.13.</td>
</tr>
<tr>
<td>Locking code is specific to the Ethernet address and the NetBIOS name of the license server computer.</td>
<td>Locking code is specific to the Company Name provided while generating the locking code.</td>
</tr>
<tr>
<td>Locking code generated on the license server computer.</td>
<td>Locking code generated on the administrative computer.</td>
</tr>
<tr>
<td>Licensing administered from main and satellite systems.</td>
<td>Licensing administered from main system only.</td>
</tr>
</tbody>
</table>

Demo License File

The Licensing folder in PSS6.0.13.zip contains the demo.ldf demo license file which can be used for those Pivotal Systems that do not require a production license file.

The demo license file grants access to only 70 named and activated users, of which 20 are mobile users. It expires on December 31st, 2013.

Request for a production license file for a Production System. For more information, see Requesting a Production License File on page 6-4.

Setting up License Management

This section details the procedures to set up license management for a Pivotal CRM deployment.

Before you set up an Pivotal CRM system for licensing, install the required Pivotal CRM software and create Pivotal CRM systems. Also restore the *.rdf files for each Pivotal CRM system. Ensure that you have completed the following steps before setting up license management:

- Restoring the Customization Module on page 5-4
- Setting Table Permissions on page 5-5
- Applying Customization Changes on page 5-6
- Upgrading from Offline on page 5-6

For more information, see Chapter 2, Deployment Scenarios and Tasks.
To set up license management

1. **Generate the locking code**
2. **Request for a production license file**
3. **Set up Pivotal CRM systems for license management**
   a) **Install the license file**
   b) **Assign licenses**

**Generating the Locking Code**

To obtain a production license file, provide the locking code of the Pivotal CRM system to Pivotal Global Technical Support.

**To generate the locking code**

1. Log on to the administrative computer as the administrator.
2. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.
3. In the **Servers** pane of the Pivotal Administration Console, expand **Data Synchronization**, and then expand the registered DSM server. You will see the name of the master system.
4. Right-click the master system name, and then click **System Properties**.
5. On the **License** tab, enter the name of your company in the **Company Name** box.
6. Click **Save Locking Code**. Specify a name for the file, and click **Save**.

The locking code is saved in a `.llck` file.

**Requesting a Production License File**

Provide the `.llck` file to Pivotal Global Technical Support along with your request for a production license file. Based on the number of licensed users, Pivotal Global Technical Support will send you a production license file.

**To request a production license file**

2. Create a new Support Incident.
3. Provide relevant information in all mandatory fields.
4. Select **License Request** from the **Type** drop-down list. Provide the following details:
   - Number of LAN licenses required
   - Number of mobile licenses required
5 Attach the .llck file to the Support Incident.
6 Click Save.

After your support incident request has been logged and processed, you will receive the required production license files from Pivotal Global Technical Support.

**Setting Up Pivotal CRM Systems for License Management**

If you are migrating from previous versions of Pivotal platform, see the *Pivotal CRM 6.0 Migration Guide*. For more information about applying 6.0.13, see the *Pivotal CRM 6.0.13 Release Notes and Quick Reference*.

**To set up Pivotal CRM systems for license management**

1 Install the license file
2 Assign licenses

**Installing the License File**

When you receive the required production license file from Pivotal Global Technical Support, install the license file for the Pivotal CRM system.

You can assign licenses only after a license is installed for the Pivotal CRM system.

Install the license file for the master system.

**Note:** You do not need to specify the license file for satellite and mobile systems. The Customization System does not require a license file either.

**To install the license file**

1 On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**
2 In the Servers pane of the **Pivotal Administration Console** window, expand the appropriate server listed under **Data Synchronization**, and then select the Pivotal CRM system.
3 Right-click the Pivotal CRM system name and select **System Properties**.

**Note:** You need to be a member of the **PivotalCRMAdmin** group to perform the next set of steps. For information about the **PivotalCRMAdmin** group, see **PivotalCRMAdmin Group** on page 3-11.
4 On the License tab, click Open License, and browse to the location containing the license file.

5 Select the license file, and click Open.

6 Click OK.

The license file is specified for the Pivotal CRM system.

Managing User Licenses

Use Pivotal Administration Console to assign or unassign licenses.

If you have started the DSM for a specific Pivotal CRM system, and you want to assign or unassign licenses for users of another Pivotal CRM system, stop the DSM before assigning or unassigning licenses.

To assign or unassign licenses for a Pivotal CRM system, ensure that:

- You are a member of the PivotalCRMAdmin group or a member of the PivotalCRMPowerUsers role or you have been granted db_owner rights to the Business Module and Enterprise Data databases.
  
  For more information about the PivotalCRMAdmin Group, see PivotalCRMAdmin Group on page 3-11. For more information about the PivotalCRMPowerUsers group, see Oracle Prerequisites on page 8-3.

- The Pivotal CRM system is defined, the FilePath specified, and *.rdf files restored. Complete the tasks detailed in Chapter 2, Deployment Scenarios and Tasks.

To be added as a user to a Pivotal CRM system

1 On the administration computer, click Start, point to Programs, point to CDC Software, and point to Pivotal CRM. Then, click Pivotal Administration Console.

2 In the Servers pane of the Pivotal Administration Console window, expand the appropriate server listed under Data Synchronization, and then select the Pivotal CRM system.

3 Right-click the Pivotal CRM system name and select Connect.

4 Right-click in the Users pane and select New User.

5 Type the name of the user in the New User dialog box and click OK. The user name must be identical to the user's network user ID, although it is not case-sensitive.

6 Close the Pivotal Administration Console window.

The user is added. Repeat steps 1 to 6 for each user.
Assigning Licenses

Before assigning licenses to users or groups for the Pivotal CRM system:

- Restore the Pivotal CRM system.
  If you are migrating to a Pivotal Platform 6.0 deployment, see the Pivotal CRM 6.0 Migration Guide. For more information about applying 6.0.13, see the Pivotal CRM 6.0.13 Release Notes and Quick Reference.
- Specify the license file for the Pivotal CRM system.
  For more information about specifying the license file, see Installing the License File on page 6-5.
- Connect to the Pivotal CRM system.
  For information about connecting to a Pivotal CRM system, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.
- Specify the e-mail address and HTTP server for mobile users and synchronizing systems.
  For information about specifying the e-mail address and the HTTP server, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.

To assign licenses to users or groups

1. On the administration computer, where the Pivotal CRM system is defined, click Start, point to Programs, point to CDC Software, and point to Pivotal CRM. Then, click Pivotal Administration Console.

2. In the Servers pane of the Pivotal Administration Console window, expand a server under Data Synchronization and select the Pivotal CRM system.

3. In the Users pane, click the Users option to display the list of users.
   If you want to assign licenses to groups, click the Groups option in the Users pane.

4. In the User ID or Group ID column:
   - Select the user or group name. To select multiple users or groups, do one of the following:
     - Press SHIFT for contiguous selection
     - Press CTRL for non-contiguous selection
   - Right-click the selected users or groups, and then select one of the following:
     - Assign License for all users that require a license and are not mobile users
     - Assign Mobile License for a mobile user or mobile group

5. Click Yes in the confirmation box if you have selected multiple users or groups.
Setting up License Management

Licenses are assigned to the selected users or groups.

**Warning!** If you select a large number of users or groups, the time taken to assign licenses will be significantly longer than the time taken to assign licenses to a smaller number of users or groups.

The ✅ icon is displayed in the **License** column for LAN licenses that have been assigned to users. The ⏺ icon is displayed for mobile licenses.

If all members of a group are assigned a license, the ⏺ icon is displayed in the **License** column. If only some members of a group are assigned a license, the ⏺ icon is displayed in the **License** column.

The number of available licenses displayed in the **Available Licenses** box changes depending on the number of licenses assigned or unassigned. Ensure that the number of licenses you assign does not exceed the number of licenses displayed in the Available Licenses box, or else an error message is displayed.

The number of available mobile licenses displayed in the **Available Mobile Licenses** box changes depending on the number of licenses assigned or unassigned. Ensure that the number of assigned mobile licenses does not exceed the number of available mobile licenses displayed in the **Available Mobile Licenses** box, or else an error message is displayed. Assigning a mobile license also decrements the number of available licenses.

### Unassigning User Licenses

You can unassign single or multiple user licenses. You can also unassign single or multiple group licenses. When all licenses are unassigned, the number displayed in the **Available Licenses** box in the Users pane of the **Pivotal Administration Console 6.0** window, will be the same as the number displayed in the **Total Licenses** box.

This section details the following procedures:

- **Unassigning Non-Mobile User Licenses**
- **Unassigning Mobile Licenses**

If you have started the DSM for a specific Pivotal CRM system, and you want to unassign licenses for users of another Pivotal CRM system, stop the DSM before unassigning licenses.

### Unassigning Non-Mobile User Licenses

You can unassign single user, multiple user, group, or multiple group licenses. If you unassign a license for the DSM user, the DSM will be stopped. Before unassigning the satellite user license, stop synchronization for the satellite user using the **Stop Synchronization**
command in Pivotal Administration Console. For more information about stopping synchronization, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

**To unassign user or group licenses**

1. On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2. In the Servers pane of the **Pivotal Administration Console** window, expand a server under **Data Synchronization** and select the Pivotal CRM system.

3. In the Users pane, click the **Users** option to display the list of users.
   
   If you want to unassign licenses to groups, click the **Groups** option in the Users pane.

4. In the **User ID** or **Group ID** column:
   - Select the user or group name. To select multiple users or groups, do one of the following:
     - Press SHIFT for contiguous selection
     - Press CTRL for non-contiguous selection

5. Right-click the selected users or groups, and then select **Unassign License**.

Licenses are unassigned, and the [ or ] icons are not displayed in the **License** column. If only some members of a group are assigned a license, the [ icon is displayed in the **License** column. The number of available licenses displayed in the **Available Licenses** box changes depending on the number of licenses assigned or unassigned.

**Unassigning Mobile Licenses**

Before you unassign mobile licenses, ensure that you are a member of the **PivotalCRMAdmin** group.

Before unassigning the mobile user license, stop synchronization for the mobile user using the **Stop Synchronization** command in Pivotal Administration Console. For more information about stopping synchronization, see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*.

**To unassign mobile licenses**

1. Stop mobile synchronization for the mobile user on the parent system.

   For more information about stopping mobile synchronization see the *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*. 
2 Unassign licenses for mobile users or groups on the parent system. For more information about unassigning licenses for mobile users or groups, see To unassign mobile user or group licenses on the parent system on page 6-10.

To unassign mobile user or group licenses on the parent system

1 On the computer where the parent system is defined, click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

2 In the Pivotal Administration Console window, expand a server under Data Synchronization and select the Pivotal CRM system.

3 In the Users pane, click the Users option to display the list of users. If you want to unassign group licenses, select the Groups option in the Users pane.

4 In the User ID or Group ID column:
   a) Select the mobile user or group name. To select multiple users or groups, do one of the following:
      • Press SHIFT for contiguous selection
      • Press CTRL for non-contiguous selection
   b) Right-click the selected users or groups and click Unassign License.
   c) Click Yes in the confirmation box if you have selected multiple users or groups.

   Licenses are unassigned. The icon that was displayed earlier for the assigned license will no longer be visible in the License column.

   If only some members of a group are assigned a license, the icon is displayed in the License column.

   After unassigning licenses for mobile users, you can initialize the child system on the mobile computer. For more information about initializing the child system on the mobile computer, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.
7

Installing Pivotal Business Server
Overview

Pivotal Business Server is a transaction processing platform that forms the middle tier (business logic) of Pivotal Platform which supports XML and .NET interfaces. Pivotal Business Server is required to manage workflow by providing business logic and data retrieval services for client applications. If you are migrating to Pivotal Business Server 6.0.13 from an earlier version, see the Pivotal CRM 6.0 Migration Guide. For more information about applying 6.0.13, see the Pivotal CRM 6.0.13 Release Notes and Quick Reference.

The installation files for Pivotal Business Server 6.0.13 are available in the PBS6.0.13.zip file.

Download the installation files for Pivotal Business Server 6.0.13 (PBS6.0.13.zip file) from the Product Downloads area at the Aptean Customer or Partner Portals. For more information about the contents of the PBS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.

Note: The Pivotal Business Server requires Server Affinity in network load balancing product while being set up in a network load balance environment. For more information on network load balancing, see the documentation for network load balancing products.

System Requirements

For more information about system requirements, see Pivotal CRM 6.0 Compatibility Guide.

Components Installed

Table 7-1 on page 7-2 details the components installed during the installation of Pivotal Business Server.

<table>
<thead>
<tr>
<th>Selection</th>
<th>Selection</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server</td>
<td>Server</td>
<td>Pivotal Business Server</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Pivotal System Manager</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pivotal Configuration Utility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pivotal Full-text configuration Utility</td>
</tr>
<tr>
<td>Services</td>
<td>Services</td>
<td><strong>Script Service</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail Management Service</td>
</tr>
<tr>
<td>Mobile</td>
<td>N/A</td>
<td>Mobile component of Pivotal Business Server</td>
</tr>
</tbody>
</table>
The Pivotal Configuration Utility is installed along with Pivotal Business Server. Use the Pivotal Configuration Utility to facilitate the configuration of a Pivotal system. The Pivotal Configuration Utility helps to:

- Optimize the operation of Pivotal Business Server.
- Optimize loading of Pivotal Business Server in a development environment

Additionally, use Pivotal Configuration Utility to configure the following:

- Development and run-time settings
- IIS settings
- COM+ settings
- E-mail settings
- XML debugging
- Logging verbosity
- E-mail management service
- Scheduled task service
- Tuning
- Active notification settings
- Report query time-outs
- Forced garbage collection settings

For more information about the Pivotal Configuration Utility, see the Pivotal CRM 6.0 Administration Guide.

## Security Options

Pivotal Business Server provides access to client applications. To set up security features for client applications, enlist the help of a customization specialist.

Pivotal Business Server is a COM+ application that runs under a privileged Windows account, the Pivotal Business Server (PBS) user.

The authentication methods for applications that use Pivotal Business Server to access Pivotal CRM databases are either a standard Windows authentication method or a non-Windows authentication method.
Windows and User Authentication

For Windows authentication and User Authentication, a valid Windows domain account is necessary.

- Integrated Windows Authentication: Logs onto Pivotal Client by using the user’s Windows logon credentials.
- User Authentication: Enables you to specify a user name and password to log on to Pivotal Client. This method does not use the user’s Windows logon credentials.

Non-Windows Authentication

Pivotal Business Server also supports the non-Windows authentication method for applications such as eService and ePartner. Non-windows authentication can be performed by referring to the Contact_Web_Details table in Pivotal CRM. This method of authentication does not require a Windows user account.

Unicode Considerations

To register VB AppServer rules without any error, specify the appropriate regional language settings. Use only characters supported by the codepage for the regional language in the Business Server installation path.

To specify the regional and language settings, make sure you log on to the computer as a local administrator and use the Regional and Language Options dialog box in the Control Panel. For more information about specifying regional and language settings, see Microsoft documentation.

Installation Tasks

The checklists in this section list all the tasks required to complete Pivotal Business Server installation for SQL and Oracle environments.

Installation Tasks for SQL Server Environment

Table 7-2 on page 7-4 lists all the tasks required for successful installation of Pivotal Business Server in a SQL Server environment.

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating the PBS domain user</td>
<td>See Creating a Pivotal Business Server (PBS) Windows User Account on page 7-6</td>
</tr>
<tr>
<td>Creating a PBS user SQL logon account in SQL Server</td>
<td>See Creating a PBS User in SQL Server on page 7-6</td>
</tr>
<tr>
<td>Ensuring the PBS user SQL logon account uses Windows Authentication</td>
<td>See Creating a SQL Logon account on page 7-7</td>
</tr>
</tbody>
</table>
**Table 7-2 Task Checklist for SQL environment (Continued)**

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring the PBS user SQL logon account has db_owner rights to the target databases, though this is not mandatory, fewer rights can also be granted.</td>
<td>See <a href="#">Granting SQL Permissions on page 7-7</a>.</td>
</tr>
<tr>
<td>Installing Microsoft Internet Information Services (IIS)</td>
<td></td>
</tr>
<tr>
<td>Installing Pivotal Business Server</td>
<td>See <a href="#">Installing Pivotal Business Server on page 7-5</a>.</td>
</tr>
<tr>
<td>Creating ODBC connections for the target system BM and ED databases on the Pivotal Business Server computer</td>
<td>See <a href="#">Creating ODBC Connections on page 7-13</a>.</td>
</tr>
<tr>
<td>Specifying the PBS user ID in the Pivotal Business Server AppServer component properties</td>
<td></td>
</tr>
<tr>
<td>Defining a system for the PBS user on the Pivotal Business Server computer</td>
<td></td>
</tr>
</tbody>
</table>

**Installation Tasks for Oracle Environment**

*Table 7-3* on page 7-5 lists all the tasks required for successful installation of Pivotal Business Server in an Oracle environment.

**Table 7-3 Task Checklist for Oracle environment**

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating the PBS domain user</td>
<td>See <a href="#">Creating a Pivotal Business Server (PBS) Windows User Account on page 7-6</a>.</td>
</tr>
<tr>
<td>Creating a PBS user in Oracle</td>
<td>See <a href="#">Creating a PBS User in Oracle Server on page 7-7</a>.</td>
</tr>
<tr>
<td>Ensuring the PBS user login has administrative rights to the target databases</td>
<td></td>
</tr>
<tr>
<td>Installing Microsoft Internet Information Services (IIS)</td>
<td></td>
</tr>
<tr>
<td>Installing Pivotal Business Server</td>
<td>See <a href="#">Installing Pivotal Business Server on page 7-5</a>.</td>
</tr>
<tr>
<td>Creating ODBC connections for the target system BM and ED databases on the Pivotal Business Server computer</td>
<td>See <a href="#">Creating ODBC Connections on page 7-13</a>.</td>
</tr>
<tr>
<td>Specifying the PBS user ID in the Pivotal Business Server AppServer component properties</td>
<td></td>
</tr>
<tr>
<td>Defining a system for the PBS user on the Pivotal Business Server computer</td>
<td></td>
</tr>
</tbody>
</table>

**Installing Pivotal Business Server**

This section details the procedure to install Pivotal Business Server on a server or a mobile computer. Install and configure Pivotal Business Server to connect to a target system such as a Production System or an Offline System in a master or satellite environment.
For Pivotal Client deployments, install Pivotal Business Server on the server. Client workstations do not require Pivotal Business Server unless they are running as mobile clients. Install the mobile component of Pivotal Business Server on all mobile clients.

You can install Pivotal Business Server using the `setup.exe` file available in the `PBS6.0.13.zip`. You can also install Pivotal Business Server using command-line parameters or JScript files. For more information about using command-line parameters or JScript files, see *Additional Installation Methods* on page 7-18.

**Note:** You must set up and define a Pivotal CRM system before installing and configuring Pivotal Business Server. For more information, see *Administrative Tasks* on page 4-1.

### Preliminary Tasks

Before installing Pivotal Business Server, complete the following tasks:

2. Grant administrator privileges to the PBS user.
3. Create a PBS User in
   a) SQL Server.
   b) Oracle.

### Creating a Pivotal Business Server (PBS) Windows User Account

Create a PBS user domain account in Active Directory. The PBS user is a domain user account created to run Pivotal Business Server and requires no special status as a Pivotal CRM user.

### Granting Administrator Privileges to the PBS User

On the computer designated to run Pivotal Business Server grant the PBS user account local Administrator rights.

### Creating a PBS User in SQL Server

If you plan to run Pivotal Business Server using SQL Server, do the following:

1. Create an SQL logon account for the PBS user.
2. Grant SQL permissions for the PBS user.
Creating a SQL Logon account

SQL Server contains databases for the Production System. To enable the Pivotal Business Server to connect to the Production System, create a logon account for the PBS user on the SQL Server computer.

Do the following when you create a logon account for the PBS user:

- Select **Windows Authentication**.
- Create a logon account with the same spelling and letter case as the PBS user account created in Active Directory.

Granting SQL Permissions

Grant database owner (db_owner) rights to the PBS user for the databases on the SQL Server. For more information, see “Granting SQL Server Permissions” on page 3-10, and “Creating SQL Server Logins” on page 3-11.

Creating a PBS User in Oracle Server

To create a PBS user


2. Modify SECTION 6 of the `install.sql` script, to create the PBS user. For more information, see Listing 7-1 on page 7-8.
Listing 7-1 Sample script for creating a PBS user

```sql
-- SECTION 6: Create the PBS user
--
-- PBS is the user who runs Pivotal Business Server components
CREATE USER &PBSUser
    PROFILE DEFAULT
    IDENTIFIED BY &PBSPass
    DEFAULT TABLESPACE USERS
    TEMPORARY TABLESPACE TEMP
    ACCOUNT UNLOCK;

GRANT Connect, Resource, PivotalCRMAdmin, PivotalCRMUsers TO &PBSUser;

-- grant privileges required for dynamic package and procedure creation
-- ANY is required to create packages under BM/ED schemas
GRANT CREATE ANY PROCEDURE, ALTER ANY PROCEDURE, EXECUTE ANY PROCEDURE, DROP ANY PROCEDURE TO &PBSUser;

ALTER USER &PBSUser QUOTA UNLIMITED ON USERS;
--ALTER USER &PBSUser QUOTA UNLIMITED ON TEMP;
ALTER USER &PBSUser QUOTA UNLIMITED ON &BM_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &BM_TabSpaceIndex;
ALTER USER &PBSUser QUOTA UNLIMITED ON &ED_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &ED_TabSpaceIndex;
ALTER USER &PBSUser QUOTA UNLIMITED ON &CM_TabSpaceTable;
ALTER USER &PBSUser QUOTA UNLIMITED ON &CM_TabSpaceIndex;
GRANT SELECT ANY TABLE to &PBSUser;
GRANT SELECT ANY DICTIONARY to &PBSUser;
--Grant CREATE ANY PROCEDURE to &PBSUser;
--Grant DROP ANY PROCEDURE to &PBSUser;
-- This is required by PBS, to create procedures in ED Schema..
-- If you connect as ED instead of PBS, then you don't need this.
```
3 Run the script in Oracle SQL*Plus to create the PBS user.

Installation

If you install Pivotal Business Server on a Windows Server 2003 computer, ensure that IIS, Active Server Pages (ASP), and ASP.NET are installed and enabled. Use the Manage Your Server wizard to enable IIS and ASP.NET. Use the Internet Information (IIS) Manager to enable Active Server Pages. For more information about using the Manage Your Server wizard, or Internet Information (IIS) Manager, see the Microsoft documentation.

If you install Pivotal Business Server on a Windows Server 2008, Windows Server 2008 R2, Windows Vista, or Windows 7 computer, then IIS, Active Server Pages (ASP), and ASP.NET are automatically enabled and configured during installation.

For specific system requirements for the Pivotal Business Server computer, see Pivotal CRM 6.0 Compatibility Guide.

Download the installation files for Pivotal Business Server (PBS6.0.13.zip file) from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the contents of the PBS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.

To install Pivotal Business Server

1 Log on as the PBS user to the computer designated to run Pivotal Business Server.

2 Extract the contents of the PBS6.0.13.zip file to any folder on the Pivotal Business Server computer.

3 Browse to the folder with the contents of the PBS6.0.13.zip file and double-click the setup.exe file for Pivotal Business Server.

4 In the Open File -Security Warning dialog box, click Run.

Note: Use upper case letters for all variable values.

Note: On mobile computers with Windows XP operating systems, close Microsoft Outlook and install IIS before installing Pivotal Business Server.
5 If the following are not already installed on the computer, the InstallShield Wizard dialog box is displayed:
   • Microsoft Windows Installer 4.5 (for all supported operating systems, except Windows Server 2008 R2 and Windows 7 computers)
   • .NET Framework 4
   • IIS 7.0 (for Windows Server 2008 and Windows Vista computers)
   • IIS 7.5 (for Windows Server 2008 R2 and Windows 7 computers)
   • MSXML 6.0 Service Pack 1
   • Windows Imaging Component
   • SQL Server 2008 R2 Native Client
   • SAP Crystal Reports runtime engine for .NET Framework 4

6 Do one of the following:
   • Click Install.
   • Click Cancel to abort the installation of Pivotal Business Server.

   **Note:** If the .NET Framework 4 is not already installed, the Pivotal Business Server 6.0.13 installation program will install it by default. The installation of .NET Framework 4 is via a Web download, using a bootstrap loader that downloads .NET Framework 4 from Microsoft. Click Install to install .NET Framework 4.

7 In the Welcome dialog box, click Next.

8 In the License Agreement dialog box, accept the license agreement, and then click Next.

9 Click Next in the Warning dialog box. If the Program Maintenance dialog box is displayed instead of the Warning dialog box, the installation program has detected a previous installation of Pivotal Business Server.

10 In the Setup Type dialog box, follow the steps either for the computer designated as the Pivotal Business Server or the mobile computer:

   **For the Pivotal Business Server computer:**
   a) Select the Server option.
   b) To change the directory to which files are installed, click Change.
      In the Change Current Destination Folder dialog box, click Look in to select the destination folder and click OK. Use only characters supported by the codepage for this language in the installation path.
   c) Click Next.
d) In the Custom Setup dialog box:
   • Expand Services.
   • To install the Script Service, select This feature will be installed on local hard drive from the Script Service drop-down list. To install the Email Management Service, select This feature will be installed on local hard drive from the E-mail Management Service drop-down list.
   • Proceed to step 11.

For a Mobile computer:
   a) Select the Mobile option.
   b) To change the directory to which files are installed, click Change.
   c) In the Change Current Destination Folder dialog box, click Look in to select the destination folder and click OK. Use only characters supported by the codepage for this language in the installation path.
   d) Click Next.

11 Click Install to begin the installation.

12 Click Finish when the installation is complete.

By default, a folder called Business Server is created in the C:\Program Files\CDC Software\Pivotal CRM folder. With the installation of Pivotal Business Server, a virtual directory called ePower is also created in IIS.

If Pivotal Business Server is installed on a x64 version of the operating system, the Business Server folder is created in the C:\Program Files (x86)\CDC Software\Pivotal CRM\ folder by default.

Warning! On x64 versions of Windows Server 2003, the Pivotal Business Server installer will switch IIS to run in the 32-bit mode instead of the 64-bit mode. If there are other applications on the Pivotal Business Server computer, then the switch will cause applications that require IIS in the 64-bit mode to stop working. After Pivotal Business Server has been installed and if any other application switches IIS to the 64-bit mode, then Pivotal Business Server will stop working.

Configuring the Microsoft Outlook Client

Install the Microsoft Outlook client on the computer which hosts Pivotal Business Server. Microsoft Outlook should not be configured to use a .pst file.

Note: If you have configured Simple Mail Transfer Protocol (SMTP), it is not necessary to install and configure Microsoft Outlook. Use the Pivotal Configuration Utility to configure the SMTP parameters.
Configuring Pivotal Business Server

This section details the steps to configure Pivotal Business Server.

To configure Pivotal Business Server

1. Specify a user account.
2. Create ODBC connections.
3. Define a target system.
4. Start the Microsoft Distributed Transaction Coordinator.
5. Configure Scheduled Scripts.

Specifying a User Account

On the computer that hosts Pivotal Business Server, specify the PBS user account created to run Pivotal Business Server. When no user account is specified, the interactive user account is used to run Pivotal Business Server. The interactive user account is the account of the current user running the Windows console session. This account would require db_owner rights to the Business Module and Enterprise Data databases. The Pivotal Business Server COM+ application will stop running if the PBS user is not logged on and the system is set to run under the interactive user.

Note: Set Pivotal Business Server to run on the PBS user account.

To specify the PBS user for Pivotal Business Server

1. Click Start, click Control Panel, click Administrative Tools, and then click Component Services.
2. In the Component Services window, expand the Component Services tree view.
3. Expand, Computer, expand My Computer and then expand COM+ Applications.
5. In the Pivotal Lifecycle Engine AppServer Properties dialog box, click the Identity tab, and then select This user.
6. In the User box, type the PBS user name.
7. In the Password box, type the PBS user’s password.
8. In the Confirm password box, re-type the PBS user’s password, and then click OK.

The PBS user is specified.
Creating ODBC Connections

Create ODBC connections for the databases. Before you create ODBC connections, ensure that you have created the databases. For more information about creating databases, see Chapter 3, Preparing for Deployment.

Creating ODBC Connections in SQL Server

For the databases, create ODBC connections. Specify any Data Source Name (DSN), for example:

- BM for the Business Module of the Production System
- ED for the Enterprise Data of the Production System

To create an ODBC connection

1. Use the ODBC Data Source Administrator on the Pivotal Business Server computer to create ODBC connections. To open the Administrator, click Start, point to Programs, point to CDC Software, and point to Pivotal CRM. Then, select Pivotal System Manager.
   - In the Pivotal System Manager window, click New.
   - In the New System window, click ODBC.
2. In the ODBC Data Source Administrator dialog box, select the System DSN tab, and then click Add.
3. In the Create New Data Source dialog box, select the SQL Server driver, and then click Finish.
4. In the Create a New Data Source to SQL Server dialog box, do the following for each DSN:
   a) Type the data source name, for example, BM.
   b) Type the SQL Server name, or select the SQL Server name from the drop-down list.
   c) Type a description (optional).
   d) Click Next.
5. Accept the default values specified in the second dialog box of the Create a New Data Source to SQL Server window.

   Note: Do not select the option to specify SQL Server authentication.

6. Click Next.
7. In the next dialog box, select the Change the Default database to check box and select the target database from the drop-down list. For example, select the Production Business Module database as a target for BM, or the Production Enterprise Data database as a target for ED.
8. Click Next and then click Finish to create the ODBC connection.
9 To test the connection, click **Test Data Source**.

10 Click **OK**.

To create ODBC connections to the other databases, repeat step 1 to step 9.

### Creating ODBC Connections in Oracle Server

This section details how to create ODBC connections in the Oracle environment.

#### To create an ODBC connection

1 Use the ODBC Data Source Administrator on the Pivotal Business Server computer to create ODBC connections. To open the Administrator, click **Start**, point to **Programs**, point to **CDC Software**, and point to **Pivotal CRM**. Select **Pivotal System Manager**.
   - In the *Pivotal System Manager* window, click **New**.
   - In the **New System** window, click **ODBC**.

2 In the **ODBC Data Source Administrator** dialog box, select the **System DSN** tab, and then click **Add**.

3 In the **Create New Data Source** dialog box, select the Oracle ODBC driver listed as *Oracle in <Oracle_Home>*, and then click **Finish**.

4 In the **Oracle ODBC Driver Configuration** window, for each DSN:
   - Type a data source name using the notation
     `<Any_name>.schema_name`
     where *Any_name* can be any name you assign.
   - Type the Transparent Network Substrate (TNS) Service name, or select the TNS Service name from the drop-down list.
   - Type the schema name in the **User ID** box.

**Note:** Obtain the TNS Service name from the *tnsnames.ora* file, located at the following location: `ORACLE_HOME\network\admin`

5 To test the connection, in the **ODBC Driver Configuration** window, click **Test Connection**, and type the user name and password of the schema owner.

A successful ODBC connection is created in the Oracle database after you type the correct information in the **ODBC Driver Configuration** window.

If the connection fails, check that:
   - The *schema_name* exists in the database.
   - The *schema_name* and password are correctly entered.

6 Click **OK**.
To create other ODBC connections, repeat step 1 to step 6 for each schema.

**Defining a Target System**

Pivotal Client users can connect to a system that is defined by pairing the ODBC data sources of the Business Module and Enterprise Data databases. To specify the databases to which Pivotal Business Server can connect, define target systems for the user running Pivotal Business Server.

**To define a target system**

1. Log on as the PBS user, to the computer that hosts Pivotal Business Server.

2. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then select **Pivotal System Manager**.

3. In the **Pivotal System Manager** dialog box, click **New**.

4. In the **New System** dialog box, type a system name for the target system in the **System Name** box.

5. Select the name of the Business Module database from the **Business Module** drop-down list.

6. Select the name of the Enterprise Data database from the **Enterprise Data** drop-down list.

   **Note:** For the target system you define, ensure that the ODBC data sources connect to the correct databases.

7. In the **This system definition is available for area**, select the **Anyone who uses this computer (all users)** check box. This ensures that the system definition is visible to the Business Server user as well as other users who log on to the computer hosting Business Server.

8. For Oracle, in the **DBMS Login** tab, do the following:
   - In the **User Name** box, type the PBS user name.
   - In the **Password** box, type the PBS user's password.
   
   The PBS user name and password specified must be the user name and password used for logging into the Oracle database, and not the user name and password used for Integrated Windows Authentication.
   - Ensure that the **Use OS Authentication** check box is not selected.

9. Click **OK**.

10. In the **Pivotal System Manager** dialog box, click **Close**.
The target system is defined.

**Configuring the Microsoft Distributed Transaction Coordinator**

Start the Distributed Transaction Coordinator (DTC) service and set it to start automatically when the computer is turned on.

**Warning!** If the DTC service is not started, records are not saved to the database through Pivotal Business Server 6.0.13. Ensure that the DTC security is set correctly. If the computer hosting the Pivotal Business Server has Windows Firewall enabled, include msdtc.exe in the exceptions list.

If the Pivotal Business Server and the Pivotal CRM databases are not on the same computer, enable Network DTC Access for the Distributed Transaction Coordinator, by following the appropriate procedure:


**To enable Network DTC Access for the Distributed Transaction Coordinator on Windows XP and Windows Server 2003**

1. Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Administrative Tools**.
2. In the **Administrative Tools** window, double-click **Component Services**.
3. In the **Component Services** window, expand **Component Services** and then expand **Computers**.
4. Right-click **My Computer** and then select **Properties**.
5. In the **My Computer Properties** dialog box:
   a) Click the **MSDTC** tab.
   b) Click **Security Configuration** in the **Transaction Configuration** area.
6. In the **Security Configuration** dialog box:
   a) Select the **Network DTC Access** check box in the **Security Settings** area.
   b) Select the **Allow Inbound** and the **Allow Outbound** check boxes in the **Transaction Manager Communication** area.
   c) Depending on the deployment environment, select either **Mutual Authentication Required**, **Incoming Caller Authentication Required** or **No Authentication Required**. For more information about which authentication method to use, see *DTC Transaction Modes* on page 7-18.
Installing Pivotal Business Server

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Installing Pivotal Business Server

7) In the DTC Logon Account area, ensure that NT Authority\NetworkService account is displayed.

e) Click OK.

7) Click OK.

8) Close the Component Services window.

Network DTC Access for the Distributed Transaction Coordinator is enabled. You can start the Distributed Transaction Coordinator.


1) Click Start, point to Settings, click Control Panel, and then double-click Administrative Tools.

2) In the Administrative Tools window, double-click Component Services.

Note: On a Windows Vista computer, open an elevated command prompt and run the comexp.msc command in order to launch the Component Services tool.

3) In the Component Services window, expand Component Services and then expand Computers.

4) Expand My Computer and then click Distributed Transaction Coordinator.

5) Right-click Local DTC and select Properties.

6) In the Local DTC Properties dialog box, click the Security tab, and:

a) Select the Network DTC Access check box in the Security Settings area.

b) Select the Allow Inbound and the Allow Outbound check boxes in the Transaction Manager Communication area.

c) Depending on the deployment environment, select either Mutual Authentication Required, Incoming Caller Authentication Required or No Authentication Required. For more information about which authentication method to use, see DTC Transaction Modes on page 7-18.

d) In the DTC Logon Account area, ensure that NT Authority\Network service account is displayed.

e) Click OK.

7) Close the Component Services window.

Network DTC Access for the Distributed Transaction Coordinator is enabled. You can start the Distributed Transaction Coordinator.
To start Distributed Transaction Coordinator

1. Click **Start**, point to **Programs**, click **Administrative Tools**, and then click **Services**.

2. In the **Services** window, right-click **Distributed Transaction Coordinator** and click **Properties**.

3. In the **Distributed Transaction Coordinator Properties (Local Computer)** dialog box, select **Automatic** from the **Startup type** drop-down list.

4. In the **Service status** area, click **Start**.

5. Click **OK**.

This sets the Distributed Transaction Coordinator service to automatically start when the computer is rebooted.

DTC Transaction Modes

In a majority of deployments, setting the DTC authentication method to **Mutual Authentication Required** is recommended. Only in the following cases, **Mutual Authentication Required** will cause problems, and in these cases, **No Authentication Required** is the recommended transaction mode:

- The network access is between a computer running Windows 2000 Server and another computer running Windows Server 2003.
- The network access is between two domains that do not have a mutual trust configured.
- The network access is between computers that are members of a workgroup.

Use the **Incoming Caller Authentication Required** transaction mode between Windows Server 2003-based computers in a clustered environment.

Configuring Scheduled Tasks

For more information about Configuring Scheduled Tasks, see the *Pivotal CRM 6.0 Administration Guide*.

Additional Installation Methods

This section details additional methods for installing Pivotal Business Server 6.0, including specific instructions for a silent installation of Pivotal Business Server. You can run the Pivotal Business Server 6.0.13 installation program by using specific command-line...
parameters. You can also use the JScript file provided in the PBS6.0.13.zip file to perform a silent installation. This section details the following:

- *Installing Pivotal Business Server using JScript Files* on page 7-22

### Installing Pivotal Business Server Using Command-Line Parameters

You can run the Pivotal Business Server installation program using command-line parameters to control the installation options available. Use a combination of switches to run the Pivotal Business Server installation program for a typical or custom installation.

**To invoke setup.exe from the command prompt**

```bash
>> At the command prompt, change directory to the folder containing the Pivotal Business Server installation files, and type setup.exe.
```

To run the installation program in various modes, at the command prompt type the additional switches listed in *Table 7-4* on page 7-19 and *Table 7-5* on page 7-20.

**Note:** Installation switches are case-sensitive.

*Table 7-4* details parameters passed to setup.exe.

**Table 7-4 Parameters passed to setup.exe**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>/v</td>
<td>Sends arguments to MsiExec.exe, the Microsoft Windows Installer Engine. <em>Table 7-5</em> lists the possible arguments that are sent to MsiExec.exe.</td>
</tr>
<tr>
<td>/s</td>
<td>Runs the installation in a silent mode and suppresses the setup.exe initialization window.</td>
</tr>
</tbody>
</table>
Table 7-5 details parameters passed to MsiExec.exe.

Table 7-5 Parameters passed to MsiExec.exe

<table>
<thead>
<tr>
<th>Switch</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>/qn</td>
<td>Specifies a quiet mode of installation without dialog boxes and passes the parameters to MsiExec.exe.</td>
</tr>
<tr>
<td>/L*V</td>
<td>Specifies a path to the log file and creates a verbose log file for installation. The verbose log file provides information about the circumstances under which errors occur, and is useful while troubleshooting an installation process. The switch must be followed by the log file name. Ensure that the log file name is enclosed within double quotation (&quot;) characters.</td>
</tr>
<tr>
<td>MOBILE=1</td>
<td>Installs the mobile component of Pivotal Business Server.</td>
</tr>
</tbody>
</table>

Note: The /qn and /L*V switches pass parameters to MsiExec.exe through the /v switch. To pass these parameters to MsiExec.exe properly, ensure that the backslash (\) and double quotation (") characters in the /L*V switch argument are preceded by a backslash.

Table 7-7 on page 7-21 lists examples of a few commands to run the installation program from the command prompt. Change the directory to the folder containing the installation files before typing the commands.

Command-Line Parameters for Custom Installation

To install a specific component of Pivotal Business Server, use the ADDLOCAL command-line parameter with the specified feature name. Table 7-6 lists the various feature names for a custom installation with the ADDLOCAL command-line parameter.

Table 7-6 Feature Names for the ADDLOCAL command-line parameter

<table>
<thead>
<tr>
<th>Business Server component</th>
<th>Feature name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Business Server COM components</td>
<td>ePower</td>
</tr>
<tr>
<td>Services</td>
<td>Services</td>
</tr>
<tr>
<td>Scheduled Task Service</td>
<td>ScriptService</td>
</tr>
<tr>
<td>EMS Service</td>
<td>EmsService</td>
</tr>
</tbody>
</table>
For example:

- To install only Pivotal Business Server, at the command prompt, change directory to the folder with the installation files, and type the following:

  setup.exe /v"ADDLOCAL=ePower"

- To install the EMS Service only, at the command prompt, change directory to the folder with the installation files, and type the following:

  setup.exe /v"ADDLOCAL=EmsService"

**Note:** You can install the EMS or the Scheduled Task Service only if Pivotal Business Server is installed.

- To install all components, at the command prompt, change directory to the folder with the installation files, and type the following:

  setup.exe /v"ADDLOCAL=ALL"

- To specify the installation directory, at the command prompt, type the following:

  setup.exe /v"INSTALLDIR="D:\Pivotal Business Server\" /L*V "c:\myinstall.log"

  where INSTALLDIR="D:\Pivotal Business Server" specifies the installation directory.

### Command-Line Parameter Examples

*Table 7-7* on page 7-21 provides examples of a few commands to run the installation program from the command prompt. Change directory to the folder containing the installation file before typing the commands.

**Table 7-7 Examples of installation switches**

<table>
<thead>
<tr>
<th>Command-Line Syntax</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>setup.exe /v&quot;/L*V &quot;%TEMP%\PivotalBusinessServer.log&quot;&quot;</td>
<td>Runs the installation program and creates a verbose log file (PivotalBusinessServer.log) in the defined temporary folder.</td>
</tr>
<tr>
<td>setup.exe /s /v&quot;/qn /L*V &quot;%TEMP%\PivotalBusinessServerSilentInstall.log&quot;&quot;</td>
<td>Runs the installation program in a silent mode without displaying dialog boxes, and creates a verbose log file (PivotalBusinessServerSilentInstall.log) in the defined temporary folder.</td>
</tr>
<tr>
<td>setup.exe /s /v&quot;/qn MOBILE=1&quot;</td>
<td>Installs the mobile configuration of Pivotal Business Server in a silent mode without displaying dialog boxes.</td>
</tr>
<tr>
<td>setup.exe /v&quot;ADDLOCAL=EmsService&quot;</td>
<td>Installs the EMS Service.</td>
</tr>
</tbody>
</table>
Installing Pivotal Business Server using JScript Files

You can use the JScript files provided in the PBS6.0.13.zip to install Pivotal Business Server. Extract the contents of the PBS6.0.13.zip file to any folder on the computer designated as the Pivotal Business Server computer. Double-click the JScript file to run the installation program.

**Note:** Ensure that the JScript file is in the same directory as `setup.exe`.

The following documentation details

*Table 7-8* on page 7-23 details the JScript files provided for installing Pivotal Business Server.
### Table 7-8  JScript files provided for installing Business Server

<table>
<thead>
<tr>
<th>File name</th>
<th>Function</th>
<th>Command-line equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoggedInstall.js</td>
<td>Installs Pivotal Business Server and creates two log files. One is named as the PBS_InstallSetupExe.log and is from the setup.exe bootstrapper. The other is named as the PBS_Install.log and is created from the PBS installer.</td>
<td>setup.exe /debuglog&quot;%TEMP%\PBS_InstallSetupExe.log&quot; /v&quot;/L*V&quot;%TEMP%\PBS_Install.log&quot;&quot;</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td>Silently installs Pivotal Business Server without displaying any dialog boxes, and creates two log files. One is named as the PBS_SilentInstallSetupExe.log and is from the setup.exe bootstrapper. The other is named as the PBS_SilentInstall.log and is created from the PBS installer.</td>
<td>setup.exe /debuglog&quot;%TEMP%\PBS_SilentInstallSetupExe.log&quot; /s /v&quot;/qn /L*V &quot;%TEMP%\PBS_SilentInstall.log&quot;&quot;</td>
</tr>
<tr>
<td>SilentMobileInstall.js</td>
<td>Silently installs the mobile configuration of Pivotal Business Server without displaying any dialog boxes, creates two log files. One is named as the PBS_SilentInstallSetupExe.log and is from the setup.exe bootstrapper. The other is named as the PBS_SilentInstall.log and is created from the PBS installer.</td>
<td>setup.exe /debuglog&quot;%TEMP%\PBS_SilentInstallSetupExe.log&quot; /s /v&quot;/qn /L*V &quot;%TEMP%\PBS_SilentInstall.log&quot;&quot; MOBILE=1&quot;</td>
</tr>
</tbody>
</table>

**Note:** The syntax in the JScript files has an extra backslash (\) preceding any double quote (") or backslash (\) character.

### Using JScript Files Across the Network

You can also place the JScript and setup.exe files on a network computer and e-mail the network location of the JScript file to users.
For example, if a remote file server FileServer01 has the SilentInstall.js and setup.exe files in the Pivotal Business Server 6.0\Install folder, send an e-mail to users with a shortcut to the JScript file at the following network location: \\FileServer01\Business Server 6.0\Install\SilentInstall.js

Note: If the JScript files and the setup.exe exist on different machines, then modify the path to setup.exe in the JScript file.

Modifying, Repairing, or Uninstalling Pivotal Business Server

The Pivotal Business Server installation software detects previously installed components of Pivotal Business Server. If components are detected, one of the following conditions is true:

- An earlier version of Pivotal Business Server exists on the computer. In this case, the installation process will remove the earlier version of the product and install Pivotal Business Server 6.0.13.

- Pivotal Business Server 6.0.13 has already been installed. In this case, use the installation software to either add or remove optional features that were not previously installed, or uninstall Pivotal Business Server altogether.

- Pivotal Business Server 6.0.13 has already been installed but is not functioning correctly. If this is the case, use the installation software to repair the Pivotal Business Server installation.

Modify, repair, or uninstall Pivotal Business Server from the Control Panel.

To add components to Pivotal Business Server

1 Log on as the PBS user to the computer designated to run Pivotal Business Server.

2 To add components to Pivotal Business Server

   Using the Control Panel:
   a) Click Start, point to Settings, and click Control Panel.
   b) Double-click Add/Remove Programs in the Control Panel window.
   c) Select Pivotal Business Server 6.0.13 from the list of currently installed programs in the Add/Remove Programs dialog box.
   d) Click Change and proceed to step 3.

3 In the Welcome dialog box, click Next.

4 In the Program Maintenance dialog box, select the Modify option and click Next.
5 In the **Custom Setup** dialog box, click **Next**.

6 Click **Install**.

7 Click **Finish** when the process is complete.

The additional components are installed.

**To repair Pivotal Business Server**

1 Follow steps 1 to 3 as detailed in *To add components to Pivotal Business Server* on page 7-24.

2 In the **Program Maintenance** dialog box, select the **Repair** option and click **Next**.

3 Click **Install**.

4 Click **Finish** when the process is complete.

The Pivotal Business Server is repaired.

**To uninstall Pivotal Business Server**

1 Follow steps 1 to 2c as detailed in *To add components to Pivotal Business Server* on page 7-24.

2 Click **Remove**.

3 Click **Yes** in the **Add/Remove Programs** confirmation box to confirm the removal.

Pivotal Business Server is uninstalled.

**Uninstalling Pivotal Business Server Using Command-Line Parameters**

You can uninstall Pivotal Business Server using silent uninstall commands.

**To uninstall from the command prompt**

```bash
>> At the command prompt, type
MsiExec.exe /x {5E248F43-2B55-41B8-AD2D-FDDDBC5D1272}/q

Pivotal Business Server is uninstalled.
```

**Running Multiple Systems on the same Server**

Pivotal Business Server uses the COM+ Partitions feature to enable support for running multiple systems on the same server. Pivotal Business Server leverages this feature to run multiple instances on the
same server to support multiple systems. The COM+ Partitions feature is supported from Windows Server 2003 onwards and is only available for server operating systems.

Note: Pivotal CRM 6.0.13 does not support using the COM+ Partitions feature to run multiple instances of the same system. Ensure that the Pivotal CRM system which uses the COM+ Partitions feature does not include any COM ASRs.

Ensure to perform the following steps in order, for Pivotal Business Server to support running of multiple systems on the same server.

1. Enable the Partitions feature
2. Create a new COM+ Partition
3. Add the Activator Role
4. Copy the Pivotal Business Server Application and the Pivotal Business Server Inproc application
5. Set the Partition in Pivotal System Manager
6. Ensure that there are no COM ASRs running in the Pivotal CRM system as Pivotal Business Server does not support COM ASRs with the COM+ Partitions feature.

Figure 7-1 on page 7-26 displays the default Component Services in Windows Server 2003 with Pivotal Business Server installed.

To enable the Partitions feature

1. Click Start, select Programs, select Administrative Tools, and then select Component Services and double-click Computers.
Right-click **My Computer**, select **Properties**, and then select **Options**.

**2** In the **My Computer Properties** dialog box, select **Enable partitions**.

**Note:** The **Check local store when choosing partition for user** option is selected by default. Ensure to leave this as the default setting.

*Figure 7-2 on page 7-27 displays the Component Services in Windows Server 2003 after enabling Partitions.*

![Component Services after Enabling Partitions](image)

**Back**

**To create a new COM+ Partition**

**1** Click **Start**, select **Programs**, select **Administrative Tools**, select **Component Services** and then double-click **Computers**. Expand **My Computer**, right-click **COM+ Partitions**, select **New**, and then select **Partition**.

**2** Click **Next** in the **COM+ Partition Installation** wizard, and select **Create an empty partition**.

**3** Specify a name for the partition in the **Name** field.

**Note:** The Partition ID is specified by default.

**4** Click **Next**, and then click **Finish**.
A new COM+ Partition is created.

**Note:** Ensure to set the identity (username/password) used by the Pivotal Business Server application in each COM+ partition.

*Figure 7-3* on page 7-28 displays the Component services in Windows Server 2003 after creating a new COM+ Partition.

![Component Services](image)

To Add an Activator Role

1. Click **Start**, select **Programs**, select **Administrative Tools**, select **Component Services**, and then double-click **Computers**. Expand **My Computer**, double-click **COM+ Partitions**, and then double-click the name of the new COM+ Partition created in *To create a new COM+ Partition*.

2. Double-click **Roles**, double-click **Activator**, and then right-click **User**. Select **New** and then select **User**.

3. Add **Everyone** to the **Enter the object names to select** area. This is done so that any user can create objects in the application.

**Note:** You can also add other groups or users to the **Enter the object names to select** area, based on your requirements.

*Figure 7-4* on page 7-29 displays the Component Services in Windows Server 2003 after you add the Activator Role.
Installing Pivotal Business Server

To Copy the Pivotal Business Server Application and the Pivotal Business Server Inproc Application

1. Click **Start**, select **Programs**, select **Administrative Tools**, select **Component Services**, and then double-click **My Computer**, double-click **COM+ Partitions**. Double-click the **Base Application Partition**, and right-click **Pivotal Business Server**, and then select **Copy**.

2. In the **Copy Applications(s)** dialog box, select the destination Partition to which the application needs to be copied and click **OK**.

3. Right-click **Pivotal Business Server Inproc Applications**, and select **Copy**.

4. In the **Copy Applications(s)** dialog box, select the destination Partition to which the application needs to be copied and click **OK**.

5. Set the identity (username/password) for the Pivotal Business Server COM+ Application that has been copied in step 2.

*Figure 7-5* on page 7-30 displays the Component Services in Windows Server 2003 after copying the Pivotal Business Server Application and Pivotal Business Server Inproc application.
Installing Pivotal Business Server

To set the Partition in Pivotal System Manager

1. Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal System Manager**.

2. In the **Pivotal System Manager** dialog box, either select an existing Pivotal CRM system, or define a new Pivotal CRM System by selecting **New**.

3. Select **Modify** and then select the **Business Server** tab displayed in the **Modify System** dialog box.

   **Note:** Pivotal CRM Systems which have COM ASRs are not supported by Pivotal Business Server for the COM+ Partitions feature. Also, the COM+ Partition Name field is displayed only when the COM+ Partition feature is enabled.

4. Specify the name of the new COM+ Partition in the **COM+ Partition Name** field created in the section *To create a new COM+ Partition*.

5. Click **OK** and restart Internet Information Services (IIS).

*Figure 7-6* on page 7-31 displays the Pivotal System Manager after the COM+ Partition feature is enabled.
Figure 7-6 Pivotal System Manager

The Partition name is set in the Pivotal System Manager.

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Setting up the Master System
Overview

SyncStream deployments are composed of parent and child systems. A master system is always a parent system for any satellite or mobile child systems. A satellite can be both a parent of mobile systems and a child of a master system. Mobile systems are always the child of a satellite or master parent system.

Prerequisites for Setting Up the Master System

This section details the prerequisites for setting up the master system.

SQL Server Prerequisites

*Table 8-1 on page 8-2 lists the preliminary tasks for setting up a master system, using SQL Server.*

Oracle users, see the prerequisites detailed in *Oracle Prerequisites* on page 8-3.

*Table 8-1 Preliminary tasks for installing a master system using SQL Server*

<table>
<thead>
<tr>
<th>On this computer</th>
<th>Do the following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Directory</td>
<td>Create the Pivotal CRM Services (PCS) user in the domain where the master system resides.</td>
</tr>
<tr>
<td>HTTP Message Server</td>
<td>Add the PCS user to the local Administrators group.</td>
</tr>
</tbody>
</table>
| SQL Server (that stores master Pivotal CRM data and the SyncStream database of the master system) | - Create databases for the Production Enterprise Data, Production Business Module, Offline Business Module, Offline Enterprise Data, and Customization Module. To create databases, you must have system administrator rights on the SQL Server computer. If you do not have these rights, ask your SQL database administrator to create the databases.  
- Create the PivotalCRMUers and PivotalCRMAdmin local groups on the SQL Server computer.  
- Add the PCS user to the PivotalCRMAdmin group.  
- Create SQL logins for these groups.  
**Optional:** To enable Power Users with limited administration capabilities:  
  - Create the PivotalCRMPowerUsers local group on the SQL Server computer.  
  - Add the Power Users to the PivotalCRMPowerUsers group.  
  - Create a SQL login for the group. |
Setting up the Master System

Oracle Prerequisites

Table 8-2 on page 8-3 lists the preliminary tasks for setting up a master system, using Oracle. SyncStream supports a mixed environment deployment. This gives you the option to deploy satellite systems with an SQL Server database management.

In a deployment where a master system uses Oracle as the database, a child system can use SQL Server as the database. In this scenario, the child system acts as a satellite of the master system, hence, the child system does not need its own HTTP Message Server.

SQL Server users, see the prerequisites detailed in SQL Server Prerequisites on page 8-2.

Table 8-2 Preliminary tasks for installing a master system using Oracle

<table>
<thead>
<tr>
<th>On this computer</th>
<th>Do the following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Directory</td>
<td>Create the PCS user in the domain where the master system resides.</td>
</tr>
</tbody>
</table>
| Oracle database server that stores Pivotal CRM data and the SyncStream database | • Create the PCS Oracle user.  
• Create databases for the Production Enterprise Data, Production Business Module, Offline Business Module, Offline Enterprise Data, and Customization Module.  
• Create the PivotalCRMUsers and PivotalCRMAdmin user roles.  
• Grant the PivotalCRMAdmin role to the PCS user.  
**Optional**: To enable Power Users with limited administration capabilities:  
• Create the PivotalCRMPowerUsers user role.  
• Grant the PivotalCRMPowerUsers role to Power Users.  
You can perform these tasks by modifying and running the install.sql script. For more information, see Chapter 3, Preparing for Deployment. |
| Administrative computer                  | • Create a profile for the login user in Microsoft Outlook e-mail application.  
• Install Pivotal Administration Console.  
• Create the login user on the Oracle database server. For more information, see Adding the Administrative User to the Oracle Database Server (Oracle only) on page 4-3. |
PivotalCRMPowerUsers Role

Installing Pivotal SyncStream 6.0 Service Pack 1 and later enables the PivotalCRMPowerUsers role.

Creation of the PivotalCRMPowerUsers role is optional. Create this group to enable Power Users with reduced administration capabilities to perform tasks in Pivotal Administration Console which do not involve direct access to data. The Power User will not have access to certain commands in Pivotal Administration Console, and these commands are grayed out. These commands will be available only to Pivotal CRM administrators who belong to the PivotalCRMAdmin role.

The PivotalCRMPowerUsers role has permission to execute the following commands in Pivotal Administration Console:

- Start DSM
- Stop DSM
- Apply Customization Changes
- Upgrade from Offline System
- Audit System
- Assign License
- Unassign License
- Assign Mobile License
- Unassign Mobile License

System Properties can be viewed, but no properties can be changed. User Properties can be viewed and modified, except for the user’s defined HTTP Message Server. The View Permissions command can be executed by Power Users if the user has been added as a Pivotal CRM user, and is a member of the PivotalCRMUsers group.

Power User functionality is enabled after applying Pivotal SyncStream 6.0 Service Pack 1 or later. The following configuration is necessary to use the new feature:

- The DSM should run as a service on the DSM Server
- Power Users should register the DSM Server from the instance of Pivotal Administration Console running on the Power User’s computer, and then connect to the system through this server.

### Table 8-2 Preliminary tasks for installing a master system using Oracle

<table>
<thead>
<tr>
<th>On this computer</th>
<th>Do the following</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP Message Server</td>
<td>Add the PCS user to the local Administrators group.</td>
</tr>
<tr>
<td>Designated server for the ANM</td>
<td>Add the PCS user to the local Administrators group.</td>
</tr>
<tr>
<td>Designated server for the DSM</td>
<td>Add the PCS user to the local Administrators group.</td>
</tr>
</tbody>
</table>
For Oracle systems, the following steps are required after installing Pivotal SyncStream 6.0.13:

- Store the security settings for the Power User using the Pivotal Storage Manager.
- Starting the Master system.

Note: Perform these steps only if they have not been performed after a previous installation.

**Storing Security Settings**

To store security settings in the PSS Storage Manager

1. Log on to the DSM server as a Pivotal CRM administrator.
2. Click **Start**, point to **Programs**, point to **CDC Software**, point to **Pivotal CRM**, and then click **PSS Storage Manager**.
3. In the **PSS Storage Manager** dialog box:
   a) From the **DSN** drop-down list, select the name of the ODBC connection of the Business Module of the Production System.
   b) In the **User name**, **Password**, and **Confirm password** text boxes, type the user name and password of the schema referred to by the DSN.
4. Click **Test** to test your connection.
5. If the test succeeded, click **OK** in the **Test Connection** dialog box. If the connection failed, make sure that:
   - The schema name exists in the database.
   - The schema owner’s name and password were typed correctly.
6. Click **OK** to close the PSS Storage Manager.

The security settings are stored in the PSS Storage Manager. Repeat the same procedure for the ODBC connection of the Enterprise Data of the Production System, as well as the ODBC connections for the Offline and Customization systems.

**Starting the Master system**

Before Power Users can connect to the Master system, the Pivotal CRM administrator should connect to the master system and start the DSM, so that the logon credentials are encrypted and stored in the registry.

Note: Start the master system only after all steps required to set up the master system are completed.
To start the master system

1. Log on to the DSM server as the Pivotal CRM administrator.
2. Click Start, point to Programs, point to CDC Software, point to Pivotal CRM, and then click Pivotal Administration Console.
3. Expand Data Synchronization until you see the name of the master system.
4. Expand the server name. All defined systems are displayed.
5. To enable Power Users to connect to the system, right-click the system name and click Connect. When a connection is established, Power Users will be able to connect to the system.
6. To enable Power Users to start the DSM for the system, right-click the system name and click Start DSM. Enter the logon credentials of the DSM user and click OK.
7. Right-click the system name and click Start.

The credentials are encrypted and stored in the registry when the logon credentials of the administrative user are specified.

Note: The user can also choose to stop the DSM Server.

Checklist for Setting Up the Master System

1. Set up the administration computer with Pivotal Administration Console.
2. Install SyncStream Server components.
3. Create the SyncStream database with an ODBC connection.
4. Depending on your database version, create SQL or Oracle databases with ODBC connections for the Production, Offline, and Customization Systems.
5. Set up Production, Offline, and Customization Systems.
6. Configure ANM server properties.
7. Configure DSM server properties.
8. Access the Webstore.
Installation Options

When you run the SyncStream installer, you are presented with the following setup types:

- Server Components - for setting up master and satellite systems
- Mobile Components - for setting up mobile systems
- Desktop Components - for setting up an administrative workstation on master or satellite systems

Select the appropriate installation components depending on the setup type. Table 8-3 on page 8-7 outlines the SyncStream setup types and components you need to select when setting up master, satellite, or mobile systems.

Note: Pivotal SyncStream 6.0.13 setup installs Microsoft .NET Framework 4 and Microsoft Visual C++ 2010 Service Pack 1 Runtime Libraries if these prerequisites are not installed on your machine.

Table 8-3  SyncStream Setup Choices

<table>
<thead>
<tr>
<th>To set up this computer</th>
<th>Select this setup type</th>
<th>Select these components</th>
<th>To install the following</th>
</tr>
</thead>
</table>
| ANM Server for master or satellite | Server Components | • Active Notification Manager (ANM) | • ANM Service  
| | | | • Pivotal Administration Console |
| DSM Server for master or satellite | Server Components | • Data Synchronization Manager (DSM)  
| | | • DSM Watcher (optional) | • DSM Service  
| | | | • DSM Watcher (if selected)  
| | | | • Pivotal Administration Console |
| HTTP Message Server for master or satellite | Server Components | • HTTP Message Server | • SyncStream virtual directory  
| | | | • HTTP Message Server security settings |
| Administrative workstation for master or satellite | Desktop Components | • Pivotal Administration Console | • Pivotal Administration Console |

SyncStream supports a mixed environment deployment. This gives you the option to deploy satellite systems with an SQL Server database when the master system uses an Oracle database server.

Installing the ANM Service

Run the SyncStream installer to install the ANM service on the computer designated to run the ANM service. Installing the ANM service also automatically installs Pivotal Administration Console. You require Pivotal Administration Console to configure the computer where the ANM is installed.
Download the installation files for Pivotal SyncStream (PSS6.0.13.zip file) from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the contents of the PSS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.

**Note:** If you plan to run the ANM and DSM services on the same computer, install both services at the same time. Do not run the SyncStream installer twice.

**To install the ANM service**

1. On the computer designated to run the ANM, log on as the PCS user.
2. Extract the contents of the PSS6.0.13.zip file to any folder on the computer designated to run the ANM service.
   
   Browse to the folder with the contents of the PSS6.0.13.zip file and double-click setup.exe.
3. In the *Pivotal SyncStream 6.0 (v6.0.1300) - InstallShield Wizard* click **Next**.
4. Accept the license agreement and click **Next**.
5. Type the **User Name** and **Organization**, and then click **Next**.
6. Select **Server Components**, and then click **Next**.
7. Select **ANM Service**. If the server is to run additional components such as the DSM or DSM Watcher, also select the options for these components. Click **Next**.
8. To specify a different location for installation, log files, and temporary files click **Change**, browse to the new location, and click **OK**, and then click **OK**. Click **Next**.
9. Provide the domain name, user name, and password for the PCS user account.
   
   Click **Next**. If you click **Next** without providing the user account information, a message box is displayed informing you to specify the information in the **Services** console. Click **OK** to close the message box.
10. Click **Install**.
11. Click **Finish** when the installation is complete.

The ANM service is installed.
Setting the ANMSTORE Folder Location

Installing the ANM service automatically creates the ANMSTORE folder in the root of the C: drive of the ANM server. When setting the ANMSTORE location, you can also select the following options in the Pivotal Administration Console.

- The value in the **Trace sensitivity** field indicates whether messages are logged. The available choices are 0 and 1 for no logging and 2 for logging.
- The value in the **Note delay** field sets the duration (in milliseconds) that the ANM holds messages before sending them to appropriate clients. One second is added to the number that you enter. A low number results in more messages and a faster response time for lists and forms on the desktop. A higher number means greater network efficiency, as messages are bundled and sent all at once.

Note: Always set the ANMSTORE folder location from the ANM server because you cannot perform the task using UNC paths, IP addresses, or mapped drives.

To set the ANMSTORE folder location

1. On the ANM server, click **Start**, point to **Programs**, point to **CDC Software**, point to **Pivotal CRM**, and then, click **Pivotal Administration Console**.
2. In the **Servers** pane, expand **Active Notification** until you see the name of the ANM server.
3. Right-click the ANM server name, and then click **Properties**.
4. In the **Message store path** field of the **Properties for “<ANM Server>”** dialog box, type the path to the ANMSTORE folder, using standard drive name and path format (for example, `C:\ANMSTORE`). Do not use a UNC path, IP address, or a mapped drive.
5. Accept the default settings in the **Trace sensitivity** and **Note delay (ms)** fields.
6. Click **OK**, and then exit Pivotal Administration Console.

Note: To improve access speed, manually create an ANMSTORE folder on a high-speed disk with an independent disk controller on the ANM server.

To change the ANMSTORE folder location

1. On the ANM server, manually create a folder named ANMSTORE on a high-speed disk with an independent disk controller (for example, `D:\ANMSTORE`).
2. Click **Start**, point to **Programs**, point to **CDC Software**, point to **Pivotal CRM**, and then, click **Pivotal Administration Console**.
Setting up the Master System

3 In the Servers pane, expand Active Notification until you see the name of the ANM server.

4 Right-click the ANM server name, and then click Properties.

5 In the Message store path field of the Properties for “<ANM Server>” dialog box, type the new path to the ANMSTORE folder, using standard drive name and path format (D:\ANMSTORE). Do not use a UNC path, IP address, or a mapped drive.

6 Accept the default settings in the Trace sensitivity and Note delay (ms) fields.

7 Click OK, and then exit Pivotal Administration Console.

Warning! Do not set the ANMSTORE folder location and then attempt to move the folder to an alternate location by using the cut and paste function of Windows Explorer.

Installing the DSM Service

The DSM service is required if you are deploying satellite or mobile machines, or if you are using the Power Users functionality. If neither of these features are required, do not install the DSM Service on the master system. Skip this section and proceed to Setting up the Master System on page 8-18.

If only Power Users functionality is required, install the DSM Service, then proceed to Setting up the Master System on page 8-18.

For more information about the Power Users functionality, see Oracle Prerequisites on page 8-3.

Download the installation files for Pivotal SyncStream (PSS6.0.13.zip file) from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the contents of the PSS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.

Installing the DSM service also automatically installs Pivotal Administration Console and Pivotal System Manager. You require Pivotal Administration Console and Pivotal System Manager to configure the computer hosting the DSM.

To install the DSM service and the DSM Watcher

1 Log on as the PCS user to the computer designated to run the DSM.

2 Extract the contents of the PSS6.0.13.zip file to any folder on the computer designated to run the DSM service.

3 Browse to the folder with the contents of the PSS6.0.13.zip file and double-click the setup.exe file.

4 In the Pivotal SyncStream 6.0 (v6.0.1300) - InstallShield Wizard click Next.
Accept the license agreement and click **Next**.

Type the **User Name** and **Organization**, and then click **Next**.

Select **Server Components**, and then click **Next**.

Select **DSM Service**. If you want to install the DSM Watcher, select **DSM Watcher**.

Select **MS SQLServer** or **Oracle** and then click **Next**.

Click **Next** to install to the default location. To specify a different location for installation, log files, and temporary files click **Change**, browse to the new location and click **OK**, and then click **Next**.

Provide the domain name, user name, and password of the DSM user, and then click **Next**.

Click **Install**.

Click **Finish** when the installation is complete.

The DSM service and the DSM Watcher are installed.

**Setting the Service Principal Name (SPN)**

If you are using Kerberos authentication in the Active Directory, it is recommended that you set the Service Principal Name (SPN) for the ANM and DSM service.

**Setspn.exe** is a Microsoft tool which allows you to create a Service Principal Name. Also, the command to set the SPN must be run by someone who has domain administrator or enterprise administrator rights, or by someone who has been delegated the correct permissions to run the command.

For more information about the **Setspn.exe** tool, see:


or


**To set the SPN for the ANM and DSM service**

**Warning!** If ANM or DSM is / are installed on the same machine with PBS, setting the SPN should not be attempted. You would need to separate the installation between PSS components and PBS.

>> Run the following command using the command prompt:

Setspn.exe -a rpc/<SERVERNAME> <DOMAIN\SERVICEUSERACCOUNT>.
Where the `<SERVERNAME>` is the name of the ANM or DSM server and the `<DOMAIN\SERVICEUSERACCOUNT>` is the account running the ANM or DSM service.

**Note:** The command for setting the SPN for the ANM or DSM service should be run once for each server.

## Installing and Configuring the HTTP Message Server

This section provides installation and configuration instructions for the HTTP Message server.

For Unicode deployments, install the HTTP Message Server on a computer running Windows Server 2003 or Windows Server 2008, as IIS 6.0 and IIS 7.0 and Windows Server 2008 R2 as IIS7.5 functionality included in these operating systems supports a Unicode environment.

The configuration includes setting up file and folder access permissions.

Download the installation files for Pivotal SyncStream (PSS6.0.13.zip file) from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the contents of the PSS6.0.13.zip file, see Appendix A, Contents of Installation Zip Files.

Add the PCS user to the local administrators groups on the HTTP Message Server.

**Note:** Before installing the HTTP Message Server on an IIS 6.0 computer, uninstall any 64-bit application running under Internet Information Services (IIS) Manager. If you run the SyncStream installer for the HTTP Message Server on a 64-bit operating system, IIS must be configured to run in the 32-bit compatibility mode. The installer automatically detects the IIS compatibility mode and converts IIS to a 32-bit compatibility mode. Hence, any existing 64-bit applications on IIS will not run.

### To install the HTTP Message Server

1. On the computer designated as the HTTP Message server, log on as the PCS user.
2. Extract the contents of the PSS6.0.13.zip file to any folder on the computer designated as the HTTP Message Server.
3. Browse to the folder with the contents of the PSS6.0.13.zip file and double-click the `setup.exe` file.
4. In the Pivotal SyncStream 6.0 (v6.0.1300) - InstallShield Wizard click Next.
5 Accept the license agreement and click **Next**.
6 Type the **User Name** and **Organization**, and then click **Next**.
7 Select **Server Components**, and then click **Next**.
8 Select the **HTTP Message Server** check box, and then click **Next**.

**Note:** On Windows Server 2008, the installer checks the status of the IIS 7.0 configuration. When prompted, click **Yes** to launch the IIS 7.0 installer. If the installer displays a message stating that the computer requires rebooting, reboot the computer, and run the installer again to complete the installation. When restarted, the installer checks if WebDAV 7.5 for IIS 7.0 is installed. If it is not installed, you need to download the appropriate WebDAV installer (32-bit or 64-bit, depending on the computer’s hardware), and run the installer.

On Windows Server 2008 R2, these manual steps are not required to install WebDAV.

9 Click **Next** to install to the default location. To specify a different location for installation, log files, and temporary files click **Change**, and then click **Next**.

10 In the **Services Account** dialog box, type the domain name in the **Domain** box. Type the username in the **User Name** box and type the password in the **Password** box. Click **Next**.

11 Click **Next** to accept the default location for the HTTP Message Server Destination Webstorage folder. To specify a new location for the HTTP Message Server Destination Webstorage folder, click **Change** and browse to specify the folder. Click **OK**, and then click **Next**.

12 Click **Install**.

13 Click **Finish** when the installation is complete.

This installation creates the **PivotalHTTPSyncUsers** local security group and the SyncStream virtual directory on the HTTP Message Server.

**Creating the SyncStream Database**

The SyncStream database stores outbound synchronization messages awaiting transport to the HTTP Message Server. It also stores inbound synchronization messages until they are transported to the DSM for processing.

You need to create the database, and assign the **PCS** user the necessary rights to it. Rights to the Business Module and Enterprise Data databases are provided through the **PivotalCRMAdmin** local group on the SQL Server computer. The procedures in this section assume you have already created the **PivotalCRMAdmin** local group, added the **PCS** user to it, and have created a SQL login for this group with **db_owner** rights to the Business Module and Enterprise Data databases. For more details, see *Preparing for Deployment* on page 3-1.
After you have created the database, and assigned the necessary rights to it, create the ODBC connection.

To complete the following procedures, you must have system administrator permissions on the SQL Server computer.

**Note:** A deployment of Unicode Pivotal CRM systems and a non-Unicode SyncStream database is not supported. You require separate databases for Unicode and non-Unicode deployments.

### Creating a SQL Server Database

This section is specific to SQL Server deployments. For information about creating databases in Oracle, see *Creating an Oracle Database* on page 8-16.

**To create the SyncStream database**

1. On the SQL Server computer, log on as the PCS user.
2. Extract the contents of the `PSS6.0.13.zip` file to any folder on SQL Server computer.
3. Open **SQL Server Management Studio**.
4. In the **Connect to Server** dialog box:
   a) Select the server type from the **Server type** drop-down list.
   b) Select the server name from the **Server name** drop-down list.
   c) Select **Windows Authentication** from the **Authentication** drop-down list.
   d) Click **Connect**.
5. Click **File**, click **Open** and then click **File**.
7. Open the **Local Store** sub folder and open:
   a) `buildSyncStreamDB.sql` (for non-Unicode databases)
   b) `buildSyncStreamDBUnicode.sql` (for Unicode databases)
8. On the **Query** menu, click **Execute**.

A confirmation is displayed on the **Messages** tab.

**To assign the necessary rights to the SyncStream database**

1. Start **SQL Server Management Studio**.
2. In the **Connect to Server** dialog box:
   a) Select the server from the **Server** type drop-down list.
   b) Select the appropriate server from the **Server name** drop-down list.
   c) Select **Windows Authentication** from the **Authentication** drop-down list.
   d) Click **Connect**.
3 In the **Object Explorer** pane, expand the **Security** folder, and then click **Logins**.

4 In the **Logins** pane, right-click the **PivotalCRMAdmin** login, and then click **Properties**.

5 In the **Logins Properties** dialog box, click **User Mapping**.

6 Select the **Map** check box for the SyncStream database.

7 Select the **db_owner** check box as the database role membership for the SyncStream database.

8 Click **OK**.

The login properties for the PivotalCRMAdmin are specified.

Create an ODBC connection for the SyncStream database.

**To create an ODBC Connection for the SyncStream database**

1 On the DSM server, log on as the **PCS** user.

2 On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, right-click **Pivotal Administration Console**, and select **Run as administrator**.

   For other operating systems, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Administration Console**.

3 In the **Servers** pane of Pivotal Administration Console, right-click **Data Synchronization**, and click **System Manager**.

4 In the **Pivotal System Manager** dialog box, click **New**.

5 In the **New System** dialog box, click **ODBC**.

6 In the **ODBC Data Source Administrator** dialog box, select the **System DSN** tab, and then click **Add**.

7 In the **Create New Data Source** dialog box, click **SQL Server** from the **Names** list, and then click **Finish**.

8 In the **Create a New Data Source to SQL** dialog box, do the following:
   - In the **Name** box, type **SyncStream**.
   - In the **Description** box, type a description for the data source.
   - In the **Server** drop-down list, click the SQL Server computer where this database resides. Do not select **Local** in the **Server** drop-down list, even if the SQL Server is located on the local computer.
   - Do not type a period (.) for the server name.

9 Click **Next**, and then click **Next** again.

10 Select the **Change the Default database to** check box.
11 In the **Database** drop-down list, select the SyncStream database.

12 Click **Next**, and then click **Finish**.

13 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.
   
   The message in the window indicates whether or not the ODBC connection has been properly set up.

14 If the test results are successful, click **OK**, and then click **OK** again.
   
   If the connection was unsuccessful, verify the settings you entered and repeat this procedure.

### Creating an Oracle Database

This section is specific to Oracle deployments. SQL Server users, refer to **Creating a SQL Server Database** on page 8-14.

Complete the following tasks to set up the SyncStream database:

1. **Modify the** `buildsyncstreamdb_ora.sql` **script**
2. **Run the script in SQL*Plus**
3. **Create an ODBC connection for the SyncStream database**
4. **Configure the PSS Storage Manager**

**To modify `buildsyncstreamdb_ora.sql`**

1. On the DSM server, log on as the **PCS** user.
2. Browse to the folder with the extracted contents of the `PSS6.0.13.zip` **file**.
3. Open the **Local Store** sub folder.
4. In a text editor, open the `buildsyncstreamdb_ora.sql` **file**.
5. Replace the placeholders in the DEFINE statements with values for the user name and password variables.

   **Warning!** Case is important when specifying these variable values. Use uppercase to specify the user name, user password, and tablespace name. The file path, however, is case-sensitive. Use the same case for the `FilePath` as what displays in the Oracle database instance.

6. Save this file to a folder on your local hard drive, noting the location.

   The `buildsyncstreamdb_ora.sql` **file is modified**.

**To run the `buildsyncstreamdb_ora.sql` script**

1. On the DSM server, start SQL*Plus.
2. In the **Log on** dialog box, perform the following:
   a) In the **User Name** and **Password** text boxes, type the user name and password of the Oracle database administrator.
Setting up the Master System

b) In the Host String text box, type OracleService as sysdba, replacing OracleService with the name of your Oracle service.

3 At the SQL> prompt, type @ c:\filepath\buildsyncstreamdb_ora.sql, replacing filepath with the path to the local copy of the buildsyncstreamdb_ora.sql script, and then press ENTER.

4 Follow the prompts to specify the SyncStream user name and password, and the login credentials for your Oracle service.

Note: When prompted for the Oracle service name, type OracleService as sysdba, replacing OracleService with the name of your Oracle service.

5 After you run the script, verify that the SyncStream user is created in the Oracle database.

After you create the SyncStream database, create the ODBC connection.

To create an ODBC connection for the SyncStream database

1 On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator.

For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.

2 In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.

3 In the Pivotal System Manager dialog box, click New.

4 In the New System dialog box, click ODBC.

5 On the System DSN tab, click Add.

6 In the Create New Data Source dialog box, select the Oracle ODBC driver listed as Oracle in <Oracle_Home>, and then click Add.

7 In the Oracle ODBC Driver Configuration dialog box, do the following:
   a) In the Data Source Name box, type the name of the SyncStream database as SYNCSTREAM.
   b) In the Description box, type a description for the SyncStream database.
   c) In the TNS Service Name text box, type the service name, or select an option from the drop-down list.
   d) On the Oracle tab, ensure that the Enable LOBs check box is selected.
8 Click **Test Connection**

9 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

10 If the connection succeeds, click **OK** in the **Testing Connection** message box.

   If the connection fails, ensure that:
   
   - The schema name exists in the database.
   - The schema owner’s name and password were typed correctly.

You need to specify the security settings in the PSS Storage Manager. These security settings are needed to access the SyncStream database. During synchronization, the PSS Storage Manager makes this information available to the DSM whenever it accesses the SyncStream database. Therefore, users do not need to provide this information during ongoing synchronization.

**To store security settings in the PSS Storage Manager**

1 On the DSM server, click **Start**, point to **Programs**, point to **Pivotal**, and then click **PSS Storage Manager**.

2 In the **PSS Storage Manager** dialog box:

   a) From the **DSN** drop-down list, select the name of the ODBC connection you created in *To create an ODBC Connection for the SyncStream database* on page 8-15.

   b) In the **User Name**, **Password**, and **Confirm password** boxes, type the SyncStream database user name and password you specified in *To modify buildsyncstreamdb_ora.sql* on page 8-16.

3 Click **Test** to test your connection.

4 If the test succeeds, click **OK** in the **Test Connection** dialog box.

   If the connection fails, make sure that:
   
   - The schema name exists in the database.
   - The schema owner’s name and password were typed correctly.

5 Click **OK** to close the PSS Storage Manager.

The security settings are stored in the PSS Storage Manager.

---

**Setting up the Master System**

This section contains instructions to set up a master system in a production environment.

Consider a naming convention for systems and ODBC data source names. A naming convention makes it easier to administer a system that has many satellites.
To set up the master system

1. Create ODBC Connections
2. Define the master system
3. Set Up the File Path
4. Restore data to the master system
5. Specify the ANM server for the master system
6. Connect to the DSM server
7. Set up the Administrative Computer
   To set up the administrative computer, see Administrative Tasks on page 4-1.

Creating ODBC Connections

Create ODBC connections to the Production Business Module and Production Enterprise Data SQL Server databases.

Creating ODBC Connections for SQL Server

This section is specific to SQL Server deployments. Oracle users, refer Creating ODBC Connections for Oracle on page 8-21.

You need to create ODBC data source names (DSN) to the Production Business Module and Production Enterprise Data SQL Server databases. If you have not yet created these databases, see Creating Empty SQL Server Databases on page 3-6.

ODBC DSNs are specific to the computer they are created on. This means you need to create these ODBC DSNs on the DSM server. If the Pivotal System Manager is used to create a system on the administrative computer, create the required ODBC DSNs on the administrative computer as well. However, as they are system DSNs, they are available to anyone who logs on to the computer they were created on.

To create a connection for the Production Business Module database on the DSM server

1. Log on to the DSM server with administrative permissions.
2. On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator.

   For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.
3 In the **Servers** pane of Pivotal Administration Console, right-click **Data Synchronization**, and click **System Manager**.

4 In the **Pivotal System Manager** dialog box, click **New**.

5 In the **New System** dialog box, click **ODBC**.

6 In the **ODBC Data Source Administrator** dialog box, click the **System DSN** tab, and then click **Add**.

7 In the **Create New Data Source** dialog box, click **SQL Server**, and then click **Finish**.

8 In the **Create a New Data Source to SQL** dialog box, do the following:
   - In the **Name** box, type *ProductionBM*. The name can have embedded spaces and can be the same as the database name.
   - In the **Description** text box, type a description of the data source.
   - In the **Server** drop-down list, click the name of the SQL Server computer. Do not select Local, even if the SQL Server is located on the local computer. Do not type a period (.) for the server name.

9 Click **Next**.

10 In the **Create a New Data Source to SQL Server** dialog box, click **Next**.

   This accepts the default, which is NT authentication.

   **Note:** Pivotal supports only NT Authentication.

11 In the **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

12 In the **Database** drop-down list, select *ProductionBM*, and then click **Next**.

13 Click **Finish**.

14 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.

   The message in the window indicates whether or not the ODBC connection has been properly set up.

   If the test results are successful, click **OK**.

   If the connection was unsuccessful, verify the settings you entered and repeat steps 1 to 11.

15 Click **OK**.

A connection for the Production Business Module database on the DSM server is created.
To create a connection for the Production Enterprise Data database on the DSM server

1 Follow steps 1 to step 6 of To create a connection for the Production Business Module database on the DSM server on page 8-19.

2 In the Create a New Data Source to SQL dialog box, do the following:
   - In the Name box, type ProductionED. The name can have embedded spaces and can be the same as the database name.
   - In the Description box, type a description of the data source.
   - In the Server drop-down list, click the name of the SQL Server computer. Do not select Local in the Server drop-down list, even if the SQL Server is located on the local computer. Do not type a period (.) for the server name.

3 Click Next.

4 In the Create a New Data Source to SQL Server dialog box, click Next.
   This accepts the default, which is NT authentication.

5 In the Create a New Data Source to SQL Server dialog box, select the Change the Default database to check box.

6 In the Database drop-down list, select ProductionED, and then click Next.

7 Click Finish.

8 In the ODBC Microsoft SQL Server Setup dialog box, click Test Data Source.
   The message in the window indicates whether or not the ODBC connection has been properly set up.
   If the test results are successful, click OK.
   If the connection was unsuccessful, verify the settings you entered and repeat steps 1 to 7.

9 Click OK.

You are now ready to define the master system, as detailed in Defining the Master System on page 8-23.

Creating ODBC Connections for Oracle

This section is specific to Oracle deployments. SQL Server users, refer Creating ODBC Connections for SQL Server on page 8-19.
You need to create ODBC data source names (DSN) to the Production Business Module and Production Enterprise Data Oracle databases. If you have not yet created these databases, follow the instructions for creating the Production Business Module and Production Enterprise Data databases in To create empty Pivotal databases on page 3-7.

ODBC DSNs are specific to the computer they were created on. This means you need to create these ODBC DSNs on the DSM server and on the administrative computer. However, as system DSNs, they are available to anyone who logs on to the computer in which they were created.

To create a connection for the Production Business Module on the DSM server

1 On the DSM server, log on with administrative permissions.

2 On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator. For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.

3 In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.

4 In the Pivotal System Manager dialog box, click New.

5 In the New System dialog box, click ODBC.

6 On the System DSN tab, click Add.

7 In the Create New Data Source dialog box, select the Oracle ODBC driver listed as Oracle in <Oracle_Home>, and then click Finish.

8 In the Oracle ODBC Driver Configuration window, do the following:
   • In the Data Source Name box, type the name for the ProductionBM using the <OracleService_name>.<schema_name> notation.
   • In the Data Source Description box, type a description for the ProductionBM data source.
   • In the TNS Service Name box, type the service name, or make a selection from the drop-down list.
   • In the User ID field, type the user name for the schema owner.
   • On the Oracle tab, make sure that Enable LOBs is selected.

9 Click Test Connection.
Setting up the Master System

10 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

11 If the connection succeeds, click **OK** in the **Testing Connection** message box.
   If the connection fails, make sure that:
   • The schema name exists in the database.
   • The schema owner’s name and password were typed correctly.

To create a connection for the Production Enterprise Data on the DSM server

1 Follow steps 1 to 6 of *To create a connection for the Production Business Module on the DSM server* on page 8-22.

2 In the **Oracle ODBC Driver Configuration** window, do the following:
   • In the **Data Source Name** box, type the name for the ProductionED using the `<OracleService_name>.<schema_name>` notation.
   • In the **Data Source Description** box, type a description for the ProductionED data source.
   • In the **TNS Service Name** text box, type the service name, or make a selection from the drop-down list.
   • In the **User ID** box, type the user name for the schema owner.
   • On the **Oracle** tab, make sure that **Enable LOBs** is selected.

3 Click **Test Connection**.

4 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

5 If the connection succeeds, click **OK** in the **Testing Connection** message box.
   If the connection fails, make sure that:
   • The schema name exists in the database.
   • The schema owner’s name and password were typed correctly.

You are now ready to define the master system, as detailed in *Defining the Master System* on page 8-23.

Defining the Master System

A Pivotal CRM system is a pair of ODBC data sources: one points to the Business Module database, and the other points to the Enterprise Data database. You need to set up the master system by pairing the Business Module and Enterprise Data data source names created in the previous section.

You must define a master system while logged on as the **PCS** user on the DSM server.
Setting up the Master System

For example, a system defined by the PCS user on the DSM server is accessible only on the DSM server when you are logged on as the PCS user.

**To define a master system**

1. On the DSM server, log on as the PCS user.
2. On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, right-click **Pivotal Administration Console**, and select **Run as administrator**.
   
   For other operating systems, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Administration Console**.
3. In the **Servers** pane of Pivotal Administration Console, right-click **Data Synchronization**, and click **System Manager**.
4. In the **Pivotal System Manager** dialog box, click **New**.
5. In the **System Name** box, type a name for the master system. For example, **Companyname Master System**.
6. In the **Business Module** drop-down list, select **ProductionBM**.
7. In the **Enterprise Data** drop-down list, select **ProductionED**.
8. Under **This system definition is available for**: select **Anyone who uses this computer (all users)**.
   
   This ensures that the system definition is visible to the administrative computer user, as well as other users.
9. On the **Toolkit** tab, select **Ignore Permissions**, and then click **OK**.
10. In the **Pivotal System Manager** dialog box, click **Close**.

The system definition now appears in the Pivotal System Manager **System Name** drop-down list; however, do not log on to the master system.

**Setting Up the FilePath**

Share the FilePath folder as the FilePath folder must be accessible to all Toolkit users. Create the FilePath folder on the DSM server, in a directory that is backed up regularly.

After the FilePath folder is created, you need to specify its location in the **Properties** dialog box of the master system.
The location of the FilePath folder for the master system is stored in the RSys_System_Flags table of the Enterprise Data. Thus, a data file (an .rdf file) created by the Backup System or Replicate System command may already contain the location of a FilePath folder.

**To create a FilePath folder**

1. On the DSM server, create a folder for the filepath.
2. Share the folder with all domain users.

**To specify the location of the FilePath folder for the master system**

1. On the DSM server, log on as the PCS user.
2. Click **Start**, point to **Programs**, point to **CDC Software, Pivotal CRM**, and then click **Pivotal Administration Console**.
3. In the **Servers** pane, expand **Data Synchronization**, and then expand the DSM server name until you see the master system name.
4. Right-click the master system name, and then click **System Properties**.
5. In the **FilePath** text box, click **Browse** and select the FilePath folder you created on the DSM server.

   **Note:** When you close the dialog box and open it again (or click **Apply**), the FilePath should appear in the Universal Naming Convention (UNC) format. For example: `\computername\PivotalCRM\Data\Master FilePath`.

6. Click **Apply**, and then click **OK**.

You are now ready to restore the FilePath data to the FilePath folder.

**Restoring Data to the Master System**

Restore the Business Module, Enterprise Data, and FilePath for the master system.

**Restoring Data for SQL Server**

This section is specific to SQL Server deployments. Oracle users, refer to **Restoring Data for Oracle** on page 8-26.

After the master system is defined, you can populate the databases by running the **Restore System** command in the Pivotal Administration Console.

For an out-of-the-box installation of Pivotal CRM, use the .rdf files installed with Pivotal CMS 6.0.5. Download the installation files for Pivotal CMS 6.0.5 (CMS605.zip file) from the Product Downloads area in
Setting up the Master System

To restore the Business Module and Enterprise Data

1. On the DSM server, log on as the PCS user.
2. Click Start, point to Programs, point to CDC Software, and point to Pivotal CRM. Then, click Pivotal Administration Console.
3. In the Servers pane, expand Data Synchronization, and then expand the DSM server where you defined the master system.
4. Right-click the master system, and then click Restore System.
5. In the Restore System dialog box, do the following:
   - Select the Restore Business Module check box, and then click Browse to select CMS 6.0.5 - Business Module.rdf.
   - Select the Restore Enterprise Data check box, and then click Browse to select either CMS 6.0.5 - Empty ED.rdf or CMS 6.0.5 - Sample ED.rdf.
   - Click Restore.
6. In the warning message dialog box, click Yes.
7. Wait for the process to complete, and then click Close.

Note: If you are restoring a system that has been customized for your enterprise, follow the instructions supplied by the customization specialist for step 5.

Restoring Data for Oracle

This section is specific to Oracle deployments. SQL Server users, refer Restoring Data for SQL Server on page 8-25.

After the master system is defined, populate the databases by running the Restore System command in the Pivotal Administration Console.

For an out-of-the-box installation of Pivotal Platform, use the .rdf files from the Pivotal CMS 6.0.5 installation. The installation files for Pivotal CMS 6.0.5 are available in the CMS605.zip file.

Note: If you use Pivotal CMS 6.0.5, you must apply the latest hot fix for Pivotal Foundation Library 6.0 Service Pack 1.
Download the installation files for Pivotal CMS 6.0.5 (CMS605.zip file) from the Product Downloads area at the Apteon Customer or Partner Portals. For more information about the contents of the CMS605.zip file, see the Pivotal CMS 6.0.5 Release Notes.

If you are installing a customized solution, follow the instructions supplied by the customization specialists.

**Note:** If you use Pivotal CMS 6.0.5, you must apply the latest hot fix for Pivotal Foundation Library 6.0 Service Pack 1.

When you run certain commands, such as Restore, on the DSM in the Pivotal Administration Console, you are prompted by a Pivotal Login dialog box. Enter PCS as the user name, and then enter the password you specified when you created the PCS Oracle user. The Pivotal Administration Console passes this information to the ODBC drivers for authentication on the Oracle database server.

You should have created the PCS Oracle user by running install.sql. For more information about creating the PCS user, see Running install.sql on page 3-30.

**Note:** The Oracle Call Interface (OCI) library is used to directly insert records into an Oracle database during a restore. If you encounter any problem, use a generic restore which does not use the Oracle Call Interface. Disable the use of the OCI by creating a DWORD value called "NoDirectPath" under the registry key "HKEY_LOCAL_MACHINE\Software\Pivotal\SyncStream", and setting the value to "1".

To restore the Business Module and Enterprise Data

1. On the DSM server, log on as the PCS user.
2. Install Pivotal CMS 6.0.5. For more information about installing Pivotal CMS 6.0.5, see the Pivotal CMS 6.0.5 Release Notes.
3. Click Start, point to Programs, point to CDC Software, point to Pivotal CRM, and then click Pivotal Administration Console.
4. In the Servers pane, expand Data Synchronization, and then expand the name of the DSM server where you defined the master system.
5. Right-click the master system, and then click Restore System.
6. In the Pivotal Login dialog box, type in your user ID and password, and then click OK.

**Note:** The Pivotal Login dialog box displays only if you are not already connected to the database instance.
Setting up the Master System

7 In the **Restore System** dialog box, select the **Restore Business Module** check box, and then click **Browse** to select **CMS 6.0.5 - Business Module.rdf**.

8 Select the **Restore Enterprise Data** check box, and then click **Browse** to select either **CMS 6.0.5 - Empty ED.rdf** or **CMS 6.0.5 - Sample ED.rdf**.

9 Click **Restore**.

10 In the **Warning** dialog box, click **Yes**.

11 In the **Select Tablespace** dialog box, select the tablespaces for the Business Module and Enterprise Data tables and indexes, and then click **OK**.

12 When the restore process is complete, click **Disconnect**, and then click **Connect**.

Note: If you are restoring a system that has been customized for your enterprise, follow the instructions supplied by the customization specialist for steps 7 to 8.

Specifying the ANM Server for the Master System

To enable LAN notifications for the master system, you must specify the server that is running the ANM.

Note: To ensure that active notifications are created, stop Pivotal Business Server and Pivotal Client before changing the ANM server. If Pivotal CRM is running when you change the ANM server, active notifications are not created, preventing proper data synchronization.

To specify the ANM server name for the master system

1 On the DSM server, log on as the **PCS** user.

2 Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

3 In the **Servers** pane of the Pivotal Administration Console, expand **Data Synchronization**, and then expand the registered DSM server. You will see the name of the master system.

4 Right-click the master system name, and then click **System Properties**.

5 In the **Properties** dialog box, click **Change**.

6 In the **Change ANM** dialog box, click **Browse**, and then select the computer configured to run the ANM service.

7 Click **OK**.

The ANM server name is specified for the master system.
Connecting to the DSM Server

Establish a connection between the DSM server and the administrative computer.

To connect to the DSM server from the administrative computer

1. On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**.
2. In the **Servers** pane of the Pivotal Administration Console, right-click **Data Synchronization**.
3. In the **Server** field, click **Browse**, select the DSM server name of the source system, and then click **Register**.
4. In the **Servers** pane, expand **Data Synchronization**, and then expand the registered DSM server. Locate the master system in the list of configured systems.
5. Right-click the master system name, and then click **Connect**.

Setting up the Data Synchronization Manager Server

This section details the procedures to set up the DSM Server.

To set up the DSM Server

1. **Register the HTTP Message Server**
2. **Add the PCS User as a Pivotal CRM User**
3. **Specify DSM User Properties**
4. **Specify the PCS account as the DSM User**
5. **Set Queue Wait and Process Wait Times**

Registering the HTTP Message Server

Before specifying user properties in the Pivotal Administration Console, register the HTTP Message Server.

Register the HTTP Message Server on the administrative computer, so you can assign HTTP Message Server to the users on the administrative computer.
To register the HTTP Message Server

1. On the administrative computer, click Start, point to Programs, point to CDC Software, point to Pivotal CRM, and then click Pivotal Administration Console.

2. In the Servers pane of the Pivotal Administration Console, right-click HTTP Message Servers, and then click Register Server.

3. In the Protocol drop-down box, select the protocol for your deployment.

4. In the Server edit box, click Browse to select the name of the HTTP Message Server. If you have installed the HTTP Message Server on a port other than port 80, type the name of the HTTP Message Server in the format: HTTP Message Server:port number.

5. Click Register.

6. In the Servers pane of the Pivotal Administration Console, expand HTTP Message Servers to view the registered server.

Adding the PCS User as a Pivotal CRM User

Add the PCS user as a Pivotal CRM user on the master system. This allows the DSM service to access the system tables needed for data synchronization.

Before you do this however, execute the procedures in Table 8-4 on page 8-30 that are relevant to your database version (SQL Server or Oracle).

Table 8-4 Prerequisites for adding the PCS User as a Pivotal CRM User

<table>
<thead>
<tr>
<th>SQL Server</th>
<th>Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PCS user must be a member of the PivotalCRMAdmin local group on the SQL Server, with db_owner rights for the master system databases. For details, see the PCS User Account on page 3-5.</td>
<td>The PCS and the administrative users must exist on the Oracle database server, and should have been granted the PivotalCRMAdmin user role. For details about creating the administrative Oracle user, see Adding the Administrative User to the Oracle Database Server (Oracle only) on page 4-3.</td>
</tr>
</tbody>
</table>

To add the PCS user

Note: If you have not set up an administrative computer, perform the following procedure on the DSM Server while logged in as the PCS user.
Setting up the Master System

1 On the administrative computer, point to Programs, point to CDC Software, and then point to Pivotal CRM. Click Pivotal Administration Console.

2 In the Servers pane of the Pivotal Administration Console window, expand the appropriate server listed under Data Synchronization, and then select the Pivotal CRM system.

3 Right-click the Pivotal CRM system name and select Connect.

4 Right-click in the Users pane and select New User.

5 Type PCS in the New User dialog box and click OK.

6 Close the Pivotal Administration Console window. The PCS user is added.

Specifying DSM User Properties

Before specifying DSM user properties, you need to provide the e-mail address for the PCS user in the User Properties dialog box. You must add the PCS user as a Pivotal CRM user before performing this procedure.

Specifying an e-mail address and a HTTP Message Server location for the user does the following:

- Creates the UserIDXPTO account on the parent system’s HTTP Message Server, and adds it to the PivotalHTTPSyncUsers local group on that computer.
- Creates a Webstore folder for the user on the selected HTTP Message Server.
- Creates and sends an e-mail with the subject: Local Configuration, containing a URL to a page that enables the user to set up access to their system’s webstore folder on the HTTP Message Server.

Creating a MAPI profile on the DSM Server is optional. Without a MAPI profile and e-mail client configured, the DSM cannot issue e-mail notifications messages to administrators when problems occur with synchronization.

If a MAPI profile and e-mail client are not configured on the DSM Server, then in order to enable the functionality of sending a configuration e-mail, define the user properties on an administrative computer that has a MAPI profile and Outlook installed.
To specify PCS user properties

1. On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**.

   **Note:** If the administrative computer is a Windows Server 2008 computer with UAC (User Account Control) enabled, ensure that Pivotal Administration Console is running in administrator mode, before specifying the user's HTTP Message Server. To run Pivotal Administration Console as an administrator, right-click `sysmgr.exe`, and select **Run as administrator**.

2. In the **Servers** pane of the Pivotal Administration Console, expand **Data Synchronization**, then expand the registered DSM server until you see the name of the master system.

3. Double-click the master system name.

4. In the **Users** pane, right-click **PCS**, and then click **User Properties**.

5. In the **Email Address** field, type the complete e-mail address that you created for the **PCS** user.

   **Note:** The e-mail field is optional and does not require a value to save the user properties. However a valid e-mail ID is required in the e-mail field to start synchronization to satellite or mobile systems. For more information, see **Accessing the Webstore** on page 8-34.

6. In the **HTTP Message Server** drop-down list, click the name of the HTTP Message Server where the Webstore folder of the master system resides.

7. In the **Language** drop-down list, select a language.

8. Click **Apply**, and then click **OK**.

   The user properties are specified for the **PCS** user.

**Specifying the PCS account as the DSM User**

Specify the **PCS** user as the DSM user for the master system. Add the **PCS** user as a Pivotal CRM user before you perform this procedure.

**Note:** If you have not set up an administrative computer, perform the following procedure on the DSM server.
To specify the PCS user as the DSM user

1. On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2. In the **Servers** pane, expand **Data Synchronization**, then expand the registered DSM server name until you see the master system name.

3. Right-click the master system name, and then click **System Properties**.

4. In the **Properties** dialog box, click the **System** tab, and then select **PCS** from the **DSM** list.
   If **PCS** is not in the list, click **Refresh** or restart the Pivotal Administration Console. Ensure that you have added the **PCS** user as a Pivotal CRM user. For more details, see **Adding the PCS User as a Pivotal CRM User** on page 8-30.

5. Read the notification message that appears, click **OK**, and then click **OK** again.

   The **PCS** user is specified as the DSM user.

### Setting Queue Wait and Process Wait Times

The Message Queue Wait and Message Process Wait times affect how often the DSM service packages and sends synchronization messages to mobiles and satellites.

- **Message Queue Wait time** determines the length of time a LAN notification must be stored in the **ANMSTORE** folder before the DSM accesses it.
- **Message Process Wait time** determines how often the DSM processes LAN notifications that have been in the **ANMSTORE** folder.

For initial installation, set Message Queue Wait time to two minutes and Message Process Wait time to 10 minutes. However, you can adjust Message Queue Wait and Message Process Wait times at any time.

For more information on factors to consider when setting the Message Queue Wait and Message Process Wait times, see the **Pivotal SyncStream 6.0.13 Administration Guide**.

**Note:** If you have not set up an administrative computer, perform the following procedure on the DSM server.
Setting up the Master System

To change the Message Queue Wait and Message Process Wait time

1. On the administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.
2. Expand **Data Synchronization**, and then expand the registered DSM server until you see the name of the master system.
3. Right-click the master system, and then click **System Properties**.
4. In the **Systems Properties** dialog box, click the **DSM** tab.
5. In the **Message Queue Wait** drop-down list, select the desired message queue wait time.
6. In the **Message Process Wait** drop-down list, select the desired message process wait time.
7. Click **Apply**, and then click **OK**.

The message queue wait and message process wait time are changed.

Accessing the Webstore

Authenticate the profile of the **PCS** user by connecting to the **Webstore** folder of the master system on the HTTP Message Server. Do any one of the following:

- Open an e-mail message. You need to perform this procedure on the DSM server. Make sure the e-mail messaging application on the DSM server has a profile for the **PCS** user before you follow this procedure.
- Navigate directly to a Web page.

To authenticate through an e-mail message

1. On the master DSM server, log on as the **PCS** user.
2. Open the e-mail messaging application, and open the e-mail message with the subject **Local Configuration**. The message is sent when the HTTP Message server is set up for the PCS user in the **User Properties** in Pivotal Administration Console.
3. Click the URL, and then click **Yes** when prompted to download **InitUserAX** plug-in.

A browser window opens displaying a progress message. Your configuration is confirmed with the following message:

- **Configuration Succeeded**

The profile of the **PCS** user is now authenticated for the **Webstore** folder of the master system on the HTTP Message Server.

To authenticate through a Web page

1. On the DSM server, log on as the **PCS** user.
2. Open Internet Explorer and go to
Replacing "computer name" with the name of the HTTP Message Server where the Webstore folder of the user resides.

Note: In addition to replacing "computer name" with the name of the HTTP Message Server, the user may also need to replace "http://" with "https://" if they are using the https protocol. Also, if they are using a different port other than the default for http:// or https://, then that would also need to be specified.

3 In the User Name text box, type the name of the user for this computer. The name is case-sensitive.

4 In the System drop-down list, select the system for the user. The names are in the format Servername - Systemname.

5 Click Configure Local System.

The user's profile is now authenticated for the Webstore folder of the master system on the HTTP Message Server.

Migrating the HTTP Message Server

With Pivotal SyncStream 6.0.13, the Direct Access transport provider allows a child system to directly synchronize records with the parent system's SyncStream database. After the recipient child system has processed the incoming messages stored in the parent system's SyncStream database, messages are deleted from the parent system. However, the Webstore provider uses the Webstore folder on the HTTP Message Server and incoming data is temporarily stored in the form of messages until the recipient system downloads the messages. The HTTP Message Server can use either the Direct Access transport provider or the Webstore provider.

Warning! After you migrate Message Server to the Direct Access provider, you cannot revert to the Webstore provider.

When you select the Migrate Message Server option in Pivotal Administration Console, the migration of the Message Server occurs and the new Direct Access provider is used, instead of the Webstore provider.

Note: After the migration of the Webstore, the intermediate Webstore folder is bypassed and is not used for storing messages. Do not delete the Webstore folder. Although the Webstore folder is not used to store messages, it is required for parent and child systems to communicate.

You can enhance the performance on parent systems by migrating the Webstore as the amount of processing required to synchronize data between parent and child systems is significantly reduced.
For more information about the **Migrate Message Server** option, see *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*. For more information about the Direct Access transport provider, see *Pivotal SyncStream 6.0.13 Administration Guide*.

### Running SyncStream Diagnostics

After installing SyncStream, run the SyncStream diagnostics to check SyncStream components and settings.

**To run SyncStream Diagnostics**

1. On the master system, click **Start**, point to **Programs**, point to **CDC Software**, point to **Pivotal CRM**, and click **Data Synchronization Configuration Check**.
2. In the **SyncStream Diagnostics** dialog box, click **Run Checks**. The screen displays results of the check.
3. Click **Autofix**, if the check results display any issues. Select **System Name** and then click **OK**.
4. Click **Close**.

### Starting and Stopping the Master System

Start and stop the master system to ensure that it functions properly.

**To start the master system**

1. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.
2. Expand **Data Synchronization** until you see the name of the master system.
3. Expand the server name. All defined systems are displayed.
4. To connect to a system, right-click the system name and click **Start DSM**.

**To stop the master system**

>> Right-click the name of the system that you are connected to and click **Stop DSM**.

The master system is stopped.
Silent Installation using Command-Line Parameters

You can specify standard or custom installation options in .bat files and send them to the users. Users can click these .bat files to proceed with the installation. Use a combination of switches to run the SyncStream installation program in silent-logged mode for a typical or custom installation.

**Note:** Before installing the HTTP Message Server on an IIS 6.0 computer, uninstall any 64-bit application running under Internet Information Services (IIS) Manager. If you run the SyncStream installer for the HTTP Message Server on a 64-bit operating system, IIS must be configured to run in the 32-bit compatibility mode. The installer automatically detects the IIS compatibility mode and converts IIS to a 32-bit compatibility mode and any existing 64-bit applications on IIS will not run.

**To invoke setup.exe from the command prompt**

```bash
>> At the command prompt, change directory to the folder with the Pivotal SyncStream 6.0.13 installation files and type setup.exe.
```

*Table 8-5 on page 8-37 lists the additional switches necessary to run the installation program in various modes.*

**Table 8-5 Basic Installation Switches**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s</td>
<td>Runs <code>setup.exe</code> in a silent mode</td>
</tr>
<tr>
<td>/v</td>
<td>Passes the specified installation parameters to <code>MsiExec.exe</code></td>
</tr>
<tr>
<td>/q</td>
<td>Runs <code>MsiExec.exe</code> in a silent mode</td>
</tr>
<tr>
<td>/l</td>
<td>Creates a log file for the installation</td>
</tr>
<tr>
<td>/x</td>
<td>Uninstalls SyncStream</td>
</tr>
</tbody>
</table>

**Note:** Installation switches are case-sensitive.

**Specifying Installation Parameters**

Copy the installation files to a folder on your local hard drive, or map the location to the installation files.

*Table 8-6 on page 8-38 details the various installation parameters.*
Setting up the Master System

Table 8-6 Installation Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>setup.exe</td>
<td>Installer</td>
</tr>
<tr>
<td>/l log.txt</td>
<td>Creates log file</td>
</tr>
<tr>
<td>/V</td>
<td>Passes the specified installation parameters to MsiExec.exe</td>
</tr>
<tr>
<td>/s</td>
<td>Command for silent installation</td>
</tr>
<tr>
<td>/q</td>
<td>Command for running MsiExec.exe in silent mode</td>
</tr>
<tr>
<td>INSTALLMODE=&quot;SILENT&quot;</td>
<td>Mode of installation</td>
</tr>
<tr>
<td>INSTALLPARAMS=&quot;Mobile Suppress_Reboot&quot;</td>
<td>Installation parameters are: Mobile, and the system is not rebooted after installation.</td>
</tr>
</tbody>
</table>

Specifying Custom Installation

The first installation parameter must be Services, Mobile, or DesktopTools.

Table 8-7 on page 8-38 lists the parameters for services.

Table 8-7 Values for Services

<table>
<thead>
<tr>
<th>Installation Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSM Service</td>
<td>DSM_Service</td>
</tr>
<tr>
<td>DSM Watcher</td>
<td>DSM_Watcher</td>
</tr>
<tr>
<td>ANM Service</td>
<td>ANM_Service</td>
</tr>
<tr>
<td>Message Store</td>
<td>MessageStore WebSite</td>
</tr>
<tr>
<td>Type of databases</td>
<td>SQL_TYPE=&quot;MSSQL&quot; or &quot;Oracle&quot;</td>
</tr>
</tbody>
</table>

Table 8-8 on page 8-38 lists the parameters for mobile systems.

Table 8-8 Values for Mobile Systems

<table>
<thead>
<tr>
<th>Installation Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Databases</td>
<td>Empty_SQL_DB</td>
</tr>
<tr>
<td>To create empty databases</td>
<td>Force_Empty_DB</td>
</tr>
<tr>
<td>To prevent the system from rebooting after installation</td>
<td>Suppress_Reboot</td>
</tr>
</tbody>
</table>

Table 8-9 lists the parameter values for desktop components.

Table 8-9 Values for Desktop Components

<table>
<thead>
<tr>
<th>Installation Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Administration Console desktop tools</td>
<td>PAC/DesktopTools</td>
</tr>
</tbody>
</table>
Table 8-10 on page 8-39 lists other parameters and their values for silent installation.

**Table 8-10 Parameters and Values**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webstore folder location</td>
<td>MESSAGEDIR=&quot;&lt;WebStorage folder location&gt;&quot;</td>
</tr>
<tr>
<td>Services account name</td>
<td>DLG_ACCOUNT_USERNAME=&quot;&lt;Services username&gt;&quot;</td>
</tr>
<tr>
<td>Services password</td>
<td>DLG_ACCOUNT_PASSWORD=&quot;&lt;Services password&gt;&quot;</td>
</tr>
<tr>
<td>Location of the temporary files</td>
<td>TEMPDIR=&quot;&lt;Temp files location&gt;&quot;</td>
</tr>
<tr>
<td>Location of the log files</td>
<td>LOGDIR=&quot;&lt;Log files location&gt;&quot;</td>
</tr>
<tr>
<td>Domain where the mobile system will log in</td>
<td>NT_DOMAIN=&quot;&lt;Mobile's domain&gt;&quot;</td>
</tr>
<tr>
<td>Mobile user</td>
<td>NT_USER=&quot;&lt;Mobile user&gt;&quot;</td>
</tr>
<tr>
<td>Domain in which the services are installed</td>
<td>DLG_ACCOUNT_DOMAIN=&quot;&lt;Services Domain&gt;&quot;</td>
</tr>
<tr>
<td>SyncStream installation folder</td>
<td>INSTALLDIR=&quot;&lt;SyncStream installation folder&gt;&quot;</td>
</tr>
</tbody>
</table>

**Note:** The properties listed in Table 8-10 on page 8-39 must not be included as the INSTALLPARAMS parameters. Specify them separately in the silent installation script. For example, to install a mobile system in a particular domain with specific Services user name and password, and log files location, type:

```
"e:\PSS 6.0\setup.exe" /s /V"/q /l log.txt INSTALLMODE="SILENT" INSTALLPARAMS="Mobile Empty_SQL_DB" NT_DOMAIN="banrdc" NT_USER="corpuser"
```

where

- `e:` is the mapped network drive to the folder with the installation files.
- Replace the values of NT_DOMAIN and NT_USER with values specific to your deployment.

**To install a mobile system and empty databases**

```
>> At the command prompt, type the following:

"e:\PSS 6.0\setup.exe" /s /V"/q /l log.txt INSTALLMODE="SILENT" INSTALLPARAMS="Mobile Empty_SQL_DB" NT_DOMAIN=""corpdomain" NT_USER="rd005"
```

where

- `e:` is the mapped network drive to the folder with the installation files.
- Replace the values of NT_DOMAIN and NT_USER with values specific to your deployment.

**Installing SQL Server 2008 R2 Express Edition with Advanced Services**

Ensure to install .NET Framework 3.5 Service Pack 1, Power Shell 2.0, and Windows Installer 4.5 before installing SQL Server 2008 R2.
To install .NET Framework 3.5

>> Install .NET Framework 3.5 Service Pack 1 by running dotnetfx35.exe from the redist folder in PSS6.0.13WithSQL.zip.

To install Power Shell 2.0

>> Do one of the following:

- If the operating system is Windows XP 32-bit or 64-bit, then install Power Shell 2.0 by running WindowsXP-KB968930-x86-ENG.exe from the redist folder in PSS6.0.13WithSQL.zip.

- If the operating system is Windows 2003 or Windows 2003 R2 32-bit, then install Power Shell 2.0 by running WindowsServer2003-KB968930-x86-ENG.exe from the redist folder in PSS6.0.13WithSQL.zip.

- If the operating system is Windows 2003 or Windows 2003 R2 x64 64-bit, then install Power Shell 2.0 by running WindowsServer2003-KB968930-x64-ENG.exe from the redist folder in PSS6.0.13WithSQL.zip.

- If the operating system is Windows Vista or a newer 32-bit, then install Power Shell 2.0 by running Windows6.0-KB968930-x86.msu from the redist folder in PSS6.0.13WithSQL.zip.

- If the operating system is Windows Vista or a newer 64-bit, then install Power Shell 2.0 by running Windows6.0-KB968930-x64.msu from the redist folder in PSS6.0.13WithSQL.zip.

Note: Windows 2000 Server is not supported.
To install Windows Installer 4.5

Do one of the following:

- If the operating system is Windows XP, 32-bit or 64-bit, then install Windows Installer 4.5 by running
  `WindowsXP-KB942288-v3-x86.exe` from the `redist` folder in `PSS6.0.13WithSQL.zip`.

- If the operating system is Windows 2003 or Windows 2003 R2, 32-bit, then install Windows Installer 4.5 by running
  `WindowsServer2003-KB942288-v4-x86.exe` from the `redist` folder in `PSS6.0.13WithSQL.zip`.

- If the operating system is Windows 2003 or Windows 2003 R2 x64, 64-bit, then install Windows Installer 4.5 by running
  `WindowsServer2003-KB942288-v4-x64.exe` from the `redist` folder in `PSS6.0.13WithSQL.zip`.

- If the operating system is Windows Vista or a newer 32-bit, then install Windows Installer 4.5 by running
  `Windows6.0-KB942288-v2-x86.msu` from the `redist` folder in `PSS6.0.13WithSQL.zip`.

- If the operating system is Windows Vista or a newer 64-bit, then install Windows Vista by running
  `Windows6.0-KB942288-v2-x64.msu` from the `redist` folder in `PSS6.0.13WithSQL.zip`.

**Note:** Windows 2000 Server is not supported.

To install SQL Server 2008 R2 Express Edition with Advanced Services

Do one of the following:

- For a brand new install, type the following at the command prompt:
  ```cmd
  e:\SQLExpress\setup.exe /IACCEPTSQLSERVERLICENSETERMS /ACTION=Install /ConfigurationFile="e:\SQLExpress\InstallConfigurationFile.ini"
  ```

- For an upgrade, type the following at the command prompt:
  ```cmd
  e:\SQLExpress\setup.exe /IACCEPTSQLSERVERLICENSETERMS /ACTION=UPGRADE /ConfigurationFile="e:\SQLExpress\UpgradeConfigurationFile.ini"
  ```
To install services

```
"e:\PSS6.0\setup.exe" /s /V"/q /l log.txt INSTALLPARAMS="Services DSM_Service ANM_Service MessageStore WebSite" INSTALLMODE="SILENT" sql_type="MSSQL"
DLG_ACCOUNT_DOMAIN="banrdc" DLG_ACCOUNT_USERNAME="mnagpal1" DLG_ACCOUNT_PASSWORD="test"
```

where

e: is the mapped network drive to the folder with the installation files.

Replace the values of DLG_ACCOUNT_DOMAIN, DLG_ACCOUNT_USERNAME, and DLG_ACCOUNT_PASSWORD with values specific to your deployment.

To install desktop components

```
"e:\PSS6.0\setup.exe" /s /V"/q /lv log.txt INSTALLPARAMS="DesktopTools PAC_DesktopTools" INSTALLMODE="SILENT"
```

where

e: is the mapped network drive to the folder with the installation files.

Uninstalling SyncStream Components

Before you uninstall any SyncStream components, do the following:

1. Ensure that no users are connected to the system.
2. Do the following, in sequence:
   - Stop the DSM Watcher.
   - Stop the DSM from Pivotal Administration Console.
   - Stop the DSM service from the Services console in the Control Panel.
   - Stop the ANM service.
3. Close Pivotal Administration Console.

Uninstalling a particular component depends on whether the component runs on a dedicated server, or runs in conjunction with other SyncStream components.

- If only one SyncStream component is running on a server, you can uninstall it by using Add/Remove Programs in the Control Panel. You can also use this method to remove all SyncStream components from the server.
- If multiple SyncStream components are running on a server, remove one of them by running the Pivotal SyncStream 6.0.13 setup.exe.
To uninstall from the Control Panel

1. Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Add/Remove Programs**.

2. In the **Currently installed programs** list, click **Pivotal SyncStream**, and then click **Remove**.

SyncStream is uninstalled.

**Silent Uninstallation**

>>> To specify the uninstallation, at the command prompt, type the following:

```
msiexec.exe /x "<location>\Pivotal SyncStream 6.0 (v6.0.1300).msi"
/q INSTALLMODE="SILENT"
```

where

/x is the switch for uninstall

<location> is the location where the Pivotal SyncStream 6.0 (v6.0.1300).msi file is stored.

>>> To prevent the system from rebooting after uninstallation, type the following:

```
msiexec.exe /x "<location>\Pivotal SyncStream 6.0 (v6.0.1300).msi"
/q INSTALLMODE="SILENT" REBOOT="ReallySuppress"
```
Setting up Satellite Systems
Satellite Deployment Considerations

Before deploying satellite systems, make sure you have considered the following:

- Whether to deploy an HTTP Message Server for the satellite system
- Obtaining scalable Hardware for IIS and SQL Server or the Oracle Server
- Obtained administrative support
- Identified prerequisite tasks and granted the necessary permissions

HTTP Message Server

If a satellite system has its own child systems, it is recommended that you deploy an HTTP Message Server for that satellite system. If a satellite has its own HTTP Message Server, the child systems of the satellite do not require access to the master system’s HTTP Message Server. This decreases the load on the HTTP Message Server of the master system, and is recommended for deployments spread over vast geographical areas. For HTTP Message Server system requirements, see the Pivotal compatibility guide.

Prerequisites for Setting Up Satellite Systems

The requirements for deploying satellite systems are detailed in this section.

SQL Server Prerequisites

This section is specific to SQL Server deployments. Oracle users, refer to the prerequisites detailed in Oracle Prerequisites on page 9-3.

Table 9-1 on page 9-3 lists the tasks that you need to complete before installing and setting up a satellite system, using SQL Server. For specific procedures, see Setting up Microsoft SQL Server on page 3-6.
Table 9-1 Preliminary tasks for installing a satellite system using SQL Server

<table>
<thead>
<tr>
<th>On This Computer</th>
<th>Do The Following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Directory</td>
<td>• Create the SatellitePCS user on the domain where the satellite system resides.</td>
</tr>
</tbody>
</table>
| Satellite HTTP Message Server                          | • Add the SatellitePCS user to the local Administrators group.  
• Add the logon user name to the local Administrators group.                                                                                          |
| SQL Server (that stores satellite Pivotal CRM data and the SyncStream database of the satellite system) | • Create the Satellite Business Module and Satellite Enterprise Data databases.  
• Create the PivotalCRMUsers and PivotalCRMAdmin local groups on the SQL Server computer.  
• Add the SatellitePCS user to the PivotalCRMAdmin group.  
• Create SQL logins for these groups.                                                                                                                   |
| Administrative computer                               | • Create a profile for the login user name in the e-mail messaging application.  
• Add the logon user name to the Administrators local group  
• Install the Pivotal Administration Console.                                                                                                           |
| Designated server for the ANM                         | • Add the SatellitePCS user to the local Administrators group.                                                                                                                                                    |
| Designated server for the DSM                          | • Add the SatellitePCS user to the local Administrators group.                                                                                                                                                  |

At the satellite location, you need staff experienced in administering Microsoft BackOffice products.

**Oracle Prerequisites**

This section is specific to Oracle deployments. SQL Server users, refer to the prerequisites detailed in *SQL Server Prerequisites* on page 9-2.

Table 9-2 on page 9-4 lists the tasks that you need to complete before installing and setting up a satellite system, using Oracle. For specific instructions, see *Setting up the Oracle Database Instance* on page 3-16.
Setting up Satellite Systems

Table 9-2 Preliminary tasks for installing satellite systems using Oracle

<table>
<thead>
<tr>
<th>On This Computer</th>
<th>Do The Following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Directory</td>
<td>• Create the SatellitePCS user on the domain where the satellite system resides.</td>
</tr>
<tr>
<td>Oracle database server (that will house satellite</td>
<td>• Create Satellite Business Module and Satellite Enterprise Databases databases.</td>
</tr>
<tr>
<td>Pivotal CRM Data, and the satellite’s SyncStream</td>
<td>• Create the PivotalCRMUsers and PivotalCRMAdmin user roles, If using a different Oracle database server computer than the master system.</td>
</tr>
<tr>
<td>local store)</td>
<td>• Grant these roles to the SatellitePCS user. These tasks can be done by modifying and running the install.sql script. For more information about these tasks see Running install.sql on page 3-30.</td>
</tr>
<tr>
<td>Satellite’s administrative computer</td>
<td>• Create a profile for the login user name in the e-mail messaging application.</td>
</tr>
<tr>
<td></td>
<td>• Add the login user name to the PivotalCRMUsers and PivotalCRMAdmin Oracle roles.</td>
</tr>
<tr>
<td></td>
<td>• Install the Pivotal Administration Console.</td>
</tr>
<tr>
<td>HTTP Message Server</td>
<td>• Add the SatellitePCS user to the local Administrators group.</td>
</tr>
<tr>
<td>Designated server for the ANM</td>
<td>• Add the SatellitePCS user to the local Administrators group.</td>
</tr>
<tr>
<td>Designated server for the DSM</td>
<td>• Add the SatellitePCS user to the local Administrators group.</td>
</tr>
</tbody>
</table>

Note: Before installing a satellite system, create a security group specifically for the satellite. The data set for a satellite system is based on the security rights associated with this group.
To set up a satellite system

1. Install and configure the ANM service
2. Install and configure the DSM service
3. Install and configure the HTTP Message Server
4. Create the SyncStream database
5. Create ODBC data sources
6. Define the satellite system
7. Set up the File Path
8. Specify the ANM server for the satellite system
9. Set up the administration computer
10. Restore data to the satellite system

While most of the setup is done on the satellite servers, several tasks need to be done on the parent system. If your satellite servers are not in the same physical location as the parent, contact the administrators of the parent system to complete the installation.

Installing and Configuring the ANM Service

This section provides installation and configuration instructions for the ANM service. When you install the ANM service, the SyncStream installer also installs the Pivotal System Manager, Pivotal Administration Console, and PSS Storage Manager.

To run the Pivotal SyncStream 6.0.13 installer you need to be logged on with administrator permissions.

If you are planning to install the ANM and DSM services on the same computer, you only need to run the SyncStream installer once, and select the ANM service and DSM service check boxes. Then, configure the services as described below.

To install the ANM service

1. On the satellite computer designated to run the ANM, log on as the SatellitePCS user.
2. Follow the instructions in To install the ANM service on page 8-8.

To set the ANMSTORE folder location

>> On the satellite ANM server, log on as the SatellitePCS user, and then follow the instructions in Setting the ANMSTORE Folder Location on page 8-9.

To set the Service Principal Name (SPN)

>> If you are using Kerberos authentication in the Active Directory, it is recommended that you set the Service Principal Name (SPN) for
the ANM service. For information on how to set the SPN for the ANM service, see "Setting the Service Principal Name (SPN)" on page 8-11.

Installing and Configuring the DSM Service

When you install the DSM service, the SyncStream installer also installs the Pivotal System Manager, Pivotal Administration Console, and PSS Storage Manager.

To run the Pivotal SyncStream 6.0.13 installer you need to be logged on with administrator permissions.

To install the DSM service and DSM Watcher

1 On the satellite computer designated to run the DSM, log on as the SatellitePCS user.

2 Follow the instructions in "To install the DSM service and the DSM Watcher" on page 8-10.

To set the Service Principal Name (SPN)

>> If you are using Kerberos authentication in the Active Directory, it is recommended that you set the Service Principal Name (SPN) for the DSM service. For information on how to set the SPN for the DSM service, see "Setting the Service Principal Name (SPN)" on page 8-11.

Installing the HTTP Message Server

Installing the HTTP message server is optional. If a satellite system has child systems, it is recommended that you deploy an HTTP Message Server for that satellite system.

When the deployment scenario is complex with more than one satellite system with multiple child systems and mobiles from each satellite system, resource distribution is advised and more than one HTTP Message Server would be required.

Installing the HTTP Message Server creates the PivotalHTTPSyncUsers local security group. This group is used to authenticate users to their respective Webstore folder.

To install the HTTP Message Server

>> On the satellite computer designated to run the HTTP Message Server, log on as the SatellitePCS user, and then follow the instructions in "To install the HTTP Message Server" on page 8-12.
Verifying IIS Virtual Directories

Successful data synchronization requires specific virtual directories on the HTTP Message Server. You must verify that these directories were created as part of the installation process.

A complete installation of the HTTP Message Server automatically creates and configures the following virtual directories in IIS:

- SyncStream
- SyncStream\Systems_Admin
- SyncStream\Systems
- SyncStream\Admin
- SyncStream\Admin\Bin
- SyncStream\Admin\Config
- SyncStream\Users
- SyncStream\XptDirectAccess

Creating the SyncStream Database

The SyncStream database stores outbound synchronization messages awaiting transport to the HTTP Message Server. It also stores inbound synchronization messages until they are transported to the DSM for processing.

You need to create the database, and assign the PCS user the necessary rights to it. After you have created the database, and assigned the necessary rights to it, you will need to create an ODBC connection for it.

The procedures in this section assume you have already created the PivotalCRMAdmin local group (SQL Server) or PivotalCRMAdmin role (Oracle), and added the PCS user to it.

For instructions about creating the SyncStream database:

- SQL Server users, see Creating a SQL Server Database on page 8-14.
- Oracle users, see Creating an Oracle Database on page 8-16.

Creating ODBC Data Sources

Create ODBC data source names (DSNs) to the Satellite Business Module and Satellite Enterprise Data databases. If you have not yet created these databases:

- SQL Server users, follow the instructions for creating the Production Business Module and Production Enterprise Data databases in To create empty Pivotal databases on page 3-7.
- Oracle users, see To set up the Oracle database instance on page 3-16.
ODBC DSNs are specific to the computer they are created on. This means you need to create these ODBC DSNs on the DSM server. However, as system DSNs, they are available to anyone who logs on to the computer where they were created.

Creating ODBC Data Sources for SQL Server

This section is specific to SQL Server deployments. Oracle users, refer to the procedures detailed in Creating ODBC Data Sources for Oracle on page 9-10.

To create a connection for the Satellite Business Module on the DSM server

1. On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator.
   
   For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.

2. In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.

3. In the Pivotal System Manager dialog box, click New.

4. In the New System dialog box, click ODBC.

5. In the ODBC Data Source Administrator dialog box, click the System DSN tab, and then click Add.

6. In the Create New Data Source dialog box, click SQL Server, and then click Finish.

7. In the Create a New Data Source to SQL dialog box, do the following:
   
   • In the Name text box, type Satellite BM.
   
   • In the Description text box, type a description for the data source.
   
   • In the Server drop-down list, click the name of the satellite SQL Server computer. Do not select Local in the Server box, even if the SQL Server is located on the local computer. Do not type a period (.) for the server name.

8. Click Next.

9. In the Create a New Data Source to SQL Server dialog box, click Next.
   
   This accepts the default, which is NT authentication.
10 In the **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

11 In the **Database** drop-down list, click **SatelliteBM**, and then click **Next**.

12 Click **Finish**.

13 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.

   The message in the window indicates whether or not the ODBC connection has been properly set up.

   If the test results are successful, click **OK**.

   If the connection was unsuccessful, verify the settings specified and repeat steps 1 to 11.

14 Click **OK**.

**To create a connection for the Satellite Enterprise Data on the DSM server**

1 Follow steps 1 to 5 of *To create a connection for the Satellite Business Module on the DSM server* on page 9-8.

2 In the **Create a New Data Source to SQL** dialog box, do the following:
   
   - In the **Name** text box, type **SatelliteED**.
   
   - In the **Description** text box, type a description of the data source.
   
   - In the **Server** drop-down list, click the name of the satellite SQL Server computer. Do not select Local in the **Server** box, even if the SQL Server is located on the local computer. Do not type a period (.) for the server name.

3 Click **Next**.

4 In the next **Create a New Data Source to SQL Server** dialog box, click **Next**.

   This accepts the default, which is NT authentication.

5 In the next **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

6 In the **Database** drop-down list, click **SatelliteED**, and then click **Next**.

7 Click **Finish**.

**Note:** Pivotal supports only NT Authentication.
8 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.
   The message in the window indicates whether or not the ODBC connection has been properly set up.
   If the test results are successful, click **OK**.
   If the connection was unsuccessful, verify the settings you entered and repeat steps 1 to 7.

9 Click **OK**.

You are now ready to define the satellite system.

### Creating ODBC Data Sources for Oracle

This section is specific to Oracle deployments. SQL Server users, refer to the prerequisites detailed in *Creating ODBC Data Sources for SQL Server* on page 9-8.

**To create a connection for the Satellite Business Module on the satellite DSM server**

1 On the satellite DSM server, log on as the SatellitePCS user.

2 On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, right-click **Pivotal Administration Console**, and select **Run as administrator**.

   For other operating systems, click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal Administration Console**.

3 In the **Servers** pane of Pivotal Administration Console, right-click **Data Synchronization**, and click **System Manager**.

4 In the **Pivotal System Manager** dialog box, click **New**.

5 In the **New System** dialog box, click **ODBC**.

6 On the **System DSN** tab, click **Add**.

7 In the **Create New Data Source** dialog box, select the Oracle ODBC driver listed as **Oracle in <Oracle_Home>**, and then click **Finish**.
8 In the **Oracle ODBC Driver Configuration** window, do the following:

- In the **Data Source Name** text box, type the name for the SatelliteBM using the `<OracleService_name>.<schema_name>` notation.
- In the **Data Source Description** text box, type a description for the SatelliteBM data source.
- In the **TNS Service Name** text box, type the service name, or make a selection from the drop-down list.
- In the **User ID** field, type the user name for the schema owner.
- On the **Oracle** tab, make sure that **Enable LOBs** is selected.

9 Click **Test Connection**.

10 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

11 If the connection succeeded, click **OK** in the **Testing Connection** message box.

   If the connection failed, make sure that:

   - The schema name exists in the database.
   - The schema owner's name and password were typed correctly.

---

**To create a connection for the satellite Enterprise Data on the satellite DSM server**

1 Follow steps 1 to 6 of **To create a connection for the Satellite Business Module on the DSM server** on page 9-8.

2 In the **Oracle ODBC Driver Configuration** window, do the following:

   - In the **Data Source Name** box, type the name for the Satellite Enterprise Data using the `<OracleService_name>.<schema_name>` notation.
   - In the **Data Source Description** box, type a description for the Satellite Enterprise Data data source.
   - In the **TNS Service Name** box, type the service name, or make a selection from the drop-down list.
   - In the **User ID** field, type the user name for the schema owner.
   - On the **Oracle** tab, make sure that **Enable LOBs** is selected.

3 Click **Test Connection**.

4 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

5 If the connection succeeded, click **OK** in the **Testing Connection** message box.

   If the connection failed, make sure that:

   - The schema name exists in the database.
   - The schema owner's name and password were typed correctly.

You are now ready to define the satellite system.
Setting up Satellite Systems

Defining the Satellite System

Set up the satellite system by pairing the Satellite Business Module and Satellite Enterprise Data DSNs.

To define the satellite system on the DSM server

1. Log on to the satellite DSM server as the SatellitePCS user.
2. On operating systems with User Account Control (UAC) enabled, such as Windows 7, Windows Vista, Windows Server 2008, or Windows Server 2008 R2, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, click Start, point to Programs, CDC Software, click Pivotal CRM, right-click Pivotal Administration Console, and select Run as administrator.
   For other operating systems, click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal Administration Console.
3. In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.
4. In the Pivotal System Manager dialog box, click New.
5. In the New System dialog box, type a name for the Satellite system in the System Name text box. For example, Companyname Satellite System.
6. In the Business Module drop-down list, select the name of the Business Module database created for the satellite system.
7. In the Enterprise Data drop-down list, select the name of the Enterprise Data database created for the satellite system.
8. Under This system definition is available for:, select Anyone who uses this computer (all users).
   This ensures that the system definition is visible to the administrative computer user, as well as other users.
9. Click OK.
10. In the Pivotal System Manager dialog box, click Close.

The system definition is created. However, do not log on to the satellite system now.

Setting Up the FilePath

If the satellite system has LAN connections, share the FilePath folder.
Create the FilePath folder on the satellite DSM server, in a directory that is backed up regularly.

After the FilePath folder is created, specify its location in the Properties dialog box of the satellite system.
To set up the FilePath folder

>>> On the satellite DSM server, create a folder for the filepath and share it with all domain users.

To specify the location of the FilePath folder

>>> On the satellite DSM server, follow the instructions in *To specify the location of the FilePath folder for the master system* on page 8-25.

Specifying the ANM Server for the Satellite System

To enable active notification for the satellite system, specify the server that is running the ANM.

To specify the ANM server name for the satellite system

On the satellite DSM server, log on as the SatellitePCS user, and then follow the instructions in *To specify the ANM server name for the master system* on page 8-28.

Setting Up the Administrative Computer

Use the administrative computer of the satellite system to complete the setup of the satellite system. To decrease the load on your satellite DSM server, use that computer for administering data synchronization in general.

Note: If you have not set up an administrative computer (for example, in a testing environment where all SyncStream components are installed on one or two computers), perform the procedures on the computer running the DSM service (referred to as the DSM server) while logged on as the SatellitePCS user.

On the administrative computer of the satellite system, connect to the DSM server. For more information, see *To connect to the DSM server from the administrative computer* on page 9-14.

Add the user account to the local Administrators group on the following computers:

- Satellite administrative computer
- Satellite DSM server
- Satellite ANM server
- Satellite HTTP Message Server (if deployed for this satellite system).

Add the SatellitePCS user to the PivotalCRMAdmin local group on the SQL Server computer or to the PivotalCRMAdmin role in the Oracle database to ensure the logon user has the necessary permissions to the satellite system’s Business Module, Enterprise Data, and SyncStream databases.
Defining the Satellite System

To define the satellite system on the administrative computer

>> On the administrative computer, log on with your own user name, and then follow the instructions in To define the satellite system on the DSM server on page 9-12.

Connecting to the DSM Server

To connect to the DSM server from the administrative computer

>> On the satellite administrative computer, follow the instructions detailed in To connect to the DSM server from the administrative computer on page 8-29.

Synchronizing Data

After you define the satellite system, you need to restore data. To restore data, start the synchronization process for the satellite system. When synchronization begins, a compressed version of the Business Module, filtered Enterprise Data, and the FilePath contents are sent from the parent system (master or satellite) to the SatellitePCS user. The data is then processed and restored to the satellite system by the satellite DSM.

Note: If changes made to security group memberships for external users on the master system are not visible on satellite systems, the satellite DSM does not have rights to the Contact_Web_Details or Extranet_Group_Members tables. This problem is also caused if there is a sync filter active on these tables.

To synchronize the satellite system with the master system

1 Register the HTTP Message Server
2 Add the SatellitePCS user
3 Access the Web store
4 Start synchronization to the satellite system
5 Start the satellite system
6 Set queue wait and process wait times

Registering the HTTP Message Server

Before specifying user properties in Pivotal Administration Console, register the HTTP Message Server where the Webstore folder of the satellite system resides.
Determining the location of the webstore folder on the satellite

- If you set up an HTTP Message Server as part of the satellite system deployment, the satellite Webstore should reside on this HTTP Message Server. You need to deploy a dedicated HTTP Message Server for a satellite system if that satellite is going to support its own child systems.
- When deploying a new satellite system after migrating the message store, the satellite token should be created on the parent HTTP message server.
- If you did not set up an HTTP Message Server for the satellite system, the Webstore folder of the satellite system will reside on the HTTP Message Server created during the master system deployment.

To register the HTTP Message Server

On the administrative computer of the master system, follow the instructions in To register the HTTP Message Server on page 8-30.

**Note:** For more information about migrating to the Direct Access transport provider, see Migrating the HTTP Message Server on page 8-35.

Migrating the HTTP Message Server: Points to Note

1. Scenario: Two HTTP Message Servers, and a satellite system deployed outside the LAN.
   a) When using the Webstore transport provider, create a Message Server each for the master (main parent) and the satellite system. To service the calls over the WAN, create the Inbox on the HTTP Message Server of the master and satellite systems respectively.
   b) To use the Direct Access transport provider, create the satellite Inbox on the main parent Message Server. The satellite HTTP Message Server will be used to deploy mobiles from the Satellite.

2. Scenario: A satellite system, deployed with a HTTP Message Server in a satellite environment that has been initialized.
   - The Inbox should be on the main parent HTTP Message Server, and the satellite token has to be recreated and downloaded again.

3. Scenario: Three levels of deployment of master, satellite and mobile systems, or any similar configuration, where there are parent systems at each level. All parent systems share one single HTTP Message Server.
   - In each parent system’s SyncStream database, grant permissions to the account that is set to run the XPTDirectAccess extension. By default, this account is the Main DSM user account.
Adding the SatellitePCS User

Before synchronizing data to the satellite system, add the SatellitePCS user to a security group on the master system. Specify the e-mail address and HTTP Message Server of the SatellitePCS user in Pivotal Administration Console.

Specifying an e-mail address and the HTTP Message Server location for the user does the following:

- Creates the UserIDXPT0 account on the specified HTTP Message Server, and adds it to the PivotalHTTPSyncUsers local group on that computer.

- Creates a Webstore folder for the user on the selected HTTP Message Server.

- Creates and sends an e-mail containing a URL to a page that will enable the user to set up access to their system’s webstore folder on the HTTP Message Server.

Note: This account provides authentication for synchronizing systems.

Note: If you have not set up an administrative computer for the master system, perform the following procedure on the master DSM server.

To add the SatellitePCS user to the satellite security group

1. On the administrative computer of the master system, log on with administrator permissions.

2. On the administrative computer, click Start, point to Programs, point to CDC Software, and point to Pivotal CRM. Then, click Pivotal Administration Console.

3. In the Servers pane of the Pivotal Administration Console window, expand the appropriate server listed under Data Synchronization, and then select the Pivotal CRM system.

4. Right-click the Pivotal CRM system name and select Connect.

5. Right-click in the Users pane and select New User.

6. Type SatellitePCS in the New User dialog box and click OK.

7. Right-click the SatellitePCS user and select Add to Group.

8. Select the security group to add the SatellitePCS user.

Warning! The mobile permissions and filters assigned to this group determine the data subset sent to the satellite system.
The SatellitePCS user is added to the satellite security group. If you have not set up an administrative computer for the master system, perform the following procedure on the master DSM server.

**To specify SatellitePCS user properties**

1. On the administrative computer of the master system, click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

2. In the Servers pane, expand Data Synchronization, and then expand the registered DSM server until you see the name of the master system.

3. Double-click the master system name.

4. In the User pane, right-click SatellitePCS, and then click User Properties.

5. In the Email Address text box, type the e-mail address of the SatellitePCS user.

6. In the HTTP Message Server drop-down list, click the name of the HTTP Message Server where the Webstore folder of the satellite system will reside. If unsure, see Determining the location of the webstore folder on the satellite on page 9-15.

7. In the Language drop-down list, select the SatellitePCS user’s language.

8. Click the OK on the User properties dialog box, to save the changes to the database.

**Accessing the Webstore**

Authenticate the SatellitePCS user’s profile by connecting to the Webstore folder of the satellite system.

Do one of the following:

- Open an e-mail message on the DSM server. Make sure the e-mail messaging application on the DSM server has a profile for the PCS user before you follow this procedure.
- Navigate directly to a Web page.
To authenticate through an e-mail message

>> On the satellite DSM server, log on as the SatellitePCS user and then follow the instructions in To authenticate through an e-mail message on page 8-34.

The SatellitePCS user's profile is now authenticated for the Webstore folder of the satellite system on the HTTP Message Server.

To authenticate through a Web page

1. On the satellite DSM server, log on as the SatellitePCS user.
2. Open Internet Explorer and go to http://computername/SyncStream/Admin/Config/MIS.htm
   Replace computername with the name of the HTTP Message Server where the SatellitePCS user's webstore folder resides. Also, replace "http://" with "https://" if the HTTP Message Server uses the https protocol. If a different port other than the default port is being used for the HTTP Message Server, ensure to specify that as well.
3. Follow the instructions in To authenticate through a Web page on page 8-34.

The SatellitePCS user's profile is now authenticated for the Webstore folder of the satellite system on the HTTP Message Server.

Starting Synchronization to the Satellite System

After configuring access to the Webstore folder of the satellite system, start synchronizing data with the satellite system.

SQL Server Synchronization

This section is specific to SQL Server deployments. Oracle users, refer to the procedure detailed in Oracle Synchronization on page 9-19.

To start synchronizing data on the parent system

1. On the administrative computer of the master system, log on with administrator permissions.
2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.
3. In the Servers pane, expand Data Synchronization, and then expand the registered DSM server until you see the name of the master system.
4. Double-click the master system name.
5. If the DSM server is stopped, right-click the parent system name and then click Start DSM. Data synchronization begins when
(Running: <system name> \ <DSM User Name>) appears beside the server name.

6 In the Users pane, right-click the SatellitePCS user, and then click Start Synchronization. In the Start Synchronization dialog box, select Start Satellite Synchronization and then click OK.

A Send System progress dialog box displays while synchronization messages are being constructed. The duration of this process depends on the size of the data set being sent.

7 Click Close when the process is completed.

Oracle Synchronization

This section is specific to Oracle deployments. SQL Server users, refer to the procedure detailed in SQL Server Synchronization on page 9-18.

To start synchronizing data on the parent system

1 On the master system’s administrative computer, log on with administrator rights.

2 Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

3 In the Servers pane, expand Data Synchronization, and then expand the registered DSM server until you see the name of the master system.

4 In the Servers pane of the Pivotal Administration Console, right-click the master system, and then click Connect.

5 In the Pivotal Login dialog box, type the PCS user’s ID and password, and then click OK.

6 If the DSM server is stopped, right-click the master system name, and then click Start DSM. If the DSM server is running the text Running: <system name> \ <DSM User Name>) is displayed next to the server name.

7 In the Pivotal Login dialog box, type the PCS user’s ID and password, and then click OK.

8 In the Users pane, right-click the SatellitePCS user, and then click Start Synchronization. In the Start Synchronization dialog box, select Start Satellite Synchronization and then click OK.

A Send System progress dialog box displays while synchronization messages are being constructed. The duration of this process depends on the size of the data set being sent.

9 Click Close when the process finishes.
Starting the Satellite System

To synchronize data between a satellite and its parent, the satellite must have a persistent connection to the LAN or WAN. Transmission between a satellite system and its parent is automatically started when you start the data synchronization process for the satellite user on the satellite system.

Transmission is terminated when the data synchronization process is stopped, either by a system administrator, or because of an error.

SQL Server Synchronization

This section is specific to SQL Server deployments. Oracle users, refer to the procedure detailed in Oracle Synchronization on page 9-21.

To start the data synchronization process on the satellite system

1. On the administrative computer of the satellite system, log on with administrator permissions.

2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

3. In the Servers pane, expand Data Synchronization, and then expand the registered DSM server until you see the name of the satellite system.

4. Right-click the satellite system name, and then click Start DSM.

The synchronization process begins automatically and can take several hours, depending on the size of the databases.

To view the progress of the restore process

1. On the satellite system’s administrative computer, log on with administrator permissions.

2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Click Pivotal Administration Console.

3. In the Pivotal Administration Console window, click the View menu, and then click View Progress.

4. Click Restore Process, and then click OK.

To hide the Progress dialog box without stopping the restore process, click Close. To re-open the dialog box, click View Progress from the View menu.

After satellite synchronization has begun, the DSM and Source DSM fields in the Satellite System Properties dialog box are automatically set. The SatellitePCS user name is set in the DSM field, and the PCS user name is set in the Source DSM field.
To stop the restore process before it has finished

1 In the Servers pane of Pivotal Administration Console, expand Data Synchronization until you see the name of the satellite system.

2 Right-click the satellite system name, and then click Stop DSM.

Before you use the satellite system, restart the data synchronization process on the satellite system so that the restore process can finish.

Oracle Synchronization

This section is specific to Oracle deployments. SQL Server users, refer to the procedure detailed in SQL Server Synchronization on page 9-20.

To start the data synchronization process on the satellite system

1 On the satellite system’s administrative computer, log on with administrator permissions.

2 Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

3 In the Servers pane, expand Data Synchronization, and then expand the registered DSM server until you see the name of the satellite system.

4 Right-click the satellite system name, and then click Start.

5 In the Pivotal Login dialog box, type the SatellitePCS user's ID and password, and then click OK.

6 In the Tablespace dialog box, select the Oracle tablespaces that will be used when the satellite restores the system.

The restore process begins automatically. The restore process can take several hours, depending on the size of the databases.

To view the progress of the restore process

To view the progress of the restore process, see To view the progress of the restore process on page 9-20.

To stop the restore process before it has finished

To stop the restore process before it has finished, see To stop the restore process before it has finished on page 9-21.
### Setting Queue Wait and Process Wait Times

The Message Queue Wait and Message Process Wait times affect how often the DSM service packages and sends synchronization messages to mobile users and satellites.

- **Message Queue Wait time** determines the length of time a LAN notification must be in the ANMSTORE folder before the DSM has access to it.
- **Message Process Wait time** determines how often the DSM processes LAN notifications that have been in the ANMSTORE folder.

For initial installation, set the Message Queue Wait time to 2 minutes and Message Process Wait time to 10 minutes. However, you can adjust Message Queue Wait and Message Process Wait times at any time.

For more information about factors to consider when setting these times, see the *Pivotal SyncStream 6.0.13 Administration Guide*.

If you have not set up an administrative computer for the satellite system, do the following on the satellite DSM server.

#### To change the Message Queue Wait and Message Process Wait time

1. On the administrative computer of the satellite system, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.

2. Expand **Data Synchronization**, and then expand the registered DSM server until you see the name of the satellite system.

3. Right-click the satellite system, and then click **System Properties**.

4. In the **System Properties** dialog box, click the **DSM** tab.

5. In the **Message Queue Wait** drop-down list, select the desired Message Queue Wait time.

6. In the **Message Process Wait** drop-down list, select the desired Message Process Wait time.

7. Click **Apply**, and then click **OK**.

The message queue wait time and message process wait time are changed.

For instructions for silent installation of Pivotal SyncStream using Command Line parameters and uninstalling Pivotal SyncStream components, see *Setting up the Master System* on page 8-1.
10

Pivotal CRM ClickOnce Deployment
Overview

This chapter details the deployment tasks and the end-user tasks involved in installing Pivotal CRM components using the ClickOnce Deployment method. ClickOnce deployment is not supported for mobile computers.

Note: A Pivotal CRM deployment can consist of client computers that use the ClickOnce deployment method, as well as client computers that use the Packaged Client deployment method. Both types of client computers can connect to the same Pivotal Business Server computer in a deployment. However, both deployment methods cannot exist on the same client computer.

Deployment Tasks Overview

Note: To improve startup time of Pivotal Client, enable BM caching on the Production System. Also, modify the Prefetcher setting on Client computers with Windows XP. The new prefetcher settings improve the startup time of Pivotal Client. For more information prefetcher settings, see KB# 11024.

This section details the tasks required to use a central deployment server for the deployment of Pivotal CRM:

- Installing CDC Software Smart Client Framework on page 10-9
- Installing Pivotal Client on the Deployment Server on page 10-13
- Installing Pivotal Integration 6.0 for Microsoft Outlook on the Deployment Server on page 10-16
- Additional Tasks on page 10-19
- Adding Multiple Environments on page 10-21
- Uninstalling CDC Software Smart Client Framework on page 10-35
- Uninstalling, Modifying, or Repairing Pivotal Client on page 10-36
- Uninstalling or Repairing Pivotal Integration 6.0 for Microsoft Outlook on page 10-37

Microsoft's ClickOnce technology is used to provide a simple initial download of the CDC Software Manager to client computers. After the simple deployment initialization, the CDC Software Smart Client Framework is utilized to provide a complete, managed, download and update service for the Pivotal CRM 6.0.13 platform.

For Pivotal applications installed on a central deployment server, the extended technology supports:

- end-user-initiated installation from the central deployment server.
- automatic downloads of updates to client computers.
- repair of applications on client computers.
A central deployment server is configured with the CDC Software Smart Client Framework and files for Pivotal Client and Pivotal Integration 6.0 for Microsoft Outlook. This eliminates the need for the administrator to individually install Pivotal Client and Pivotal CRM application components on every client computer.

Installing CDC Software Smart Client Framework on the deployment server creates the:

- CDC Smart Updater Service in Internet Information Services (IIS) Manager.
- Smart Client Container bundle.
- Environment for the application instance.

When Pivotal Client and Pivotal Integration for Microsoft Office are installed on the deployment server, bundles of packages (versioned components), are available as an instance of Pivotal Client.

End users launch a URL to connect to the deployment server and are prompted to install CDC Software Manager as shown in Figure 10-1 on page 10-4.
When CDC Software Manager connects to the deployment server, the application instances available for installation from the deployment server are displayed in a dialog box to the end user.

End users must select **Pivotal CRM** from the list of application instances. The following are then downloaded to the client computer:

- Smart Client Container component of CDC Software Smart Client Framework
- Files for Pivotal Client and Pivotal Integration for Microsoft Office.

*Figure 10-2 on page 10-5 displays the installation of CDC Software Manager.*
If only one environment has been defined for the Pivotal Client instance, Pivotal Client automatically opens and end users can work with the Pivotal CRM system. If more than one environment has been defined on the deployment server, end users can connect to the Pivotal CRM system by selecting the environment from the Environment drop-down list in the Pivotal CRM login window.

When there has been an update to files for either Pivotal Client, Pivotal Integration 6.0 for Microsoft Outlook, or the Pivotal CRM application, end users can run Pivotal CRM and all required updates are automatically downloaded to client computers as shown in Figure 10-3 on page 10-6.

End users can run CDC Software Manager to:
- download new application instances.
- repair an existing application instance.
Terminology

Table 10-1 on page 10-7 details a few of the terms used in this chapter.
## Table 10-1 Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Instance           | Instances are individual applications that are available for download from the deployment server. For example, the same deployment server can have the following 3 instances:  
- Pivotal Client with a Pivotal CRM application such as Pivotal Financial Services or Pivotal Homebuilder Front Office.  
- Ross ERP  
- CDC MarketFirst  
End users can select and install any instance available on the deployment server. |
| Packages           | Packages are versioned components that make up each installed application. Instances are created and configured by combining multiple packages into a downloadable instance. A package may be shared by more than one instance. | On a deployment server, all the environments you define for different Pivotal CRM systems are available to end users. If you do not want users to access specific Pivotal CRM systems, use multiple deployment servers. On a deployment server, define only those Pivotal CRM systems that users of specific groups need to access. For more information about specifying environments for multiple Pivotal CRM systems, see Adding Multiple Environments on page 10-21. |
| Environment        | An environment is a collection of configuration settings such as data folders, database connectivity information, and configuration files. For an application instance, you can define more than one environment. Each environment has a unique name. For every environment defined on the deployment server, there must exist a corresponding Pivotal CRM system.  
If you define more than one environment on the deployment server for the Pivotal Client application instance, users can work with multiple Pivotal CRM systems using Pivotal Client. For example, you can create two Pivotal CRM systems, one for Pivotal Client with Pivotal Financial Services and the other for Pivotal Client with Pivotal Homebuilder Front Office. On the deployment server, define an environment for each Pivotal CRM system. After installing Pivotal Client, users can select the environment to which they want to connect.  
You do not need to define an environment on the deployment server for the Customization System.  
**Note:** Use the Pivotal CRM system name as the name for the environment. |                                                                                                                                                      |
| EnvironmentInstances.xml | The EnvironmentInstances.xml file stores information about installed applications on the deployment server and defines the instances available for each environment. Edit this file if you want to define multiple environments for various Pivotal CRM systems. The file is located in the C:\Program Files\CDC Software\Smart Updater\40\Instances folder.  
When you make changes to the EnvironmentInstances.xml file, use the Smart Launcher Management page to reset files on the deployment server and update the running IIS server processes. | For information about:  
- adding multiple environments, see Adding Multiple Environments on page 10-21.  
- resetting files on the deployment server, see Resetting Configuration Files on the Deployment Server on page 10-30.  
- adding a new instance of Pivotal Client, see Adding a New Instance of Pivotal Client on page 10-32. |
Table 10-1 Terminology (Continued)

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
</table>
| CDC Software Manager      | End users are provided with a hyperlink to connect to the deployment server. Users then click **Install** on the **CDC Software Manager Client Install** Web page to install the CDC Software Manager which then automatically downloads and installs Pivotal Client and Pivotal Integration 6.0 for Microsoft Outlook on client computers. Users can run the CDC Software Manager to:  
  • download new application instances that have been added to the deployment server.  
  • repair problems with installations for application instances that have been downloaded and installed on each client computer.                                                                                       |                                                                                               |
| CDC Smart Updater Service | The CDC Smart Updater Service is the Web-service enabled software that is installed on the deployment server. The CDC Software Manager on each client computer connects to the CDC Smart Updater Service to keep track of available or updated application instances. The CDC Software Manager is responsible for comparing versions of downloaded and installed files on client computers. Along with the CDC Software Manager, and the CDC Software Smart Client Framework, the CDC Smart Updater Service is responsible for downloading the required files to client computers. To install the CDC Software Manager, provide end users with a URL to access the **CDC Software Manager Client Install** page on the deployment server. The default format of the URL is:  
  **http://<deployment_server>/iaf/smartupdater/clickonce/default.htm**  
  where **<deployment server>** is the name of the deployment server.                                                                                                      |                                                                                               |
| Updates                   | When users run CDC Software Manager or Pivotal CRM, updated files for Pivotal Client and the Pivotal CRM application are automatically downloaded to client computers.                                               |                                                                                               |

**Prerequisites and System Requirements**

Ensure that the deployment server computer has .NET Framework 4 installed.

**Note:** Pivotal CRM Platform 6.0.13 components other than Thin Client do not support Microsoft .Net Framework 4.5.

For more information about system requirements, see *Pivotal CRM 6.0 Compatibility Guide*.

**Note:** Close Microsoft Outlook/Lotus Notes before installing CDC Software Smart Client Framework, Pivotal Client, and Pivotal Integration 6.0 for Microsoft Outlook.
On the deployment server, manually enable the ASP.NET v4.0 Web Service Extension. For more information, see *To verify if the ASP.NET v4.0 Web Service Extension is listed and allowed* on page 17-10.

Install the following on the deployment server in the following order:

1. *CDC Software Smart Client Framework*
2. *Pivotal Client*
3. *Pivotal Integration 6.0 for Microsoft Outlook*

## Installing CDC Software Smart Client Framework

Install CDC Software Smart Client Framework before installing Pivotal Client 6.0.13 and Pivotal Integration 6.0.13 for Microsoft Outlook.

Download the installation files for CDC Software Smart Client Framework (SCF4.0.4.33.zip file) from the Product Downloads area in the Apteon Customer or Partner Portals. For more information about the contents of the SCF4.0.4.33.zip file, see *Contents of Installation Zip Files* on page A-1.

**To install CDC Software Smart Client Framework with Typical or Complete options**

1. Log on to the deployment server as the administrator.
2. Extract the contents of the SCF4.0.4.33.zip file to any folder on the deployment server.
3. Close Microsoft Outlook.
4. Browse to the folder with the contents of the SCF4.0.4.33.zip file. Depending on the 32-bit or 64-bit operating system, double-click either the CdcSmartClientFramework32_*msi* file or the CdcSmartClientFramework64_*msi* file.

**Note:** For CDC Software Smart Client Framework to work properly in a 64-bit environment, IIS should be configured to run in 64-bit mode. CDC Software Smart Client Framework does not support IIS running in 32-bit mode on a 64-bit computer.

5. In the **CDC Software Smart Client Framework Setup** dialog box, click *Next*.
6 Choose the setup type that best suits your requirements in the Choose Setup Type dialog box. You have the following options:

- **Typical**
  This option installs the most common program features. Select Typical, click Next, and proceed to step 7.

- **Custom**
  This option allows you to choose the components you want to install.
  For more information about installing CDC Software Smart Client Framework using the Custom installation option, see To install CDC Software Smart Client Framework with Custom Installation options on page 10-11.

- **Complete**
  This option installs all program features. The program features installed are Localization Web Service, Updater Service and Smart Client Framework. This will require the most disk space.
  Select Complete, click Next, and proceed to step 7.

7 In the Deployment Provider Configuration dialog box, the Web Site field displays the virtual root directory in Internet Information Services (IIS) Manager.

8 Specify the Instance Server Name. By default the Instance Server Name is the machine name, which you can overwrite with an alphanumeric string of your choice.

9 The Deployment URL is used to browse the ClickOnce Web page. You need to specify the server name in the URL. By default, the Fully Qualified Domain Name (FQDN) of the server is used. You can change it to any name that can be resolved within the domain, or an Internet Domain Name if the deployment server needs to be accessed over the internet.

10 Deployment server can be configured to use HTTPS for the connection between the deployment server and Client machines. To do that, you need to select the Use SSL check box.

11 Select the Port Number from the Port Number drop-down list. The Web site uses the default Port (80). Ensure that the correct Port number is entered if the Use SSL check box is selected.
12 Click **Next**. The URL is validated and a warning message is displayed if the URL specified is not valid. Click **Next** to proceed with the installation.

13 Click **Choose File** to select a .cer certificate to be used for the ClickOnce deployment. Browse to the location of the certificate file, and select the certificate file and click **Open**. If you do not have a certificate file, click **Next** to accept and install the certificate file provided by CDC Software.

**Note:** If the certificate is not added to either the client's Trusted Root or Trusted Publisher store, or the certificate is not a certificate issued by a Trusted Root, a warning message is displayed to end users when they install Pivotal Client.

Also, ensure that a Performance Information Exchange (.pfx) certificate is installed on your machine.

14 Type the Environment ID in the **Environment ID** box. For example, if you are setting up the environment for a Pivotal CRM system called **PRODUCTION**, type **PRODUCTION** in the **Environment ID** box. You must provide an Environment ID. It is recommended that you type the Environment ID in uppercase, with no spaces. The Environment ID is case sensitive. Optionally, type a description for the environment in the **Description** box.

**Note:** If you have more than one Pivotal CRM system, add multiple environments, one for each Pivotal CRM system. For more information about adding environments, see **Adding Multiple Environments** on page 10-21.

15 Click **Next**.

16 Click **Install**.

17 Click **Finish**.

**To install CDC Software Smart Client Framework with Custom Installation options**

1 Log on to the deployment server as the administrator.

2 Extract the contents of the **SCF4.0.4.33.zip** file to any folder on the deployment server.

3 Close Microsoft Outlook.

4 Browse to the folder with the contents of the **SCF4.0.4.33.zip** file and double-click the **CdcSmartClientFramework32_*.msi** file. A 64-bit installer is also provided for 64-bit operating systems.

**Note:** For CDC Software Smart Client Framework to work properly in a 64-bit environment, IIS should be configured to run in 64-bit mode. CDC Software Smart Client Framework does not support IIS running in 32-bit mode on a 64-bit computer.

5 In the **CDC Software Smart Client Framework Setup** dialog box, click **Next**.
6 Click Custom.
   a) Select the drop-down beside Smart Client Container and select **Entire feature will be installed on local hard drive** to install the Smart Client Container.
   b) If required, click **Reset** to reset the selections.
   c) If required, click **Disk Usage** to calculate disk space requirements.
   d) Click **Next**.

7 In the **Deployment Provider Configuration** dialog box, the **Web Site** field displays the virtual root directory in Internet Information Services (IIS) Manager.

8 Specify the **Instance Server Name**. By default the Instance Server Name is the machine name, which you can overwrite with an alphanumeric string of your choice.

9 The **Deployment URL** is used to browse the ClickOnce Web page. You need to specify the server name in the URL. By default, the Fully Qualified Domain Name (FQDN) of the server is used. You can change it to any name that can be resolved within the domain, or an Internet Domain Name if the deployment server needs to be accessed over the internet.

10 Deployment server can be configured to use HTTPS for the connection between the deployment server and client machines. To do that, you need to select the **Use SSL** check box.

11 Select the **Port Number** from the **Port Number** drop-down list. The Web site uses the default Port (80). Ensure that the correct Port number is entered if the **Use SSL** check box is selected.

12 Click **Next**. The URL is validated and a warning message is displayed if the URL specified is not valid. Click **Next** to proceed with the installation.

13 Click **Choose File** to select a .cer certificate to be used for the ClickOnce deployment. Browse to the location of the certificate file, and select the certificate file and click **Open**. If you do not have a certificate file, click **Next** to accept and install the certificate file provided by CDC Software.

---

**Note:** The CDC Software Manager entries in the **Start** menu on Client machines will be appended with the Instance Server Name specified.

**Note:** The **Use SSL** check box is enabled only if it is configured at the server level.
Type the Environment ID in the **Environment ID** box. For example, if you are setting up the environment for a Pivotal CRM system called **PRODUCTION**, type **PRODUCTION** in the **Environment ID** box. You must provide an Environment ID. It is recommended that you type the Environment ID in uppercase, with no spaces. The Environment ID is case-sensitive. Type a description for the Environment in the **Description** box.

Note: If you have more than one Pivotal CRM system, add multiple environments, one for each Pivotal CRM system. For more information about adding environments, see *To add an environment* on page 10-21.

14 Click **Next**.
15 Click **Install**.
16 Click **Finish**.

The CDC Software Smart Client Framework is installed with:
- **CDC Smart Updater Service** available under the **Start-Programs** group.
- **SmartUpdaterAppPool** in the Internet Information Services (IIS) Manager.
- **IAF** virtual directory in the Internet Information Services (IIS) Manager.

### Installing Pivotal Client on the Deployment Server

Install Pivotal Client only on the deployment server. For more information about end user tasks for installing files required for Pivotal Client on client computers, see *Installing Pivotal CRM on Client Computers: End User Tasks* on page 10-46.

The installation files for Pivotal Client (**PC6.0.13.zip** file) are available in the Product Downloads area of the **Aptean Customer Portal and Partner Portal**. For more information about the contents of the **PC6.0.13.zip** file, see Appendix A, *Contents of Installation Zip Files*.

**Note:** Install Pivotal Client 6.0.13 on the deployment server only after installing CDC Software Smart Client Framework.
To install Pivotal Client on the deployment server

1. Log on to the deployment server as the administrator.
2. Extract the contents of the PC6.0.13.zip file to any folder on the deployment server computer.
3. Close Microsoft Outlook.
4. Browse to the folder with the contents of the PC6.0.13.zip file and double-click the setup.exe for a 32-bit operating system. For an x64 operating system, browse to the 64-bit folder and double-click the setup.exe.
5. If Microsoft Windows Installer 4.5 is not already installed on the computer, the InstallShield Wizard dialog box is displayed. Do one of the following:
   - Click Install to install Windows Installer 4.5
   - Click Cancel to abort the installation of Windows Installer 4.5 and Pivotal Client.
6. In the Pivotal Client 6.0.13 - InstallShield Wizard, click Next.
7. Accept the license agreement and click Next.
8. Specify the:
   a) name of the Pivotal CRM system in the System Name box.
   b) name of Pivotal Business Server computer in the Pivotal Business Server Name box.
9. Click Advanced Options to optionally specify the following settings:
   a) Form Display Layout - Specify how the form layout should be displayed. By default, the Right to Left option is set to False.
   b) Windows Authentication - Specify what authentication mode should be used. By default, the Windows Authentication option is set to True.
10. Click Next.
11. Click Install.
12. Click Finish.

Pivotal Client is installed on the deployment server.

Customize the navigation, task pad, and subject items of Pivotal Client using Pivotal Toolkit. For more information about working with Pivotal Toolkit, see the Pivotal Toolkit 6.0.13 Toolkit Guide.
Setting User Authentication Option by editing the IafConfig.xml file

In Pivotal Client 6.0, you can also enable the end-user to log on to Pivotal Client by using the following authentication methods:

- Integrated Windows Authentication: Logs onto Pivotal Client by using the user credentials of the logged on Windows user.
- User Authentication: Enables the end user to specify user name, and password to log on to Pivotal Client, so that you can log on with credentials different from the logged on Windows user.

You need to set the User Authentication option to enable the end users to log on with credentials of their choice. If User Authentication is enabled, the **Sign in to Pivotal CRM** dialog box with the authentication options is displayed before Pivotal Client is launched.

**Note:** You can specify the authentication option for Pivotal Client either during the installation of Pivotal Client on the deployment server or using the IafConfig.xml file after the installation of Pivotal Client on the deployment server.

### To set the authentication option

1. **Browse to** C:\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0 folder.
2. **Open the** IafConfig.xml file with any XML editor.
3. **Locate the string “windowsAuthentication”, and set the value to False.** This value is True by default. If Windows Authentication is set to True, the **Sign in to Pivotal CRM** dialog box is not displayed to the user when they launch Pivotal Client.

The changes are downloaded to the Client computers when Pivotal Client is downloaded.

**Note:** The windows authentication setting that you specify in the iafconfig.xml file is defined per environment. If you have multiple environments, you need to specify this option for every environment.

### Setting the Sign In Option in Pivotal Client

In Pivotal Client, click **Tools** and then click **Options**, and then click **Sign In**.

The **Turn off automatic sign in. Prompt me to log in when application starts** check box on the **Sign In Options** page of the **Options** dialog box enables you to turn off automatic login. If you select this option, the **Sign in to Pivotal CRM** dialog box is displayed to the user when they launch Pivotal Client. This option is enabled only
when User Authentication is enabled and the user selects the **Do not ask me again** option in the **Sign in to Pivotal CRM** dialog box when they log in.

On selecting the user authentication option to enable end-user log on to Pivotal Client, if you are logging in with the domain user account, specify the user name as `<domain name>/user name>`. When prompted to log in, if you select **Remember me**, the user credentials are saved, and displayed whenever you are prompted to log in.

If you select the **Do not ask me again** check box, the specified authentication option and credentials are used whenever you launch Pivotal Client. In this case, you will not be prompted for login details. However, if you have selected **Do not ask me again** check box, and if the credentials change later, resulting in an authentication failure, you will be prompted to log in when you launch Pivotal Client.

**Note:** The windows authentication setting that you specify in the `iafconfig.xml` file is defined per environment. If you have multiple environments, you need to specify this option for every environment. Also, the user credentials that you use for logging in to Pivotal Client and to Outlook can be different.

### Installing Pivotal Integration 6.0 for Microsoft Outlook on the Deployment Server

Download the installation files for Pivotal Integration 6.0 for Microsoft Outlook (`PIMO6.0.13.zip` file) from the Product Downloads area in the Aptean Customer Portal and Partner Portal. For more information about the contents of the `PIMO6.0.13.zip` file, see Appendix A, *Contents of Installation Zip Files*.

**Note:** For all information about Pivotal Integration for Lotus Notes, see *Administering Pivotal Integration for Lotus Notes, How To Series*.

**To install Pivotal Integration 6.0 for Microsoft Outlook on the deployment server**

1. Log on to the deployment server as the administrator.
2. Extract the contents of the `PIMO6.0.13.zip` file to any folder on the deployment server computer.
3. Close Microsoft Outlook.
4. Browse to the folder with the contents of the extracted files. For a 32-bit operating system double-click the `setup.exe` file. For a x64 operating system, double-click the `setup.exe` file in the 64bit folder.
5. In the **Pivotal Integration 6.0 for Microsoft Outlook - InstallShield Wizard**, click **Next**.
6. Accept the license agreement and click **Next**.
7 Click **Next**.
8 Click **Install**.
9 Click **Finish**.

Pivotal Integration 6.0 for Microsoft Outlook is installed on the deployment server.

**Post-Installation Tasks**

After installing Pivotal Integration 6.0 for Microsoft Outlook, perform the following tasks:

1. Import the **PIMO 6.0 SP5.rtr** file into the Business Module.
2. Apply Customization Changes to the Offline System.
3. Upgrade from Offline.

**To import the PIMO 6.0 SP5.rtr file**

1. Log on to the Customization System.
2. On the **eTab**, click the **Transporter** Business Object and then click **Import Elements from File**.
3. Browse to the folder to which you have extracted the **PIMO6.0.13.zip** file's contents.
4. Select **PIMO 6.0 SP5.rtr** and click **Open**.
5. In the **Importing Elements** dialog box, click **Continue**.
6. Click **Close**.
   When the .rtr file has been successfully imported, a message is displayed.
7. Click **OK** in the message box.

**Note:** If Lotus Notes is being used as the e-mail client, then for more information about the post-installation tasks, see *Administering Pivotal Integration for Lotus Notes, How To Series*.

**Setting User Authentication Option**

**Note:** User Authentication is not supported on Mobile Systems.
When using Pivotal Integration for Microsoft Outlook, you can allow users to log on to Pivotal CRM by using the following authentication methods:

- Integrated Windows Authentication: Logs onto a Pivotal System by using the credentials of the logged on Windows user. This is the default option.
- User Authentication: Enables you to specify credentials to log on to Pivotal Integration for Microsoft Outlook, so that you can log on with credentials different from the logged on Windows user. If you are logging on with the domain user account, specify the user name as `<domain name>\<user name>`.

**To set the authentication option**

1. Browse to `C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig\6.0.x.0\bin\Standard\Office Integration` folder.
2. Open the `IafConfig.xml` file with any XML editor.
3. Locate the string “windowsAuthentication”, and set the value to False. This value is True by default. If Windows Authentication is set to True, the Pivotal CRM Log on dialog box is not displayed to the user when they launch Microsoft Outlook.

**To set the authentication option for Microsoft Outlook 2007**

1. In Microsoft Outlook, click **Tools** and then click **Options**.
2. In the **Options** dialog box, click the **CRM Authentication** tab.
3. In the CRM User Credential area, select an authentication mode. For user authentication, you can optionally select the **Use the following credentials to log in** check box to remember the specified credentials for subsequent connections to the Pivotal System.
4. Click **OK**. The new authentication mode is effective for the subsequent connections to the Pivotal System.

**To set the authentication option for Microsoft Outlook 2010**

1. After opening Microsoft Outlook, click **File**, select **CRM Settings** and then select **CRM Authentication**.
2. In the **CRM Authentication Settings** dialog box, select an authentication mode. For user authentication, you can optionally select the **Use the following credentials to log in** check box to remember the specified credentials for subsequent connections to the Pivotal System.
3. Click **OK**. The new authentication mode is effective for the subsequent connections to the Pivotal System.
OR

1. After opening Microsoft Outlook, click **File** and then click **Options**.

2. In the **Outlook Options** dialog box, select the **Add-Ins** tab and then select **Pivotal Integration for Microsoft Outlook**. Click **Add-in Options**.

3. In the **CRM Authentications Settings** dialog box, select an authentication mode. For user authentication, you can optionally select the **Use the following credentials to log in** check box to remember the specified credentials for subsequent connections to the Pivotal System.

4. Click **OK**. The new authentication mode is effective for the subsequent connections to the Pivotal System.

For the new authentication mode to take effect, click the **Reconnect** button.

**Note:** The user credentials that you use for logging in to Pivotal Client and to Outlook can be different.

If changing the authentication option is required after client computers have been updated with Pivotal Client 6.0.13, follow the steps described in **To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\4.0\Packages\PivotalOfficeIntegration\OIIafconfig folder** on page 10-28.

However, while changing the authentication option, if you are already connected to a Pivotal System, for the new authentication mode to take effect, you have to restart Microsoft Outlook.

**Note:** The authentication setting that you specify in the IafConfig.xml file is defined per deployment server. If you have set up multiple environments, you need not specify this option for every environment.

### Additional Tasks

**Note:** To improve startup time of Pivotal Client enable BM caching on the Production System. Also, modify the Prefetcher setting on Client computers with Windows XP. The new prefetcher settings improve the startup time of Pivotal Client. For more information prefetcher settings, see KB# 11024.

After installing CDC Software Smart Client Framework, Pivotal Client, and Pivotal Integration 6.0 for Microsoft Outlook, do the following on the deployment server:

- Set directory security to anonymous access
- Enable ASP.NET on:
  - **IIS 6.0**
or

- **IIS 7.0**

**To set the directory security to anonymous access**

1. Log on to the deployment server as the administrator.
2. Click **Start** and then click **Run**.
3. Type `inetmgr` in the **Run** dialog box and click **OK**.
4. In the **Internet Information Services (IIS) Manager** window, expand **Web Sites** and then expand **IAF**.
5. Right-click **IAF** and select **Properties**.
6. Click the **Virtual Directory** tab, and select **Scripts only** from the **Execute Permissions** drop-down list.
7. Click the **Directory Security** tab, click **Edit** in the Authentication and Access Control area.
8. In the **Authentication Methods** window, select the **Anonymous access** check box.
9. Click **OK**.

The IAF Web site directory security is set to anonymous access.

**To enable ASP.NET on IIS 6.0**

1. Log on to the deployment server as the administrator.
2. Click **Start** and then click **Run**.
3. Type `inetmgr` in the **Run** dialog box and click **OK**.
4. In the **Internet Information Services (IIS) Manager** window, expand **Web Service Extensions**.
5. Right-click the ASP.NET v4.0 Web Service Extension in the **Web Service Extension** pane and select **Allowed**.
6. Click **OK**.

ASP.NET is enabled.

**To enable ASP.NET on IIS 7.0**

1. Log on to the deployment server as the administrator.
2. Click **Start** and then click **Run**.
3. Type `inetmgr` in the **Run** dialog box and click **OK**.
4. Click the name of the deployment server.
5. On the right pane, under the IIS area click **ISAPI and CGI restrictions**.
6. In the **ISAPI and CGI Restrictions details** pane, right-click **Active Server Pages (ASP)** and select **Edit**.
In the **Edit ISAPI or CGI Restriction** window select the **Allow extension path to execute** checkbox.

Click **OK**. ASP.NET is enabled.

### Adding Multiple Environments

If you have more than one Pivotal CRM system in your deployment, configure the deployment server by adding environments, where each additional environment defined on the deployment server corresponds to a Pivotal CRM system with the same name.

For more information about environments, see Table 10-1 on page 10-7.

**To add an environment**

1. **Administrator tasks**
   
   a) **Preliminary Steps**

   b) **Define the additional environment on the deployment server and edit files listed in Table 10-2 on page 10-22.**
Table 10-2 Files to edit on the deployment server

<table>
<thead>
<tr>
<th>File Name</th>
<th>Folder Location</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnvironmentInstances.xml</td>
<td>C:\Program Files\CDC Software\Smart Updater\40\Instances</td>
<td>Edit and update the EnvironmentInstances.xml file to specify the instance that is configured for each environment. This file also stores the description for each environment. For more information, see To edit the EnvironmentInstances.xml file on page 10-23.</td>
</tr>
<tr>
<td>IafConfig.xml</td>
<td>C:\Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40</td>
<td>For the instance that is selected for download by the end user, the IafConfig.xml file includes a configuration entry for each environment defined. The file configures environment values used by the CDC Smart Updater Service. Every client instance environment must be reflected in this file. For more information, see To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40 folder on page 10-25.</td>
</tr>
<tr>
<td>IafConfig.xml</td>
<td>C:\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0</td>
<td>The Instance folder defines the IafConfig.xml that will be downloaded to the client computer. For each environment, the IafConfig.xml file specifies the location of services on the middle tier servers that are used by client computers. For more information, see To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0 folder on page 10-26</td>
</tr>
<tr>
<td>IafConfig.xml</td>
<td>C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OiIafconfig\6.0.x.0\bin\Standard\Office Integration</td>
<td>For more information, see To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OiIafconfig folder on page 10-28</td>
</tr>
</tbody>
</table>

c) Reset configuration files on the deployment server

2 End user tasks
To connect to the environment defined for the additional Pivotal CRM system, end users must:

- Run CDC Software Manager and install Pivotal CRM.
- In the Pivotal CRM dialog box, select the additional environment from the Environment ID drop-down list, and connect to the additional Pivotal CRM system.

For more information, see To run CDC Software Manager on page 10-50.

**Preliminary Steps**

Before you configure the deployment server, define and set up the additional Pivotal CRM system. For more information, see To set up Pivotal CRM systems on page 4-5.

**Defining the Additional Environment**

To define the environment on the deployment server, use an XML editor and edit the files listed in Table 10-2 on page 10-22. Add the definition of the environment (additional Pivotal CRM system) in each file. Each environment you define corresponds to a Pivotal CRM system name.

**To edit the EnvironmentInstances.xml file**

1. Log on to the deployment server as the administrator.
2. Open Windows Explorer and browse to the C:\Program Files\CDC Software\Smart Updater\40\Instances folder.
3. Open the EnvironmentInstances.xml file using an XML editor.
4. Locate the Environment id code for the existing Pivotal CRM system. For example, the lines for a Pivotal CRM system named SYSTEMONE are:

```xml
<Environment id="SYSTEMONE" description="">
  <Instances>
    <Instance name="PivotalClient"/>
  </Instances>
</Environment>
```

Note: It is recommended that you specify Pivotal CRM system names in uppercase, without spaces.
5 Copy the following lines of code and paste it below the 
</Environment> tag for the existing Pivotal CRM system.

```xml
<Environment id="NEWSYSTEM" description="">
  <Instances>
    <Instance name="PivotalClient"/>
  </Instances>
</Environment>
```

where NEWSYSTEM is the name of the additional environment 
corresponding to the additional Pivotal CRM system with the same 
name.

Listing 10-1 on page 10-24 displays the lines of code for the 
environments defined for two Pivotal CRM systems that are named 
SYSTEMONE and NEWSYSTEM.

Listing 10-1 Edited EnvironmentInstances.xml file

```xml
<?xml version="1.0" encoding="utf-8"?>
<EnvironmentInstances>
  <Environment id="SYSTEMONE" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
  <Environment id="NEWSYSTEM" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
</EnvironmentInstances>
```

6 Save and close the EnvironmentInstances.xml file.

---

1. Sample code provided in this chapter may not reflect the upto-date contents of 
each file.
To edit the IafConfig.xml files

The IafConfig.xml file is available in three different locations. For more information on editing each of them, see the following procedures:

- To edit the IafConfig.xml file in the \Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40 folder
- To edit the IafConfig.xml file in the \Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0 folder
- To edit the IafConfig.xml file in the \Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig folder

To edit the IafConfig.xml file in the \Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40 folder

1. Log on to the deployment server as the administrator.
2. Open Windows Explorer and browse to the \Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40 folder.
3. Open the IafConfig.xml file with any XML editor.
4. Locate the <Environment id=""/> line for the existing Pivotal CRM system. For example, for a Pivotal CRM system named SYSTEMONE, the line is
   
   <Environment id="SYSTEMONE"/>
   
5. Add the following line of code below the <Environment id=""/> line for the existing Pivotal CRM system:

   <Environment id="NEWSYSTEM"/>

   where NEWSYSTEM is the name of the additional environment defined for a Pivotal CRM named NEWSYSTEM.

   Repeat step 5 for every Pivotal CRM system.

   Table 10-2 on page 10-26 lists the lines of code for the environments defined for two Pivotal CRM systems that are named SYSTEMONE and NEWSYSTEM.
6  Save and close the IafConfig.xml file.

**To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0 folder**

1  Log on to the deployment server as the administrator.

2  Browse to C:\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.0 folder.

3  Open the IafConfig.xml file with any XML editor.

4  Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system.

*Table 10-3* on page 10-27 shows the lines of code for an environment defined for a Pivotal CRM named SYSTEMONE.
Listing 10-3 Lines of code in the lafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\instances\PivotalClient\6.0.x.0 folder

```xml
<Environment id="SYSTEMONE" description="first system">
  <Metadata>
    <Services>
      </Service>
      </Service>
    </Services>
    <LocalizationSearchOrder>
      <Service name="Pivotal Language Dictionary MetaDataService Provider" />
      <Service name="Pivotal Resource String MetaDataService Provider" />
    </LocalizationSearchOrder>
  </Metadata>
  <CommandService>
    <CommandProviders>
      </CommandProvider>
      </CommandProviders>
  </CommandService>
  <NavigationService>
    <!-- no filters definition means that it'll use the simple aggregator.... -->
    <Filters />
  </NavigationService>
  <PivotalCRM>
    <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
    <Help url="Pivotal_Client.chm" />
    <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm" />
    <Settings rightToLeft="false" windowsAuthentication="true" />
  </PivotalCRM>
</Environment>
```
5 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- `<Environment id="SYSTEMONE" description="first system">`
  with `<Environment id="NEWSYSTEM" description="second system">`
  where NEWSYSTEM is the name of the additional Pivotal CRM system.

- `<DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />`
  with `<DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" />`
  where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

Repeat step 5 for every additional Pivotal CRM system.

6 Save and close the IafConfig.xml file.

To edit the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig folder

1 Log on to the deployment server as the administrator.

2 Browse to the C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig folder. Note the name of the existing folder in this location.

3 Create a new folder with a name that reflects an incremental integer change. For example, if the existing folder in step 2 is named 6.0.13.0, create a new folder with the name 6.0.13.1. Similarly, if the existing folder is 6.0.13.100, create a new folder with the name 6.0.13.101.

4 Copy the contents of the folder located in step 2 and paste it in the folder created in step 3.

5 Browse to the C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig\6.0.x.x\bin\Standard\Office Integration folder, where 6.0.x.x is the folder created in step 3.

6 Open the IafConfig.xml file with any XML editor.

7 Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system. Table 10-4 on page 10-29 shows the lines of code for an environment that is defined for a Pivotal CRM system named SYSTEMONE.
Listing 10-4 Lines of code in the IafConfig.xml file in the C:\Program Files\CDC Software\Smart Updater\40\Packages\PivotalOfficeIntegration\OIIafconfig\6.0.0.x\bin\Standard\Office Integration folder

```
<Environments>
  <Environment id="SYSTEMONE" description="first system">
    <Metadata>
      <Services>
      </Services>
      <LocalizationSearchOrder>
        <Service name="Pivotal Language Dictionary MetaDataService Provider" />
        <Service name="Pivotal Resource String MetaDataService Provider" />
      </LocalizationSearchOrder>
    </Metadata>
    <CommandService>
      <CommandProviders>
      </CommandProviders>
    </CommandService>
    <NavigationService>
      <!-- no filters definition means that it'll use the simple aggregator.... -->
      <Filters />
    </NavigationService>
  </Environment>
  <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
</Environments>
```

8 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- <Environment id="SYSTEMONE" description="first system">
  with <Environment id="NEWSYSTEM" description="second system">
  where NEWSYSTEM is the name of the additional Pivotal CRM system.
- <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS1" />
  with <DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS"/>
  where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

9 Repeat step 8 for every additional Pivotal CRM system.

10 Save and close the IafConfig.xml file.

The IafConfig.xml files are edited.

**Note:** Every time you make a change in the IafConfig.xml file, you must repeat step 3 and 4.

### Resetting Configuration Files on the Deployment Server

Reset files on the deployment server using the **Smart Launcher Management** page.

**To reset files on the deployment server**

1 Log on to the deployment server as the administrator.
2 Open a browser window.
3 In the **Address** box of the browser window, type the URL of the **Smart Launcher Management** page: http://localhost/IAF/SmartUpdater/Manage/Manage.aspx and press ENTER.
4 In the **Smart Launcher Management** page, click **Reload Now**.

All the configuration files are reset.

To connect to the additional Pivotal CRM system, end users must:

- Run CDC Software Manager and install Pivotal CRM.
- In the **Pivotal CRM** dialog box, select the additional environment from the **Environment ID** drop-down list, and connect to the additional Pivotal CRM system.

For more information, see **To run CDC Software Manager** on page 10-50.
Additional Customization Options

This section details a few additional customization options. You can change:

- the name of the Pivotal CRM shortcut displayed in the Start - Programs menu.
- the Start - Programs menu folder for the Pivotal CRM shortcut.
- the Pivotal CRM icon displayed in the shortcut menu.

To change the name of the Pivotal CRM shortcut, the shortcut menu folder, and the Pivotal CRM icon

1 Log on to the deployment server as the administrator.
2 Open Windows Explorer.
3 Browse to the C:\Program Files\CDC Software\Smart Updater\40\instances\PivotalClient\6.0.x.0 folder. Open the Instance.xml file with any XML editor.

Note: If a new release has been applied, in the C:\Program Files\CDC Software\Smart Updater\40\instances\PivotalClient folder, open the folder with the highest number in the folder name.

4 Change the attributes of the <InstanceDef> tag as listed in Table 10-3 on page 10-31.

Warning! Do not change the value of the name="PivotalClient" and the exePackage="Scc" attributes.

Table 10-3 Attributes of the <InstanceDef> tag

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the text to be displayed in the Pivotal CRM login window. You can also change the text specific to a localized language.</td>
</tr>
<tr>
<td>startMenuText=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the text to be displayed in the Start menu. This change will also be reflected in the Uninstall Pivotal CRM shortcut menu. You can also change the text specific to a localized language.</td>
</tr>
</tbody>
</table>
Table 10-3 Attributes of the `<InstanceDef>` tag

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>startMenuFolder=&quot;CDC Software/Pivotal CRM&quot;</code></td>
<td>Replace CDC Software/Pivotal CRM with the name of the folder. For example, if you want the Pivotal CRM shortcut to appear in the MY COMPANY folder, change the value of the attribute to <code>startMenuFolder=&quot;MY COMPANY&quot;</code>.</td>
</tr>
<tr>
<td><code>icon=&quot;Resources/relapp.ico&quot;</code></td>
<td>Replace the <code>relapp.ico</code> file in the <code>C:\Program Files\CDC Software\SmartUpdater\40\instances\PivotalClient\6.0.x.0\Resources</code> folder with the icon you want displayed.</td>
</tr>
<tr>
<td><code>startMenuDescription=&quot;Pivotal CRM&quot;</code></td>
<td>Replace Pivotal CRM with the text to be displayed in the tooltip for the shortcut. The text is also displayed in the <code>Comment</code> textbox on the <code>Shortcut</code> tab of the <code>Properties</code> dialog box for the shortcut.</td>
</tr>
</tbody>
</table>

5. Save the `Instance.xml` file.

6. Reset files on the deployment server using the **Smart Launcher Management** Web page. For more information, see *Resetting Configuration Files on the Deployment Server* on page 10-30.

When the end user runs CDC Software Manager and downloads files to the client computer, changes are reflected in the **Start - Programs** menu on the client computer.

**Adding a New Instance of Pivotal Client**

When you install Pivotal Client on the deployment server, an instance of Pivotal Client is automatically created. You can copy and duplicate the installed instance and rename it as another instance that is available for download from the deployment server.

**To add a new instance of Pivotal Client**

1. Copy the `C:\Program Files\CDC Software\SmartUpdater\40\instances\PivotalClient` folder.

2. Paste the `C:\Program Files\CDC Software\SmartUpdater\40\instances\PivotalClient` folder in the `C:\Program Files\CDC Software\SmartUpdater\40\instances\PivotalClient` folder and rename the pasted `Copy of PivotalClient` folder to the new instance you want to create.

3. Browse to the `C:\Program Files\CDC Software\SmartUpdater\40\instances\PivotalClient` folder and open the `EnvironmentInstances.xml` file with any XML editor.

4. Locate the following lines:
   `<Instances>`
<Instance name="PivotalClient"/>
</Instances>

5 Paste the following line `<Instance name="newinstance"/>` below the existing instance as shown:

```xml
<Instances>
  <Instance name="PivotalClient"/>
  <Instance name="newinstance"/>
</Instances>
```

where `newinstance` is the name of the new instance created in step 2.

6 Save the `EnvironmentInstances.xml` file.

7 Browse to the `C:\Program Files\CDC Software\Smart Updater\40\instances\<newinstance>\6.0.x.0` folder and open the `Instance.xml` file with any XML editor, where `<newinstance>` is the name of the folder renamed in step 2.

**Note:** If a new release has been applied, open the folder with the highest number in the folder name in the `C:\Program Files\CDC Software\Smart Updater\40\instances\PivotalClient` folder.

8 Change the attributes of the `<InstanceDef>` tag as listed in **Table 10-4** on page 10-33.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the name of the new instance.</td>
</tr>
<tr>
<td>startMenuText=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the name of the new instance, or the text to be displayed in the Start menu. The text will be reflected for the following shortcuts:</td>
</tr>
<tr>
<td></td>
<td>• new instance</td>
</tr>
<tr>
<td></td>
<td>• uninstalling the new instance.</td>
</tr>
<tr>
<td>startMenuFolder=&quot;CDC Software/Pivotal CRM&quot;</td>
<td>Replace CDC Software/Pivotal CRM with the name of the folder for the new instance. For example, if you want the newinstance shortcut to appear in the new instance folder, change the value of the attribute to startMenuFolder=&quot;newinstance&quot;</td>
</tr>
<tr>
<td>icon=&quot;Resources/relapp.ico&quot;</td>
<td>Replace the relapp.ico file in the <code>C:\Program Files\CDC Software\Smart Updater\40\instances\&lt;newinstance&gt;\6.0.x.0\Resources</code> folder with any icon you want displayed, where <code>&lt;newinstance&gt;</code> is the name of the folder renamed in step 2 above.</td>
</tr>
</tbody>
</table>

9 Save the `Instance.xml` file.

10 Reset files on the deployment server using the **Smart Launcher Management** Web page. For more information, see **Resetting Configuration Files on the Deployment Server** on page 10-30.
End users can run CDC Software Manager and select the new instance to download.

**Silent Installation of Pivotal Client on the Deployment Server**

Use the JavaScript files provided in the PC6.0.13.zip file to silently install Pivotal Client. If required, open the JavaScript file in an editor, and provide the required values. *Table 10-5* on page 10-34 details the JavaScript files provided for the silent installation of Pivotal Client.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Purpose</th>
<th>Values to be provided, if any</th>
</tr>
</thead>
</table>
| SilentInstall.js | Silently installs Pivotal Client without any dialog boxes. Do not run this file on a mobile computer. | Replace **var sysName="YourSystemName";** with the name of the Pivotal CRM system.  
  **var PBSServer="YourPBSServerName";** with the name of the computer on which Pivotal Business Server is installed.  
  For example, if the name of the Pivotal CRM System is **Production**, and **PBSComputer** is the name of the computer on which Pivotal Business Server is installed, replace:  
  - **YourSystemName** with **Production**  
  - **YourPBSServerName** with **PBSComputer** |
| LoggedInstall.js | Installs Pivotal Client and also creates a verbose PivotalClient.log file in the \Temp folder.  
  **Note:** The LoggedInstall.js file does not install Pivotal Client silently. |                                                                                                                                 |

**Silent Installation Methods of Pivotal Integration 6.0 For Microsoft Outlook**

This section details additional methods for installing Pivotal Integration 6.0 For Microsoft Outlook, including specific instructions for a silent installation of Pivotal Integration 6.0 For Microsoft Outlook. You can run the Pivotal Integration 6.0 For Microsoft Outlook installation program by using specific command-line parameters. You can also use the JavaScript file provided in the PIM06.0.13.zip file to perform a silent installation.
Installation using JavaScript Files and Command-Line Parameters

Use the JavaScript files provided in the PIMO6.0.13.zip to silently install Pivotal Integration 6.0 For Microsoft Outlook. If required, open the JavaScript file in an editor and provide the required values. Table 10-5 on page 10-34 details the JavaScript files provided for installing Pivotal Integration 6.0 For Microsoft Outlook.

Note: Ensure that the JavaScript file is in the same directory as the setup.exe file.

<table>
<thead>
<tr>
<th>Filename, Function, and Command-line equivalent</th>
<th>Description</th>
<th>Command Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoggedInstall.js</td>
<td>Installs Pivotal Integration 6.0 For Microsoft Outlook and creates a verbose log file (OfficeIntegration) in the defined temporary folder.</td>
<td>setup.exe /v&quot;L*V &quot;%TEMP%\OfficeIntegration&quot;&quot;</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td>Silently installs Pivotal Integration 6.0 For Microsoft Outlook without displaying any dialog boxes, and creates a verbose log file (OfficeIntegration) in the defined temporary folder.</td>
<td>setup.exe /s /v&quot;/qn /L*V &quot;%TEMP%\PivotalOutlookIntegrationSilentInstall.log&quot;&quot;</td>
</tr>
</tbody>
</table>

Note: The syntax in the JavaScript file has an extra backslash (\) preceding any double quote (") or backslash (\) character.

Uninstalling CDC Software Smart Client Framework

This section describes the uninstallation of CDC Software Smart Client Framework.

Recommendations for Uninstalling Software on the Deployment Server

1. When CDC Software Smart Client Framework and Pivotal Client 6.0 are uninstalled, Pivotal Integration 6.0 for Microsoft Outlook must also be uninstalled.

2. Always uninstall software in the following order:
   a) Pivotal Integration 6.0 For Microsoft Outlook
   b) Pivotal Client
   c) CDC Software Smart Client Framework
When you reinstall software adhere to the following order:
   a) CDC Software Smart Client Framework
   b) Pivotal Client
   c) Pivotal Integration 6.0 For Microsoft Outlook

To remove the CDC Software Smart Client Framework installation

1. Follow steps 1 to 4 as detailed in To change the CDC Software Smart Client Framework installation on page 1-10.
2. Click **Remove**.
3. Click **Yes** in the confirmation box to confirm the removal of CDC Software Smart Client Framework.
4. Click **Finish** when the process is complete.

CDC Software Smart Client Framework is removed.

Uninstalling, Modifying, or Repairing Pivotal Client

Modify, repair, or uninstall Pivotal Client from the **Control Panel** of the deployment server.

To modify Pivotal Client

1. Log on to the deployment server as the administrative user.
2. Click **Start**, point to **Settings**, and click **Control Panel**.
3. Double-click **Add or Remove Programs**.
4. Select **Pivotal Client 6.0.13**.
5. Click **Change**.
6. Click **Next** in the **InstallShield Wizard**.
7. In the **Program Maintenance** dialog box, click **Modify**, and then click **Next**.
8. In the **Custom Setup** dialog box, select the feature that needs to be installed.
9. Click **Next**.
10. Click **Install**.
11. Click **Finish** when the process is complete.

Pivotal Client is modified.

To repair Pivotal Client

1. Repeat steps 1 to 5 as detailed in the procedure **To modify Pivotal Client** on page 10-36.
2. In the **Program Maintenance** dialog box, click **Repair**, and then click **Next**.
3 Click **Install**.

4 Click **Finish** when the process is complete.

Pivotal Client is repaired.

**To uninstall Pivotal Client**

1 Repeat steps 1 to 5 as detailed in the procedure To modify Pivotal Client on page 10-36.

2 In the **Program Maintenance** dialog box, click **Remove**, and then click **Next**.

3 Click **Finish** when the process is complete.

Pivotal Client is uninstalled.

**Uninstalling or Repairing Pivotal Integration 6.0 for Microsoft Outlook**

Repair or remove Pivotal Integration 6.0 For Microsoft Outlook from the **Control Panel** of the deployment server.

**Warning!** When CDC Software Smart Client Framework and Pivotal Client are uninstalled, Pivotal Integration 6.0 For Microsoft Outlook must also be uninstalled. Uninstall Pivotal Integration 6.0 For Microsoft Outlook before uninstalling Pivotal Client.

**To repair the Pivotal Integration 6.0 for Microsoft Outlook installation**

1 Log on to the deployment server as the administrator.

2 Click **Start**, point to **Settings** and then click **Control Panel**.

3 Double-click **Add or Remove Programs** in the Control Panel window.

4 Select **Pivotal Integration 6.0 for Microsoft Outlook** from the list of currently installed programs in the **Add or Remove Programs** window.

5 Select **Click here for support information**.

6 Click **Repair**.

Any files related to the Pivotal Integration 6.0 for Microsoft Outlook installation that were inadvertently deleted or renamed are replaced.

**To remove the Pivotal Integration 6.0 for Microsoft Outlook installation**

1 Follow steps 1 to 4 as detailed in To repair the Pivotal Integration 6.0 for Microsoft Outlook installation on page 10-37.

2 Click **Remove**.

3 Click **Yes** in the confirmation box to confirm the removal of Pivotal Integration 6.0 for Microsoft Outlook.

4 Click **Finish** when the process is complete.
Best Practices and Recommendations

1. Install .NET Framework 4 before installing CDC Software Smart Client Framework.

2. Close Microsoft Outlook/Lotus Notes before installing or uninstalling software.

3. Install software in the following order:
   a) CDC Software Smart Client Framework
   b) Pivotal Client
   c) Pivotal Integration 6.0 for Microsoft Outlook

4. Uninstall software in the following order:
   a) Pivotal Integration 6.0 for Microsoft Outlook
   b) Pivotal Client
   c) CDC Software Smart Client Framework

Recommendations for Proxy Server Usage

This section details the recommendations for proxy server usage with the CDC Software Smart Client Framework. This section presumes you have experience with setting up and configuring proxy servers and other related administrative tasks.

Recommendations for Client Proxy Configuration

- Do not use proxy servers as intermediaries to the CDC Software Smart Client Framework installed on the deployment server.
- If proxy servers are used within the corporate firewall, local addresses must bypass the proxy server. For more information, see To bypass the proxy server for local addresses on page 10-39.
- If local addresses are directed to proxy servers, specify the name of the deployment server and the Pivotal Business Server as exceptions. For more information, To specify the name of the deployment server and the Pivotal Business Server as exceptions on page 10-39.
- If you use proxy scripts (such as proxy.pac files) to dynamically specify the proxy server based upon the client or the network location, resolve the configuration as a DIRECT connection to the deployment server and the Pivotal Business Server.
To bypass the proxy server for local addresses

1. Log on to the client computer as the end user.
2. Click Tools and then select Internet Options.
3. Click the Connections tab.
4. Click LAN Settings in the Local Area Network (LAN) Settings area.
5. In Proxy server area of the Local Area Network (LAN) Settings window:
   a) Select the Use a proxy server for your LAN check box.
   b) Type the address of the proxy server in the Address box.
   c) Type the port number of the proxy server in the Port box.
   d) Select the Bypass proxy server for local addresses check box.
   e) Click OK.
6. Click OK.
The proxy server for local addresses is bypassed.

To specify the name of the deployment server and the Pivotal Business Server as exceptions

1. Complete steps 1 to 4 of the procedure To specify the name of the deployment server and the Pivotal Business Server as exceptions on page 10-39.
2. In the Proxy server area of the Local Area Network (LAN) Settings window:
   a) Select the Use a proxy server for your LAN check box.
   b) Type the address of the proxy server in the Address box.
   c) Click Advanced.
3. In the Proxy Settings window:
   a) In the Servers area, for the HTTP Type:
      Type the Proxy Address in the Proxy Address box and the Port number in the Port box.
   b) In the Exceptions area:
      Type the NETBIOS name of the deployment server and Pivotal Business Server. Separate the names with a semi-colon (;). For example, if the names of the deployment server and Pivotal Business Server are deployserver and PBS, type deployserver;PBS.
   c) Click OK.
4. Click OK.
5. Click OK.
The names of the deployment server and the Pivotal Business Server are specified as exceptions.
Recommendations for Server Configurations for Proxy Servers

Do not configure the deployment server to require a proxy server for Web service targets used by client computers, such as the CDC Software Manager Client Install Web page that directs to the CDC Smart Updater Service.

Supported Proxy Configurations

Although not recommended, simple proxy configurations are supported, where the proxy configuration redirects client traffic to a named proxy server that does not require authentication.

Unsupported Proxy Configurations

Any proxy server requiring custom authentication credentials is not supported. Custom authentication includes conditions where usernames and passwords are assigned to individuals separately from Active Directory credentials.

End-User Tasks Overview

This section details the steps required to install Pivotal Client on client computers using ClickOnce deployment method. Pivotal Client replaces the Windows Access and Active Access access methods of working with Pivotal CRM systems.

Pivotal Client uses ClickOnce and Smart Client technology from Microsoft®. End users connect to a deployment server by launching a URL. End users can then click Install on the CDC Software Manager Client Install Web page to install the CDC Software Manager. The CDC Software Manager connects to the deployment server and automatically downloads files and installs Pivotal Client and Pivotal Integration 6.0 For Microsoft Outlook. If only one environment has been defined for a Pivotal CRM system, Pivotal Client automatically opens and end users can work with the Pivotal CRM system. If more than one environment has been defined for multiple Pivotal CRM systems, end users can select the Pivotal CRM to which they want to connect.

If there has been any update such as a new release for CDC Software Smart Client Framework, Pivotal Client, or Pivotal Integration 6.0 For Microsoft Outlook on the deployment server, the required files are automatically downloaded to the client computer when the end user runs Pivotal Client to work with any Pivotal CRM system.
Pivotal CRM 6.0.13
Installation and Deployment Guide

Pivotal CRM ClickOnce Deployment

Preliminary Steps

Before end users install Pivotal CRM by connecting to the deployment server, do the following:

1. Complete all steps detailed in Chapter 10, *Pivotal CRM ClickOnce Deployment*.
2. Add users to the Pivotal CRM system.
3. Assign licenses to users.
4. Grant security permissions to users.
5. Install Pivotal CRM 6.0.10 Prerequisites or later on the client computer. This is a mandatory step and must be done by the administrator.
6. Configure a Microsoft Outlook profile for the user, on the client computer.
7. Send the URL of the **CDC Software Manager Client Install** Web page on the deployment server to end users. Users must connect to the deployment server to install CDC Software Manager and Pivotal Client. The format of the URL is:
   
   http://<deployment server>/iaf/smartupdater/clickonce/default.htm

   where <deployment server> is the name of the deployment server.

**Warning!** Before end users install Pivotal CRM, you (deployment administrator) must install all prerequisites using the Pivotal CRM 6.0.10 Prerequisites or later installer on the client computer. You must also configure a Microsoft Outlook profile for the user on the client computer.

To add users to the Pivotal CRM system

1. Log on as the administrator to the administrative computer, where the Pivotal CRM system is defined.
2. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**.
3. In the Servers pane of the **Pivotal Administration Console** window, expand the appropriate server listed under **Data Synchronization**, and then select the Pivotal CRM system.
4. Right-click the Pivotal CRM system name and select **Connect**.
5. Right-click in the **Users** pane and select **New User**.
6. Type the name of the user in the **New User** dialog box and click **OK**. The user name must be identical to the user's network user ID, although it is not case-sensitive.
7. Repeat steps 5 to 6 for each user.
8. Close the **Pivotal Administration Console** window.

Users are added.
To assign licenses to users

Assign licenses to users. For more information about license management, see Chapter 6, *Setting up License Management*.

To grant security permissions to users

1. Log on as the administrator to the administrative computer, where the Pivotal CRM system is defined.

2. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**.

3. In the **Servers** pane, expand **Data Synchronization**, and then expand the registered DSM server until you see the name of the Pivotal CRM system to which you want to connect.

4. Right-click the system, and then click **Connect**. The right pane displays the Pivotal CRM users.

5. In the right pane, do one of the following:
   - Select the **Groups** option from the **View** panel above the right pane to display the Pivotal CRM security groups. Right-click a security group, point to **Add User**, and then click the user that you want to add to the security group. Only users who are not members of the highlighted security group are displayed.
   - Select the **Users** option from the **View** panel above the right pane to display Pivotal CRM users. Right-click a User ID, point to **Add to Group**, and click the security group to which you want to add the user. Only security groups that the user is not a member of are displayed.

6. Close the **Pivotal Administration Console** window.

The user is added to the security group.

Installing Pivotal CRM 6.0.10 Prerequisites or Later

Pivotal CRM 6.0.10 Prerequisites or later contains prerequisite installers. These prerequisites are required to run Pivotal Client and Pivotal Integration for Microsoft Outlook on client computers.

**Note:** The Pivotal CRM 6.0.10 Prerequisite or later installer automatically sets the Windows Presentation Foundation Font Cache 3.0.0.0 or 4.0.0.0 service **Startup** type to **Automatic** and also sets the Microsoft .NET Framework NGEN v4.0.xxxxx service **Startup** type to **Manual**. This improves the startup performance of Pivotal Client 6.0.13.

You can install the core Pivotal CRM 6.0.10 Prerequisites or later by running the **setup.exe** file. You can also install the prerequisites individually where you can skip a prerequisite if it has already been installed.
Pivotal CRM 6.0.13
Installation and Deployment Guide

Pivotal CRM ClickOnce Deployment

The following prerequisite installers are available when you unzip PREREQ6.0.10.zip:

1. setup.exe - Upgrades the prerequisites version to 6.0.10 or later. Installs all of the required prerequisites. The installer skips the installation of any prerequisites that are already present on the client computers. Also updates the Outlook Message Store Provider by updating the MAPISVC.INF file.

2. ISSetupPrerequisites\dotNetfx40.exe - Installs Microsoft .NET Framework 4.

3. ISSetupPrerequisites\o2007PIA.msi - Installs Microsoft Office 2007 Primary Interop Assemblies. Install this if the client computer has Outlook 2007.

4. ISSetupPrerequisites\o2010PIA.msi - Installs Microsoft Office 2010 Primary Interop Assemblies. Install this if the client computer has Outlook 2010.

5. ISSetupPrerequisites\vcredist_x86.exe - Installs Microsoft Visual C++ 2010 Runtime Libraries.

6. ISSetupPrerequisites\vstor40_x64.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 64-bit machines.

7. ISSetupPrerequisites\vstor40_x86.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 32-bit machines.

8. ISSetupPrerequisites\wic_x64_enu.exe - Install this package before installing Microsoft .NET 4 on 64-bit machines.

9. ISSetupPrerequisites\vstor40_x86.exe - Install this package before installing Microsoft .NET 4 on 32-bit machines.

10. Windows Installers 4.5 - This folder contains all the redistributable components for Windows Installers 4.5 on all the relevant operating systems.

PREREQ 6.0.10_LN.zip - Use this file to install Pivotal CRM 6.0.10 Prerequisites for Lotus Notes or when there is no e-mail client installed on the client computer. This zip folder is available for download on the Aptean Customer or Partner Portals.

Manual Installation

To upgrade to Pivotal CRM 6.0.10 Prerequisites or later

1. Extract the contents of the PREREQ6.0.10.zip file.

2. Run setup.exe and follow the installation instructions.

Note: If you are using Lotus Notes as the e-mail client, then install Pivotal CRM 6.0 Prerequisites for Lotus Notes available in PREREQ6.0.10_LN.zip file.
Automated Installation (ADS/SMS/Silent Mode)

You can push Pivotal CRM 6.0.10 Prerequisites or later installer to the Client computers through Microsoft Active Directory Service (ADS) or Microsoft Systems Management Server (SMS). You can also upgrade using the silent mode.

To upgrade to Pivotal CRM 6.0.10 Prerequisites or later through automated mode

1. Extract the contents of the PREREQ6.0.10.zip file.
2. Run the Windows Installer 4.5 files in silent mode before proceeding with the rest of the installation.
3. If .NET Framework 4 is not installed, run ISSetupPrerequisites\DotNetFx40_Full_x86_x64.exe in silent mode, or push the installer to the client computer.

**Note:** For 64-bit machines with Windows XP Service Pack 2 or Windows Server 2003:

Ensure to push the wic_x64_enu.exe along with DotNetFx40_Full_x86_x64.exe with.

---

For 32-bit machines with Windows XP Service Pack 2 or Windows Server 2003:

Ensure to push the wic_x86_enu.exe along with DotNetFx40_Full_x86_x64.exe.

The wic_x64_enu.exe, and the wic_x86_enu.exe is automatically run by the DotNetFx40_Full_x86_x64.exe.

4. **For 64-bit machines:**
   Run ISSetupPrerequisites\Vstor40_x64.exe in silent mode, or push the installer to the client computer on 64-bit machines.

   **For 32-bit machines:**
   Run ISSetupPrerequisites\Vstor40_x86.exe in silent mode, or push the installer to the client computer on 32-bit machines.

5. Run setup.exe in silent mode or push the installer to the client computers. This updates the version of Pivotal CRM 6.0 Prerequisites to 6.0.10 or later.

Silent Mode

If you run setup.exe in silent mode to install the prerequisites, the License Agreement dialog box is displayed while .NET Framework 4, VSTO Runtime, Microsoft Visual C++ 2010 Runtime Libraries, and Primary Interop Assemblies are being installed. However, the dialog boxes will not be displayed if you run the individual installers in silent mode.
To upgrade to Pivotal CRM 6.0.10 Prerequisites or later through silent mode

1. In the command prompt navigate to the folder which contains the setup.exe file.

2. Run `setup.exe /a`. Follow the installation instructions and specify the folder to which the .msi has to be extracted.

3. Run `msiexec /i "Pivotal CRM 6.0 Prerequisites.msi" /q.

Microsoft Systems Management Server (SMS)

To upgrade to Pivotal CRM 6.0.10 Prerequisites or later by pushing the installers through Microsoft Systems Management Server (SMS), follow steps listed in To upgrade to Pivotal CRM 6.0.10 Prerequisites or later through automated mode on page 10-44.

Microsoft Active Directory Service (ADS)

To upgrade to Pivotal CRM 6.0.10 Prerequisites or later through ADS, follow steps listed in To upgrade to Pivotal CRM 6.0.10 Prerequisites or later through automated mode on page 10-44. However, ADS does not support pushing .exe files to the client computers. Consult Microsoft documentation on how to install .NET Framework 4 VSTO Runtime, Microsoft Visual C++ 2010 Runtime Libraries, through ADS.

To install setup.exe on Client computers through ADS, extract the .msi file from setup.exe before you push the file to the Client computers.

To extract MSI from setup.exe

1. In the command prompt navigate to the folder that contains the setup.exe file.

2. Run `setup.exe /a`. Follow the installation instructions and specify the folder to which the .msi has to be extracted.

The destination folder contains Pivotal CRM 6.0 Prerequisites.msi and Program Files folder. With Administrative privileges, you need to push both the .msi and the folder to the client computers to install the component.

System Requirements: End User Computers

Microsoft Outlook, Word, and Excel are mandatory on client computers. For other system requirements, see Pivotal CRM 6.0 Compatibility Guide.

Note: Microsoft Outlook is not required if Lotus Notes is being used as the e-mail client.
Installing Pivotal CRM on Client Computers: End User Tasks

Provide end users with the URL to connect to the CDC Software Manager Client Install Web page on the deployment server. For more information about the format of the URL, see Preliminary Steps on page 10-41. The following procedure is written for the end user.

**Warning!** Before end users install Pivotal CRM, you (deployment administrator) must install all prerequisites using the Pivotal CRM 6.0 Prerequisites installer on the client computer.

**To install Pivotal CRM on client computers**

1. Log on to the client computer with Windows Authentication.
2. Close Microsoft Outlook.
3. Contact your system administrator and obtain the URL to connect to the deployment server. The format of the URL is:
   
   http://<deployment server>/iaf/smartupdater/clickonce/default.htm
   
   where `<deployment server>` is the name of the deployment server.
4. Open a Web browser. In the Address bar of the browser, type the URL to connect to the deployment server and press ENTER.
5. Click *Install* in the Application Install - Security Warning dialog box.
6. In the CDC Software Manager Client Install page:
   - Click *Install* to install the CDC Software Manager.
   The CDC Software Manager connects to the deployment server. Select Pivotal CRM and click *Download*. The CDC Software Manager downloads and installs files required to run Pivotal CRM on your client computer.

**Note:** After you install CDC Software Manager, and if there is only one instance of Pivotal CRM defined on the deployment server, the files are automatically downloaded to the client computer. In this case, you do not need to select Pivotal CRM and click *Download*.

7. If only one environment has been defined, the required files are downloaded, and Pivotal Client automatically opens. If more than one environment is defined, in the Pivotal CRM login window:
   a) Click the Options drop-down list.
   b) Select the environment from the Environment drop-down list. Each environment corresponds to a Pivotal CRM system.
   c) Click to log on to the Pivotal CRM system.
8. If User Authentication is set, the Sign in to Pivotal CRM dialog box with the authentication options is displayed before Pivotal Client is launched. For more information on setting the
authentication option, see Setting User Authentication Option by editing the IafConfig.xml file on page 10-15.

In the log on dialog box, if you select Remember Me, the user credentials prefilled, when the log on dialog box is displayed the subsequent times. If you select the Don’t ask me again check box, the specified credentials are used to log you on to Pivotal Client the subsequent times. In this case, the Sign in to Pivotal CRM dialog box is not displayed.

To turn off automatic log on, in the Pivotal Client window, click Tools, click Options, and then click Sign In. Select the Turn off automatic sign in check box in the Sign In Options area to turn off automatic log on. If you select this option, when you log on to Pivotal Client the next time, the Sign in to Pivotal CRM dialog box is displayed.

9 Click OK.

Pivotal Integration 6.0 For Microsoft Outlook is also installed during this process. After the installation of Pivotal CRM, run Outlook to view and work with the Pivotal CRM toolbar.

If Outlook was open when you installed the Pivotal CRM Prerequisites and Pivotal CRM, you need to restart Outlook to view the Pivotal CRM Add-In and other changes.

For End Users with Microsoft Office 2007 or Microsoft Office 2010

After launching Pivotal Client, perform the following steps to ensure that the Pivotal CRM Add-In is installed for Microsoft Outlook 2007 or Microsoft Outlook 2010.

To install the Pivotal CRM Add-In for Microsoft Outlook 2010

1 Launch Microsoft Outlook 2007 or Microsoft Outlook 2010.

2 Click Install in the Microsoft Office Customization Installer dialog box. This is Trust prompt. Figure 10-4 on page 10-48, displays the Microsoft Office Customization Installer dialog box.
Relaunch Microsoft Outlook 2007 or Microsoft Outlook 2010.

For more information about how to run Pivotal CRM again, see Accessing Pivotal CRM from the Start Menu on page 10-49.

For more information about working with Pivotal Integration 6.0 for Microsoft Outlook, see the Pivotal Integration 6.0 For Microsoft Outlook Help.

To view Pivotal CRM Contacts in Outlook, create a Pivotal Contact folder in Outlook. For procedures to create a Pivotal Contact folder in Outlook see the Pivotal Integration 6.0 For Microsoft Outlook Help.

For more information on upgrading existing Client computers to Microsoft Office 2010, see Pivotal CRM 6.0.13 Release Notes and Upgrade Guide.

Working with Pivotal CRM

The following procedures are written for the end user. This section details the following:

- Accessing Pivotal CRM from the Start menu.
- Downloading updates for Pivotal Client and the Pivotal CRM system.
- Accessing new environments defined for multiple Pivotal CRM systems
- Unregister Pivotal Integration 6.0 For Microsoft Outlook

For more information about working with Pivotal Client, see the Pivotal Client Help.
Accessing Pivotal CRM from the Start Menu

The CDC Software and Pivotal CRM shortcuts in the Start menu are created after you install CDC Software Manager and log on to Pivotal Client.

To access Pivotal CRM from the Start menu

1. Click Start, point to Programs, and then click CDC Software, point to Pivotal CRM, and then click Pivotal CRM.

   **Note:** When you have downloaded Pivotal CRM from multiple deployment servers, the name of the deployment server will be displayed next to the Pivotal CRM shortcut name. For example, if you have downloaded Pivotal CRM from deployment server 1 and deployment server 2, the shortcut items will be Pivotal CRM deployment server 1 and Pivotal CRM deployment server 2.

2. If multiple environments are defined, you are prompted to select an Environment from the Environment Selection dialog box. You can also select the Remember my preference option to avoid being prompted each time you launch Pivotal Client. If you select the Remember my preference option when you launch Pivotal Client, the setting is saved on the Startup tab of the Options dialog box. You will not be prompted to select an Environment on subsequent logins. To clear the selection, uncheck Use the following preference(s) while starting the application on the Startup tab of the Options dialog box. You will be prompted to select an Environment on subsequent logins.

3. If User Authentication is set, the Sign in to Pivotal CRM dialog box with the authentication options is displayed before Pivotal Client is launched. For more information on setting the authentication option, see Setting User Authentication Option by editing the IafConfig.xml file on page 10-15.

   In the Sign in dialog box, if you select Remember Me, the user credentials are prefilled when the Sign in dialog box is displayed subsequent times. If you select the Don’t ask me again check box, the specified credentials are used to sign you in to Pivotal Client the subsequent times. In this case, the Sign in to Pivotal CRM dialog box is not displayed.

   To turn off automatic log on, in the Pivotal Client windows, click Tools, click Options, and then click Sign In. Select the Turn off automatic sign in check box in the Sign In Options area to turn off automatic log on. If you select this option, when you log on to Pivotal Client the next time, the Sign in to Pivotal CRM dialog box is displayed.

4. Click OK.
Pivotal Client opens and is connected to the Pivotal CRM system.

**Downloading Updates**

You do not need to re-install any software when updates are available for Hot Fixes, or new releases. Updates are automatically downloaded to your computer every time you run Pivotal CRM.

**Note:** Before you download updates, your computer must be connected to the network of the deployment server.

If there is a new Pivotal CRM system available, run **CDC Software Manager** to download the required files.

**To run CDC Software Manager**

2. Click **Start**, point to **Programs**, and then click **CDC Software**, and then click **CDC Software Manager**.

**Note:** If you have downloaded the CDC Software Manager from more than one deployment server, the name of the deployment server is also displayed.

The CDC Software Manager connects to the deployment server.

3. In the **Pivotal CRM** login window:
   a) Click the **Options** drop-down list.
   b) In the **Environment** drop-down list, select the environment that corresponds to the new Pivotal CRM system.
   c) Click to log on to the Pivotal CRM system. All the required files for the new Pivotal CRM system are downloaded.

4. If User Authentication is set, the **Sign in to Pivotal CRM** dialog box with the authentication options is displayed before Pivotal Client is launched. For more information on setting the authentication option, see **Setting User Authentication Option by editing the IafConfig.xml file** on page 10-15.

   In the log on dialog box, if you select **Remember Me**, the user credentials prefilled, when the log on dialog box is displayed the subsequent times. If you select the **Don't ask me again** check box, the specified credentials are used to log you on to Pivotal Client the subsequent times. In this case, the **Sign in to Pivotal CRM** dialog box is not displayed.

   To turn off automatic log on, in the Pivotal Client windows, click **Tools**, click **Options**, and then click **Sign In**. Select the **Turn off automatic sign in** check box in the **Sign In Options** area to turn
off automatic log on. If you select this option, when you log on to Pivotal Client the next time, the **Sign in to Pivotal CRM** dialog box is displayed.

5. Click **OK**.

Pivotal Client opens and is connected to the Pivotal CRM system.

---

**Accessing Environments Defined for Multiple Pivotal CRM Systems**

Using Pivotal Client, you can connect to different Pivotal CRM systems. To connect to environments defined for existing Pivotal CRM systems, run Pivotal CRM, select the environment and connect to the Pivotal CRM system. For more information, see *To access Pivotal CRM from the Start menu* on page 10-49.

If a new environment is defined after you have installed Pivotal CRM:

- Run CDC Software Manager and install Pivotal CRM.
- In the **Environment Selection** dialog box, select the new environment and connect to the new Pivotal CRM system. You can also select the **Remember my preference** option to avoid being prompted each time you launch Pivotal Client.

For more information, see *To run CDC Software Manager* on page 10-50.

**Unregistering the Pivotal CRM Add-In for Outlook**

You can unregister the Pivotal CRM Add-In from Pivotal Client. This is equivalent to uninstalling Pivotal Integration 6.0 For Microsoft Outlook from the client computer. After you unregister the Pivotal CRM Add-In from Pivotal Client, the Pivotal CRM toolbar is removed from Outlook, and the functionality for Pivotal Integration 6.0 For Microsoft Outlook is no longer available.

**To Unregister the Pivotal CRM Add-In**

1. Click **Start**, point to **Programs**, and then click **CDC Software**, point to **Pivotal CRM**, and then click **Pivotal CRM**.

2. Select the environment from the **Environment Selection** dialog box. Each environment corresponds to a Pivotal CRM system. Pivotal Client opens.

3. From the **Tools** menu select **Options**.

4. In the **Options** dialog box select the **Outlook Add-in** tab.
5 In the Active Add-in area clear the **Pivotal Integration 6.0 for Microsoft Outlook** check box.

Pivotal CRM Add-In is unregistered and the Pivotal CRM toolbar is not available from Outlook.

**Note:** You can unregister Pivotal CRM Add-In only from the **Options** box. It is not possible to uninstall Pivotal Integration 6.0 For Microsoft Outlook from the **Add or Remove Programs** window in the **Control Panel**.

**Uninstalling Pivotal CRM**

Uninstalling Pivotal CRM on the client computer does not remove Pivotal Client from the deployment server. For information about how to uninstall Pivotal Client from the deployment server, see **Uninstalling, Modifying, or Repairing Pivotal Client** on page 10-36.

**Warning!** When you uninstall Pivotal CRM on the client computer, History and Shortcuts data will be lost.

Use the **Uninstall Pivotal CRM** shortcut in the **Start-Programs** menu to uninstall Pivotal Client. Uninstalling Pivotal CRM also uninstalls Pivotal Integration 6.0 For Microsoft Outlook.

**To uninstall Pivotal CRM from the client computer**

1 Close Microsoft Outlook.
2 Click **Start**, point to **Programs**, and then click **CDC Software**, and then click **Pivotal CRM** and then click **Uninstall Pivotal CRM**.
3 Click **Uninstall**.
4 Click **Finish**.

Pivotal Client and Pivotal Integration 6.0 For Microsoft Outlook are uninstalled.

**Uninstalling CDC Software Manager**

Uninstalling CDC Software Manager does not uninstall Pivotal Client on the client computer. Use the shortcut in the **Add/Remove Programs** console to uninstall CDC Software Manager.

**To uninstall CDC Software Manager**

1 Log on as the administrative user.
2 Click **Start**, point to **Settings**, and click **Control Panel**.
3 Double-click **Add or Remove Programs**.
4 Click **CDC Software Manager**, and then click **Change/Remove**.
5 Click **Remove the application from this computer**.
6 Click **OK**.

CDC Software Manager is uninstalled.
11

Pivotal CRM Packaged Client Deployment
Overview

Pivotal CRM 6.0 Service Pack 3 and later support ClickOnce and Packaged Client modes of Pivotal Client deployment.

Using Pivotal Packaged Client 6.0, Pivotal Administrators can automate the installation of Pivotal Client 6.0 in environments containing multiple client computers. Pivotal Packaged Client 6.0 can also be installed in a Citrix Farm environment, or on a single Citrix Server.

Note: A Pivotal CRM deployment can consist of client computers that use the ClickOnce deployment method, as well as client computers that use the Packaged Client deployment method. Both types of client computers can connect to the same Pivotal Business Server computer in a deployment. However, you cannot have both ClickOnce and Packaged Client deployments on the same client computer.

Differences Between ClickOnce and Packaged Client Deployment Methods

*Table 11-1* on page 11-2 lists the differences between ClickOnce and Packaged Client Deployment methods.

<table>
<thead>
<tr>
<th>Feature</th>
<th>ClickOnce Deployment</th>
<th>Pivotal Packaged Client Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Microsoft Active Directory Group Policy / Microsoft Systems Management Server</td>
<td>Terminal Services / Citrix</td>
</tr>
<tr>
<td>Client Installation</td>
<td>Installation initiated by end users, requiring minimal administrative intervention.</td>
<td>Installation managed by the administrator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Note: Installation managed by the administrator.)</td>
</tr>
<tr>
<td>Distribution Technology</td>
<td>Microsoft ClickOnce</td>
<td>Systems software management software such as Microsoft Active Directory Group Policy (ADS) and Microsoft Systems Management Server (SMS).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Deployment</td>
<td>Software packages downloaded by clients from deployment server when end user launches the URL.</td>
<td>Microsoft Windows Installer (.msi) based installation to deploy Pivotal Packaged Client on client and mobile computers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installed by the administrator.</td>
</tr>
<tr>
<td>Updates</td>
<td>Software packages automatically downloaded by clients from deployment server.</td>
<td>Updates are delivered or &quot;pushed&quot; to clients by using Windows Installer patch (.msp) files.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Updates are managed by the administrator.</td>
</tr>
</tbody>
</table>
### System Requirements

The recommended hardware and software requirements for computers in a Packaged Client deployment are:

#### Distribution Server

**Table 11-2 System Requirements for the Distribution Server**

<table>
<thead>
<tr>
<th>Component</th>
<th>Minimum Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution Software</td>
<td>One of the following:</td>
</tr>
<tr>
<td></td>
<td>• Microsoft Systems Management Server 2003</td>
</tr>
<tr>
<td></td>
<td>• Microsoft System Center Configuration Manager 2007</td>
</tr>
<tr>
<td></td>
<td>• Windows Server 2003-based Group Policy Implementation</td>
</tr>
</tbody>
</table>

#### Terminal Server and Citrix Server

**Table 11-3 System Requirements for the Terminal Server or Citrix Server**

<table>
<thead>
<tr>
<th>Component</th>
<th>Requirements</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Any one of the following:</td>
<td>The following are the recommended hardware:</td>
</tr>
<tr>
<td></td>
<td>• Windows Server 2003 (Standard or Enterprise Editions) Service Pack 2</td>
<td>• 4 GB RAM</td>
</tr>
<tr>
<td></td>
<td>• Windows Server 2003 (Standard or Enterprise Editions) R2 Service Pack 2</td>
<td>• Quad Processor - Intel Xeon 3.60 GHz</td>
</tr>
<tr>
<td></td>
<td>• Windows Server 2008 Service Pack 2</td>
<td>• RAID Controller</td>
</tr>
<tr>
<td></td>
<td>• Windows Server 2008 R2</td>
<td>• 512 GB Hard Disk</td>
</tr>
<tr>
<td>Citrix Software</td>
<td>Citrix Presentation Server for Windows 4.5</td>
<td></td>
</tr>
<tr>
<td>Pivotal Software</td>
<td>Pivotal CRM 6.0.10 Prerequisites or later</td>
<td></td>
</tr>
</tbody>
</table>

#### Client Computers

The following are the requirements for client computers using Pivotal Packaged Client deployed using Active Directory Group Policy or Microsoft Systems Management Server deployment methods:
Ensure that client computers meet all the requirements mentioned in *Pivotal CRM 6.0 Compatibility Guide*.

In addition, client computers require the following:

- Microsoft Windows Installer 4.5 or later
- Pivotal CRM 6.0.10 Prerequisites or later
- A user profile in Microsoft Outlook, for each user

### Deploying Pivotal Packaged Client in a Terminal Server or Citrix Server Environment

Perform the following steps to deploy Pivotal Packaged Client in a Terminal Server or Citrix Server environment:

1. **Install Pivotal CRM 6.0.10 Prerequisites or later**
2. **Install Pivotal Packaged Client 6.0**
3. **Publish the Application**

**Note:** Install Microsoft Outlook on the Terminal Server or Citrix Server as it is required by Pivotal Integration 6.0 for Microsoft Outlook. Ensure that the Citrix Server is not configured to delete files stored in the user’s folders in `C:\Documents and Settings\<user name>`, when the user logs off.

If installing Pivotal Packaged Client on On Xenapp 32-bit, see KB 11296 for more details.

### Installing Pivotal CRM 6.0.10 Prerequisites or Later

Pivotal CRM 6.0.10 Prerequisites or later is required to run Pivotal Client and Pivotal Integration 6.0 for Microsoft Outlook.

**Note:** The Pivotal CRM 6.0.10 Prerequisites or later installer automatically sets the Windows Presentation Foundation Font Cache 3.0.0.0 or 4.0.0.0 service Startup type to Automatic, and also sets the Microsoft .NET Framework NGEN v4.0.xxxxx service Startup type to Manual. This improves the startup performance of Pivotal Client.

The `PREREQ6.0.10.zip` file contains a `setup.exe` file which installs all the core Pivotal CRM 6.0.10 Prerequisites, and individual installers for third party prerequisites that are placed in a separate folder. For more information about the contents of the `PREREQ6.0.10.zip` file, see Appendix A, *Contents of Installation Zip Files*.

The following prerequisite installers are available when you unzip `PREREQ6.0.10.zip`:

1. `setup.exe` - Upgrades the prerequisites version to 6.0.10 or later. Installs all of the required prerequisites. The installer skips the
installation of any prerequisites that are already present on the client computers. Also updates the Outlook Message Store Provider by updating the MAPISVC.INF file.

2  ISSetupPrerequisites\dotNetfx40.exe – Installs Microsoft .NET Framework 4.

3  ISSetupPrerequisites\o2007PIA.msi – Installs Microsoft Office 2007 Primary Interop Assemblies. Install this if the client computer has Outlook 2007.

4  ISSetupPrerequisites\o2010PIA.msi – Installs Microsoft Office 2010 Primary Interop Assemblies. Install this if the client computer has Outlook 2010.

5  ISSetupPrerequisites\vcredist_x86.exe - Installs Microsoft Visual C++ 2010 Runtime Libraries.

6  ISSetupPrerequisites\vstor40_x64.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 64-bit machines.

7  ISSetupPrerequisites\vstor40_x86.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 32-bit machines.

8  ISSetupPrerequisites\wic_x64_enu.exe - Install this package before installing Microsoft .NET 4 on 64-bit machines.

9  ISSetupPrerequisites\wic_x86_enu.exe - Install this package before installing Microsoft .NET 4 on 32-bit machines.

10 Windows Installers 4.5 - This folder contains all the redistributable components for Windows Installers 4.5 on all the relevant operating systems.

PREREQ 6.0.10_LN.zip - Use this file to install Pivotal CRM 6.0.10 Prerequisites for Lotus Notes or when there is no e-mail client installed on the client computer. This zip folder is available for download on the Aptean Customer or Partner Portals.

To install Pivotal CRM 6.0.10 Prerequisites or later

1  Log on to the Terminal Server or Citrix Server as an Administrator.

2  Extract the contents of the PREREQ6.0.10.zip file.

3  Browse to the folder with the contents of the PREREQ6.0.10.zip file and run setup.exe.

4  Click Next in the InstallShield wizard.

5  Accept the License Agreement and click Next > Next.

6  Click Install. Click Finish.

Pivotal CRM 6.0.10 Prerequisites is installed on the Citrix server.
Installing Pivotal Packaged Client

Pivotal Packaged Client consists of:

- Pivotal Client 6.0.13
- CDC Software Smart Client Framework 4.0
- Pivotal Integration 6.0.13 for Microsoft Outlook

For End Users with Microsoft Office 2007 or Microsoft Office 2010

After launching Pivotal Client, perform the following steps to ensure that the Pivotal CRM Add-In is installed for Microsoft Outlook 2007 or Microsoft Outlook 2010.

1. Log on to the Terminal Server or Citrix Server as an Administrator.

2. Extract the contents of the `PivotalPackagedClient6.0.13.zip` file.

3. Browse to the folder with the contents of the `PivotalPackagedClient6.0.13.zip` file and run `PivotalPackagedClient.msi`.

4. In the Custom Setup screen, click Next.

5. In the Pivotal Client Configuration screen, specify details as shown in the table below.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment name</td>
<td>Specify an environment name. It is recommended that this name should be the same as the Pivotal CRM System name in upper case.</td>
</tr>
<tr>
<td>Environment description</td>
<td>Specify a brief description of the environment.</td>
</tr>
<tr>
<td>Pivotal system name</td>
<td>Specify the name of the Pivotal CRM System defined in Pivotal Administration Console.</td>
</tr>
<tr>
<td>Pivotal Business Server name</td>
<td>Specify the name of the Pivotal Business Server.</td>
</tr>
</tbody>
</table>

6. Optional: In the Pivotal Client Configuration screen, click Advanced Options to override the default for the parameters in the table below.
7 Click **Next**.

8 In the **Pivotal Client Configuration – Advanced** dialog, either proceed with the default destination folder or click **Change** to specify where to store the Client Task dll files.

If the administrator specifies the folder path while installing Pivotal Packaged Client, the Client Task dll files are downloaded to the path specified. The Client Task dll files are shared by all the users using Pivotal Client on that machine. If the administrator does not specify the folder path while installing Pivotal Packaged Client, then individual folders are created in the **Documents and Settings** folder, which contains all the Client Task dll files downloaded for the logged-in users.

9 Optionally specify the following settings:

- **Form Display Layout** - Specify how the form layout should be displayed. By default, the **Right to Left** option is set to False.

- **Windows Authentication** - Specify what authentication mode should be used. By default, the **Windows Authentication** option is set to True, which means that Windows Authentication is enabled.

10 Click **Next**.

11 Click **Finish** to complete the installation.

Pivotal Packaged Client is installed on the Terminal Server or Citrix server.

**Note:** It is mandatory to have Windows Installer 4.5 installed on ADS 2003 Server when installing or upgrading to Pivotal Packaged Client 6.0.13.
To install the Pivotal CRM Add-In for Microsoft Outlook 2010 or Microsoft Outlook 2007

1. Launch Microsoft Outlook 2007 or Microsoft Outlook 2010.

2. Click **Install** in the **Microsoft Office Customization Installer** dialog box. This is Trust prompt. Figure 11-1 on page 11-8, displays the **Microsoft Office Customization Installer** dialog box.

   ![Microsoft Office Customization Installer](image)

   **Figure 11-1**  Microsoft Office Customization Installer dialog box


**Migrating from ClickOnce to Packaged Client**

It is possible to migrate client computers from having a ClickOnce deployment to a Packaged Client deployment for client computers. The migrated client computers with Packaged Client deployment will no longer need to connect to a deployment server.

It is possible to have a mix of both ClickOnce as well as Packaged Client deployment in a single Pivotal CRM deployment, where some client computers are on ClickOnce deployment and others on Packaged Client deployment. In this scenario, the deployment server is required for the client computers running ClickOnce deployment.

**Note:** Having both ClickOnce, as well as Packaged Client deployment, on the same client computer is not supported.
On Deployment Servers

To completely migrate to a Packaged Client deployment, where no client computers use the ClickOnce method, uninstall any previous versions of:

1. Pivotal Integration for Microsoft Outlook
2. Pivotal Client
3. CDC Software Smart Client Framework

After a full migration to Packaged Client deployment, the deployment server is no longer needed, and can be used elsewhere in the deployment as a server.

Note: Ensure to uninstall Pivotal Integration for Microsoft Outlook first, Pivotal Client next, and then CDC Software Smart Client Framework.

On Client Computers

1. Click Start, point to Program Files, point to CDC Software, point to Pivotal CRM, and then click Uninstall Pivotal Client.
2. Go to Add or Remove Programs in the Control Panel and uninstall CDC Software Manager <Deployment Server>.
3. Install Pivotal CRM 6.0.10 Prerequisites or later.
4. Install Pivotal Packaged Client.

Post Upgrade Tasks

If you were using a standalone license server, you can repurpose the server, and use it elsewhere in your deployment. Do this only after your entire deployment has been upgraded.

All licensing-related operations will be performed from the administrative computer of the master system.

Note: Avoid repurposing the license server soon after upgrading. You may need to keep it available, in the case that you forget to upgrade some computers in your deployment. Having the old license server available in such a situation can prevent the downtime required to upgrade the computers that were not upgraded.
Publishing the Application in a Citrix Environment

In the Citrix environment, publish Pivotal Packaged Client to make it available to users. Refer to Citrix documentation for information on publishing applications. In the Location screen of the Publish Application Wizard, ensure that the Command line is specified correctly. In the Shortcut presentation screen, ensure that the icon is specified correctly.

To specify the Command line and Icon

1. In the Location screen of the Publish Application Wizard, click the Browse button below the Command line text box.
2. Browse to C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe and select CdcSmartClientContainer32NoDEP.exe.
3. Click Next to continue.
4. In the Shortcut presentation screen, click Change Icon.
5. Select Choose icon from a file on an IMA server and click Browse.
6. Browse to C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine and select pBall16_Blue2.ico.

Pivotal Packaged Client is published when all the steps in the Publish Application Wizard are completed.

Uninstalling Pivotal Packaged Client

Perform the following procedure to uninstall Pivotal Packaged Client from a Terminal Server or Citrix Server.

To uninstall Pivotal Packaged Client from a Terminal Server or Citrix Server

1. Click Start, point to Programs, click CDC Software, click Pivotal CRM and then click Uninstall Pivotal CRM.
2. Click Uninstall.
3. Click Finish.

Pivotal Packaged Client is uninstalled.
Deploying Pivotal Packaged Client Using Active Directory Group Policy

Perform the following steps to deploy Pivotal Packaged Client using Active Directory Group Policy:

1. Deploy Windows Installer 4.5
2. Deploy Pivotal CRM 6.0.10 Prerequisites or later
3. Deploy Pivotal Packaged Client

Deploying Windows Installer 4.5

Windows Installer 4.5 is required in order to install Pivotal CRM 6.0.10 Prerequisites or later. Refer to Microsoft documentation for information on how to deploy Windows Installer 4.5 on client computers.

Deploying Pivotal CRM 6.0.10 Prerequisites or Later

Pivotal CRM 6.0.10 Prerequisites or later contains prerequisite installers. These prerequisites are required to run Pivotal Client and Pivotal Integration 6.0 for Microsoft Outlook, if you have set up Pivotal Client on Windows 2008 or Windows 7. There are two types of prerequisites:

- Third-party prerequisites
- Pivotal CRM prerequisites

Note: The Pivotal CRM 6.0.10 Prerequisites or later installer automatically sets the Windows Presentation Foundation Font Cache 3.0.0.0 or 4.0.0.0 service Startup type to Automatic, and also sets the Microsoft .NET Framework NGEN v4.0.xxxxx service Startup type to Manual. This improves the startup performance of Pivotal Client.

Third-Party Prerequisites

The following prerequisite installers are available when you unzip PREREQ6.0.10.zip:

1. setup.exe - Upgrades the prerequisites version to 6.0.10 or later. Installs all of the required prerequisites. The installer skips the installation of any prerequisites that are already present on the client computers. Also updates the Outlook Message Store Provider by updating the MAPISVC.INF file.

2. ISSetupPrerequisites\dotNetfx40.exe – Installs Microsoft .NET Framework 4.

3. ISSetupPrerequisites\o2007PIA.msi – Installs Microsoft Office 2007 Primary Interop Assemblies. Install this if the client computer has Outlook 2007.
4. ISSetupPrerequisites\o2010PIA.msi - Installs Microsoft Office 2010 Primary Interop Assemblies. Install this if the client computer has Outlook 2010.

5. ISSetupPrerequisites\vcredist_x86.exe - Installs Microsoft Visual C++ 2010 Runtime Libraries.

6. ISSetupPrerequisites\vstor40_x64.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 64-bit machines.

7. ISSetupPrerequisites\vstor40_x86.exe - Installs VSTO 2010 (Visual Studio 2010) Runtime on 32-bit machines.

8. ISSetupPrerequisites\wic_x64_enu.exe - Install this package before installing Microsoft .NET 4 on 64-bit machines.

9. ISSetupPrerequisites\wic_x86_enu.exe - Install this package before installing Microsoft .NET 4 on 32-bit machines.

10. Windows Installers 4.5 - This folder contains all the redistributable components for Windows Installers 4.5 on all the relevant operating systems.

PREREQ 6.0.10_LN.zip - Use this file to install Pivotal CRM 6.0.10 Prerequisites for Lotus Notes or when there is no e-mail client installed on the client computer. This zip folder is available for download on the Aptean Customer or Partner Portals.

Perform the following steps to deploy Third-party Prerequisites:

1. Deploy .NET Framework 4

2. Deploy Microsoft Office 2007 Primary Interop Assemblies

3. Deploy Microsoft Office 2010 Primary Interop Assemblies


**Deploying .NET Framework 4**

Refer to Microsoft documentation for information on how to deploy .NET Framework 4 on client computers.

**Deploying Microsoft Office 2007 Primary Interop Assemblies**

Refer to Microsoft documentation for information about how to deploy Microsoft Office 2007 Primary Interop Assemblies on client computers.

**Deploying Microsoft Office 2010 Primary Interop Assemblies**

Refer to Microsoft documentation for information about how to deploy Microsoft Office 2010 Primary Interop Assemblies on client computers.

**Deploying Microsoft Visual C++ 2010 Runtime Libraries**

Refer to Microsoft documentation for information about how to deploy Microsoft Visual C++ 2010 Runtime Libraries on client computers.
Deploying Visual Studio 2010 Tools for Office Runtime

For information on deploying Visual Studio 2010 Tools for Office Runtime, see Microsoft documentation.

Pivotal CRM Prerequisites

Pivotal CRM Prerequisites includes the C runtime library file, which should be deployed using Active Directory Group Policy. Do the following to deploy Pivotal CRM Prerequisites:

1. **Extract** `setup.exe` to deploy the C runtime library and MSP related changes
2. **Create a PREREQ package in Active Directory**
3. **Verify the Active Directory package**

To extract `setup.exe` to deploy the C runtime library and MSP related changes

1. Download `setup.exe` to the root directory of the C:\ drive on your local computer.
2. Open a command prompt.
3. Change the directory to the root of the C:\ drive.
4. Type `mkdir prereq` at the command prompt to create a directory in which to copy `setup.exe`.
5. Type `setup.exe /a` at the command prompt.
6. Specify `C:\prereq` as the folder to which to extract the files.
7. Close the command prompt window.
8. Navigate to the `C:\prereq` folder in Windows Explorer and verify that the files have been extracted.
9. Move the `prereq` folder with all its contents to the server that you will use for deployment.

After moving the `prereq` folder, create an Active Directory package.

To create a PREREQ package in Active Directory

1. Click **Start**, point to **Programs**, and then click **Administrative Tools**.
2. Click **Active Directory Users and Computers**.
3. In the **Active Directory Users and Computers** tree, right-click the domain node at the top of the tree, and then click **Properties**.
4. In the **Properties** dialog box, click the **Group Policy** tab.
5. Click **Edit**. A window is displayed with the **Default Domain Policy** tree.
Specify how the software will be assigned:

a) You can select the **Computer Configuration** node in Group Policy to set policies that are applied to computers, regardless of who logs on to them.

b) You can select the **User Configuration** node in Group Policy to set policies that apply to users, regardless of the logon computer.

For the purpose of the example, select and expand the **User Configuration** node. Expand the **Software Settings** folder located under the **User Configuration** node.

Right-click **Software installation**, point to **New**, and then click **Package**.

A dialog box is displayed that prompts you for the path to the Windows Installer file (.msi) for the package. Browse to the location where you copied the prereq folder, and click the **Pivotal CRM 6.0 Prerequisites.msi** file.

Select **Advanced Published** or **Assigned selection** and click **OK**.

Specify whether to auto install or publish the software:

a) If you select **Auto Install**, the software will be installed automatically on every computer in the domain.

b) If you select **Publish**, the software is added to the list of available products, but is not installed unless a user chooses to install it.

After you have modified all necessary items, click **OK**.

Exit the **Active Directory Users and Computers** console.

After setting up the **PREREQ** package in Active Directory, verify that the package is available for installation.

**To verify an Active Directory package**

1. Log on to any computer that is a part of the domain. Click the **Start** button, point to **Control Panel**, and then click **Add or Remove Programs**.

2. Click **Add New Programs**. The **PREREQ** installation package should be displayed in the list of available software.

3. Return to the **Active Directory Users and Computers** console and double-click the package to reconfigure it, if the **PREREQ** installation package is not displayed in the list of available software.

**Deploying Pivotal Packaged Client**

**Note:** To improve startup time of Pivotal Client enable BM caching on the Production System. Also, modify the Prefetcher setting on Client computers with Windows XP. The new prefetcher settings improve the startup time of Pivotal Client. For more information prefetcher settings, see KB# 11024.
Pivotal Packaged Client consists of:
- Pivotal Client 6.0.13
- CDC Software Smart Client Framework 4.0
- Pivotal Integration 6.0.13 for Microsoft Outlook

To deploy Pivotal Packaged Client

1. Extract the contents of the PivotalPackagedClient6.0.13.zip file.
2. Unpack PivotalPackagedClient.msi in administrative mode, using the /a switch.
3. Distribute or “push” the .msi file to client computers, along with the transform (.mst) file, using Active Directory Group Policy. For more information about creating a .mst file, see Creating a .mst file using Orca on page 11-16. Refer to Microsoft documentation for information about how to deploy applications on client computers.

Setting User Authentication Option

Note: User Authentication is not supported on Mobile Systems.

In Pivotal Client 6.0 and Pivotal Integration for Microsoft Outlook, you can enable the end-user to log on to Pivotal Client or to Microsoft Outlook by using the following authentication methods:

- Integrated Windows Authentication: Logs onto Pivotal Client or Pivotal Integration for Microsoft Outlook by using the user credentials of the logged on Windows user.
- User Authentication: Enables the end user to specify user name, and password to log on to Pivotal Client or Pivotal Integration for Microsoft Outlook, so that you can log on with credentials different from the logged on Windows user.

Note: You can specify the user authentication using either the IAFConfig.xml file or the .mst file which is used for deploying Pivotal Packaged Client. For instructions on how to specify the authentication option using the .mst file, see Creating a .mst file using Orca on page 11-16.

You need to set the User Authentication option to enable the end users to log on with credentials of their choice. If User Authentication is enabled, the Sign in to Pivotal CRM or Pivotal CRM Log on dialog box with the authentication options is displayed before Pivotal Client or Microsoft Outlook is launched.

To set the authentication option

1. Browse to C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder.
2. Open the IafConfig.xml file with any XML editor.
3  Locate the string “windowsAuthentication”, and set the value to False. This value is True by default. If Windows Authentication is set to True, the **Sign in to Pivotal CRM** dialog box is not displayed to the user when they launch Pivotal Client.

4  **Browse to** C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder.

5  To enable Windows Authentication for all users, open the `IafConfig.xml` file with any XML editor and change `windowsAuthentication` to True.

   To enable Windows Authentication for one user, you can change the authentication option for Pivotal Integration for Microsoft Outlook by setting the CRM Authentication by clicking **Tools**, and **Options** in Microsoft Outlook. For more information about setting the authentication for in Microsoft Outlook, see *Pivotal Integration 6.0 for Microsoft Outlook Help*.

### Creating a .mst file using Orca

A .mst file is used to add to, delete, or change the properties of a Microsoft Windows Installer (.msi) package. The .mst file enables customization of the installation for different groups of users.

The installation of Pivotal Packaged Client 6.0 can be customized by modifying the .msi file, and saving these changes as a .mst file. The .mst file should be specified in the **Modifications** tab while creating a distribution point for the .msi file in Microsoft Active Directory Group Policy.

Use the Orca tool from Microsoft or other commercial tools to create a transform file.

**To create the MST file**

1  **Open** `PivotalPackagedClient.msi` in Orca.

2  Select the **“Transform”** | **“New Transform”** menu item.

3  Select the **Property** table.

4  Click the **Property** header to sort the rows in the **Property** table by their property names.

5  Find the property whose value needs to be changed.

   Note that properties whose values are empty/NULL are not listed, and will need to be added in step 7.

6  Edit the value of the property. Note the green highlighting of modified values. Edit the following properties to change the Instance definition:
To add a new property, select the "Tables" | "Add Row" menu item, specify the name and value of the property in the Add Row dialog box, and click OK. Add the following properties:

Table 11-5 Properties to be added

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV</td>
<td>Specify an environment name. It is recommended that this name should be the same as the Pivotal CRM System name in upper case.</td>
</tr>
<tr>
<td>ENVDESC</td>
<td>Specify a brief description of the environment.</td>
</tr>
<tr>
<td>SYSTEMNAME</td>
<td>Specify the name of the Pivotal CRM System defined in the Pivotal Administration Console.</td>
</tr>
<tr>
<td>PBSSERVER</td>
<td>Specify the name of the computer on which the Pivotal Business Server is installed.</td>
</tr>
<tr>
<td>RIGHTTOLEFT</td>
<td>Specify how the form layout should be displayed. The default value is set to false.</td>
</tr>
<tr>
<td>WINDESAUTHEN</td>
<td>Specify what authentication mode should be used. The default value is set to true.</td>
</tr>
</tbody>
</table>

Optional: Specify the location to download the Client Task dll files.

Note: When specifying the path for the Client Task dll download during Pivotal Packaged Client installation, ensure that the destination folder has Read/Write permissions, and if the network path is provided, ensure that the path is accessible and has Read/Write permissions.
Select the “Transform” | “Transform Properties” menu item to view and change any transform properties if needed. The
Select the “Transform” | “Generate Transform” menu item to generate the transform (.mst) file.
Close Orca.
Copy the transform (.mst) file to a network share containing the PivotalPackagedClient.msi file that is to be installed using Active Directory Group Policy. When creating the new Software Installation entry in the Group Policy for the .msi file, the transform file also needs to be specified on the Modifications tab. When the .msi file is being installed on client computers, the .mst file will automatically be applied to it.

**Portal Support for Mobile Computers**

For mobile computers, while creating a distribution point for the PivotalPackagedClient.msi file, modify the .msi file to add or modify properties and save it as a transform file (.mst).

To select the feature Portal Support for Mobiles for installation, select the Feature table and modify the values for Display and Level for the Pivotal_Client_Mobile_System feature, as shown in Table 11-7 on page 11-18.

**Table 11-6 User Local Profile Path**

<table>
<thead>
<tr>
<th>Directory Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USERLOCALPROFILEPATH</td>
<td>Specify the path to download the Client Task dll files. The default path is the Operating System Local User Profile path. If the administrator specifies the folder path while installing Pivotal Packaged Client, the Client Task dll files get downloaded a the path specified by the administrator. The Client Task dll file will be shared by all the users using Pivotal Client on that machine. If the administrator does not specify the folder path while installing Pivotal Packaged Client, individual folders are created in the Documents and Settings which contain all the Client Task dll files downloaded for the logged in users. <strong>Note:</strong> When specifying the path for the Client Task dll download during Pivotal Packaged Client installation, ensure that the destination folder has Read/Write permissions, and if the network path is provided, ensure that the path is accessible and has Read/Write permissions.</td>
</tr>
</tbody>
</table>

**Table 11-7 Properties to be edited to enable portal support on mobile computers**

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Display</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal_Client_Mobile_System</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Deploying Hot Fixes and New Releases

Patch (.msp) files are used to deploy updated or modified files such as Hot Fixes and new releases on client computers. In order to deploy a .msp file on client computers, ensure that you perform the following steps:

- Unpack the .msi file in administrative mode, using the /a switch. Deploy the extracted .msi file on client computers.

Uninstalling Pivotal Packaged Client

Silent Uninstallation

Pivotal Packaged Client can be uninstalled in silent mode using Active Directory Group Policy.

**Note:** MSI packages installed using Group Policy should not be manually removed from a client computer using Add or Remove Programs. Manually removing such programs will not properly remove the programs as the client computer is still subject to the Group Policy that requires the installation of those programs.

To uninstall Pivotal Packaged Client in silent mode

1. Log on to the distribution server as an administrator.
2. Click Start, point to Programs, and then click Administrative Tools.
3. Click Active Directory Users and Computers.
4. Open the Group Policy Object Editor.
5. Click Computer Configurations, Software Settings, and then click Software Installation.
6. Right-click the .MSI file that was installed, click All Tasks, and click Remove.
7. Select Immediately uninstall the software from users and computers.

Using Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007 to Deploy Pivotal Packaged Client

Pivotal Packaged Client can be deployed using Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007.
Perform the following steps to deploy Pivotal Packaged Client using Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007:

1. **Deploy Windows Installer 4.5**
2. **Deploy Pivotal CRM 6.0.10 Prerequisites or later**
3. **Deploy Pivotal Packaged Client**

### Deploying Windows Installer 4.5

Windows Installer 4.5 is required in order to install Pivotal CRM 6.0.10 Prerequisites or later. Refer to Microsoft documentation for information on how to deploy Windows Installer 4.5 on client computers.

### Deploying Pivotal CRM 6.0.10 Prerequisites or Later

Pivotal CRM 6.0.10 Prerequisites or later contains prerequisite installers. These prerequisites are required to run Pivotal Client and Outlook Integration, if you have set up Pivotal Client on Windows 2008 or Windows 7.

**Note:** The Pivotal CRM 6.0.10 Prerequisites or later installer automatically sets the Windows Presentation Foundation Font Cache 3.0.0.0 or 4.0.0.0 service Startup type to Automatic, and also sets the Microsoft .NET Framework NGEN v4.0.xxxxx service Startup type to Manual. This improves the startup performance of Pivotal Client.

Pivotal CRM 6.0.10 Prerequisites or later contains the following prerequisites:

1. `ISSetupPrerequisites\dotNetFx40_Full_x86_x64.exe` - Installs .NET Framework 4.
2. `ISSetupPrerequisites\o2007PIA.msi` - Installs Microsoft Office 2007 Primary Interop Assemblies. Install this if the client computer has Outlook 2007.
3. `ISSetupPrerequisites\o2010PIA.msi` - Installs Microsoft Office 2010 Primary Interop Assemblies. Install this if the client computer has Outlook 2010.
4. `ISSetupPrerequisites\vcredist_x86.exe` - Installs Microsoft Visual C++ 2010 Runtime Libraries.
5. `ISSetupPrerequisites\Vstor40_x64.exe` - Installs Microsoft Visual Studio Tools for Office Version 4.0 on 64-bit machines.
6. `ISSetupPrerequisites\Vstor40_x86.exe` - Installs Microsoft Visual Studio Tools for Office Version 4.0 on 32-bit machines.
7. `ISSetupPrerequisites\wic_x64_enu.exe` - Required to install .NET Framework 4 on 64-bit machines.
8. `ISSetupPrerequisites\wic_x86_enu.exe` - Required to install .NET Framework 4 on 32-bit machines.
Pivotal CRM 6.0.10 Prerequisites can be deployed by creating a packaged application in Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007 which can be distributed or “pushed” to client computers.

To deploy Pivotal CRM 6.0.10 Prerequisites or later

1. Extract the contents of the PREREQ6.0.10.zip file.
2. Create a package with setup.exe. Refer to Microsoft documentation for information about how to create a packaged application in Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007.
3. Distribute or “push” the package to client computers. Refer to Microsoft documentation for information about how to distribute a packaged application in Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007.

Deploying Pivotal Packaged Client

Pivotal Packaged Client consists of:
- Pivotal Client 6.0.13
- CDC Software Smart Client Framework 4.0
- Pivotal Integration 6.0.13 for Microsoft Outlook

To deploy Pivotal Packaged Client

1. Extract the contents of the PivotalPackagedClient6.0.13.zip file.
2. Unpack PivotalPackagedClient.msi in administrative mode, using the /a switch.
3. Distribute or “push” PivotalPackagedClient.msi to client computers, along with the transform (.mst) file, using Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007. For more information about creating a .mst file, see Creating a .mst file using Orca on page 11-16. Refer to Microsoft documentation for information about how to deploy applications on client computers.

Installing the Packaged Application for All Users

A packaged application can be installed for all users who log on to a client computer. While creating a package in Microsoft Systems Management Server 2003 or Microsoft System Center Configuration
Manager 2007, select the **Run with administrative rights** option on the **Environment** tab of the **Program Properties** dialog box for the package. *Figure 11-2* on page 11-22 displays the **Run with administrative rights** option selected in Microsoft Systems Management Server 2003. This option can also be selected in Microsoft System Center Configuration Manager 2007.

![Figure 11-2 Run with administrative rights option selected in Microsoft Systems Management Server 2003](image)

Selecting the **Run with administrative rights** option ensures that Pivotal Packaged Client is installed for all users when the package is deployed on client computers.

**Setting User Authentication Option**

For more information about setting user authentication option, see *Setting User Authentication Option* on page 11-15.

**Uninstalling Pivotal Packaged Client**

**Silent Uninstallation**

Pivotal Packaged Client can be uninstalled in silent mode using Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007.
To uninstall Pivotal Packaged Client in silent mode

1 Create a package with the following command line parameter specified:
   msiexec /x {F35B0422-2B2B-49F4-BFE3-35D8409DC9A3} /qn

2 Deploy the package on client computers. Refer to Microsoft documentation for information about how to distribute a packaged application in Microsoft Systems Management Server 2003 or Microsoft System Center Configuration Manager 2007.

Deploying Hot Fixes and New Releases

Patch (.msp) files are used to deploy updated or modified files such as Hot Fixes and new releases on client computers. In order to deploy a .msp file on client computers, ensure that you perform the following steps:

• Unpack the .msi file in administrative mode, using the /a switch. Deploy the extracted .msi file on client computers.
• Ensure that .msi files extracted from Hot Fixes and new releases are updated with the information provided in: [http://support.microsoft.com/default.aspx?scid=kb;EN-US;226936](http://support.microsoft.com/default.aspx?scid=kb;EN-US;226936).

Adding Multiple Environments

Follow the relevant procedure to add multiple environments:

• Add Multiple Environments in a Terminal Server or Citrix Server deployment
• Add Multiple Environments in a Microsoft Active Directory Group Policy or Microsoft Systems Management Server deployment

Adding Multiple Environments in a Terminal Server or Citrix Server Deployment

If you have more than one Pivotal CRM system in your deployment, configure the Citrix or Terminal server by adding environments, where each additional environment defined on the Citrix or Terminal server corresponds to a Pivotal CRM system with the same name.

For more information about environments, see Table 10-1 on page 10-7.

To add an environment

1 Administrator tasks
   a) Preliminary Steps
b) Define the additional environment on the Citrix or Terminal server and edit files listed in Table 11-8 on page 11-24.

Table 11-8 Files to edit on the Citrix or Terminal server

<table>
<thead>
<tr>
<th>File Name</th>
<th>Folder Location</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnvironmentInstances.xml</td>
<td>C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\</td>
<td>Edit and update the EnvironmentInstances.xml file to specify the instance that is configured for each environment. This file also stores the description for each environment. For more information, see To edit the EnvironmentInstances.xml file on page 11-25.</td>
</tr>
<tr>
<td>IafConfig.xml</td>
<td>C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe</td>
<td>For each environment, the IafConfig.xml file specifies the location of services on the middle tier servers that are used by client computers. For more information, see To edit the IafConfig.xml file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder on page 11-26</td>
</tr>
<tr>
<td>IafConfig.xml</td>
<td>C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration</td>
<td>For more information, see To edit the IafConfig.xml file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder on page 11-28</td>
</tr>
</tbody>
</table>

**Preliminary Steps**

Before you configure the Citrix or Terminal server, define and set up the additional Pivotal CRM system. For more information, see To set up Pivotal CRM systems on page 4-5.

**Note:** It is recommended that you specify Pivotal CRM system names in uppercase, without spaces.

**Defining the Additional Environment**

To define the environment on the Citrix or Terminal server, use an XML editor and edit the files listed in Table 11-8 on page 11-24. Add the definition of the environment (additional Pivotal CRM system) in each file. Each environment you define corresponds to a Pivotal CRM system name.
To edit the `EnvironmentInstances.xml` file

1. Log on to the Citrix or Terminal server as the administrator.

2. Open Windows Explorer and browse to the `
   C:\Program Files\CDC
   Software\PivotalClient\PivotalClient.PerMachine\`
   folder.

3. Open the `EnvironmentInstances.xml` file using an XML editor.

4. Locate the Environment id code for the existing Pivotal CRM system. For example, the lines for a Pivotal CRM system named `SYSTEMONE` are:

   ```xml
   <Environment id="SYSTEMONE" description="">
   <Instances>
     <Instance name="PivotalClient"/>
   </Instances>
   </Environment>
   ```

5. Copy the following lines of code and paste it below the `</Environment>` tag for the existing Pivotal CRM system.

   ```xml
   <Environment id="NEWSYSTEM" description="">
   <Instances>
     <Instance name="PivotalClient"/>
   </Instances>
   </Environment>
   ```

   where `NEWSYSTEM` is the name of the additional environment corresponding to the additional Pivotal CRM system with the same name.

   *Listing 11-1* on page 11-26 displays the lines of code\(^1\) for the environments defined for two Pivotal CRM systems that are named `SYSTEMONE` and `NEWSYSTEM`.

---

\(^1\) Sample code provided in this chapter may not reflect the up-to-date contents of each file.
Save and close the `EnvironmentInstances.xml` file.

To edit the `IafConfig.xml` files

1. To edit the `IafConfig.xml` file in the `C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe` folder
2. To edit the `IafConfig.xml` file in the `C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration` folder

To edit the `IafConfig.xml` file in the `C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe` folder

1. Log on to the Citrix or Terminal server as the administrator.
2. Browse to `C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe` folder.
3. Open the `IafConfig.xml` file with any XML editor.
4. Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system.

*Table 11-2* on page 11-27 shows the lines of code for an environment defined for a Pivotal CRM named `SYSTEMONE`. 

Listing 11-1 Edited `EnvironmentInstances.xml` file

```xml
<?xml version="1.0" encoding="utf-8"?>
<EnvironmentInstances>
  <Environment id="SYSTEMONE" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
  <Environment id="NEWSYSTEM" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
</EnvironmentInstances>
```
Listing 11-2 Lines of code in the iafConfig.xml file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder

```xml
<Environment id="SYSTEMONE" description="first system">
  <Metadata>
    <Services>
      </Service>
      </Service>
    </Services>
    <LocalizationSearchOrder>
      <Service name="Pivotal Language Dictionary MetaDataService Provider" />
      <Service name="Pivotal Resource String MetaDataService Provider" />
    </LocalizationSearchOrder>
  </Metadata>
  <CommandService>
    <CommandProviders>
      </CommandProvider>
    </CommandProviders>
  </CommandService>
  <NavigationService>
    <!-- no filters definition means that it'll use the simple aggregator.... -->
  </NavigationService>
  <PivotalCRM>
    <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
    <Help url="Pivotal_Client.chm" />
    <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm" />
    <Settings rightToLeft="false" windowsAuthentication="true" />
  </PivotalCRM>
</Environment>
```
5 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- <Environment id="SYSTEMONE" description="first system">
  with <Environment id="NEWSYSTEM" description="second system">
  where NEWSYSTEM is the name of the additional Pivotal CRM system.
- <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
  with <DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" />
  where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

Repeat step 5 for every additional Pivotal CRM system.

6 Save and close the IafConfig.xml file.

To edit the IafConfig.xml file in the C:\Program Files\CDCSoftware\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\OfficeIntegration folder

1 Log on to the Citrix or Terminal server as the administrator.

2 Browse to the C:\Program Files\CDCSoftware\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\OfficeIntegration folder.

3 Open the IafConfig.xml file with any XML editor.

4 Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system. Table 11-3 on page 11-29 shows the lines of code for an environment that is defined for a Pivotal CRM system named SYSTEMONE.
Listing 11-3 Lines of code in the IafConfig.xml file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine.exe\bin\Standard\Office Integration folder

```xml
<Environments>
  <Environment id="SYSTEMONE" description="first system">
    <Metadata>
      <Services>
      </Services>
      <LocalizationSearchOrder>
        <Service name="Pivotal Language Dictionary MetaDataService Provider" />
        <Service name="Pivotal Resource String MetaDataService Provider" />
      </LocalizationSearchOrder>
    </Metadata>
    <CommandService>
      <CommandProviders>
      </CommandProviders>
    </CommandService>
    <NavigationService>
      <!-- no filters definition means that it'll use the simple aggregator.... -->
      <Filters />
    </NavigationService>
    <PivotalCRM>
      <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
      <Help url="Pivotal_Client.chm" />
      <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm" />
      <Settings rightToLeft="false" windowsAuthentication="true" />
    </PivotalCRM>
  </Environment>
</Environments>
```
5 Copy and paste the lines of code selected in the previous step below the</Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- `<Environment id="SYSTEMONE" description="first system">`
  `with` `<Environment id="NEWSYSTEM" description="second system">`
  where NEWSYSTEM is the name of the additional Pivotal CRM system.

- `<DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS1" />
  with` `<DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" />
  where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

6 Repeat step 5 for every additional Pivotal CRM system.

7 Save and close the IafConfig.xml file.

The IafConfig.xml files are edited.

Additional Customization Options

This section details a few additional customization options. You can change:

- the name of the Pivotal CRM shortcut displayed in the Start - Programs menu.
- the Start - Programs menu folder for the Pivotal CRM shortcut.
- the Pivotal CRM icon displayed in the shortcut menu.

To change the name of the Pivotal CRM shortcut, the shortcut menu folder, and the Pivotal CRM icon

1 Log on to the Citrix or Terminal server as the administrator.

2 Open Windows Explorer.

3 Browse to the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder. Open the Instance.xml file with any XML editor.

4 Change the attributes of the <InstanceDef> tag as listed in Table 11-9 on page 11-31.

![Warning! Do not change the value of the name="PivotalClient" and the exePackage="Scc" attributes.]
Table 11-9 Attributes of the <InstanceDef> tag

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the text to be displayed in the Pivotal CRM login window. You can also change the text specific to a localized language.</td>
</tr>
<tr>
<td>startMenuText=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the text to be displayed in the Start menu. This change will also be reflected in the Uninstall Pivotal CRM shortcut menu. You can also change the text specific to a localized language.</td>
</tr>
<tr>
<td>startMenuFolder=&quot;CDC Software/Pivotal CRM&quot;</td>
<td>Replace CDC Software/Pivotal CRM with the name of the folder. For example, if you want the Pivotal CRM shortcut to appear in the MY COMPANY folder, change the value of the attribute to startMenuFolder=&quot;MY COMPANY&quot;</td>
</tr>
<tr>
<td>icon=&quot;Resources/relapp.ico&quot;</td>
<td>Replace the relapp.ico file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\Resources folder with the icon you want displayed.</td>
</tr>
<tr>
<td>startMenuDescription=&quot;Pivotal CRM&quot;</td>
<td>Replace Pivotal CRM with the text to be displayed in the tool tip for the shortcut. The text is also displayed in the Comment text box on the Shortcut tab of the Properties dialog box for the shortcut.</td>
</tr>
<tr>
<td>userLocalProfilePath</td>
<td>Specify the path to download the Client Task dll files. The default path is the Operating System Local User Profile path.</td>
</tr>
</tbody>
</table>

5   Save the Instance.xml file.

Adding Multiple Environments in a Microsoft Active Directory Group Policy or Microsoft Systems Management Server Deployment

If you have more than one Pivotal CRM system in your deployment, you can add environments, where each additional environment defined corresponds to a Pivotal CRM system with the same name.

For more information about environments, see Table 10-1 on page 10-7.

To add an environment

1   Administrator tasks
    a) Preliminary Steps
    b) Define the additional environment and edit files listed in Table 11-10 on page 11-32.
### Preliminary Steps

Before defining a new environment, define and set up the additional Pivotal CRM system. For more information on how to setup a Pivotal CRM System, see *To set up Pivotal CRM systems* on page 4-5.

#### Note:
It is recommended that you specify Pivotal CRM system names in uppercase, without spaces.
Defining the Additional Environment

Perform the following steps to add an additional environment in a Pivotal Packaged Client Deployment:

1. Log on to a client computer on which Pivotal Packaged Client has been deployed, and make a copy of the following files:
   - Instance.xml
     Default location of Instance.xml is \Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe.
   - EnvironmentInstances.xml
     Default location of EnvironmentInstances.xml is C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\.
   - IafConfig.xml
     This is the configuration file for Pivotal Client. Default location of IafConfig.xml is C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe.
   - IafConfig.xml
     This is the configuration file for Pivotal Integration 6.0 for Microsoft Outlook. Default location of IafConfig.xml is C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder

2. Modify each file by following the appropriate procedure:
   - Instance.xml
   - EnvironmentInstances.xml
   - IafConfig.xml in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder
   - IafConfig.xml in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder

3. Distribute the modified files to client computers.

Modifying Instance.xml

Instance.xml contains branding text displayed on the login screen of Pivotal Client.

The default location of Instance.xml on the client computer is \Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe.

To modify Instance.xml

1. Open the copy of Instance.xml that was copied from the client computer.
2. Customize the values in Table 11-11 on page 11-34 to alter the default branding text.
The `EnvironmentInstances.xml` file stores information about installed applications and defines the instances available for each environment. Edit this file to define multiple environments for various Pivotal CRM systems.

To edit the `EnvironmentInstances.xml` file

1. Open the copy of `EnvironmentInstances.xml` file that was copied from the client computer.

2. Locate the `Environment id` code for the existing Pivotal CRM system. For example, the lines for a Pivotal CRM system named `SYSTEMONE` are:

   ```xml
   <Environment id="SYSTEMONE" description="">
   <Instances>
     <Instance name="PivotalClient"/>
   </Instances>
   </Environment>
   ```

3. Copy the following lines of code and paste it below the `</Environment>` tag for the existing Pivotal CRM system.

   ```xml
   <Environment id="NEWSYSTEM" description="">
   <Instances>
     <Instance name="PivotalClient"/>
   </Instances>
   </Environment>
   ```

---

### Table 11-11 Customizable values in Instance.xml

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>text=&quot;Pivotal CRM&quot;</code></td>
<td>Replace Pivotal CRM with the text to be displayed in the Pivotal CRM login window. You can also change the text specific to a localized language.</td>
</tr>
<tr>
<td><code>startMenuText=&quot;Pivotal CRM&quot;</code></td>
<td>Replace Pivotal CRM with the text to be displayed in the Start menu. This change will also be reflected in the Uninstall Pivotal CRM shortcut menu. You can also change the text specific to a localized language.</td>
</tr>
<tr>
<td><code>startMenuFolder=&quot;CDC Software/Pivotal CRM&quot;</code></td>
<td>Replace CDC Software/Pivotal CRM with the name of the folder. For example, if you want the Pivotal CRM shortcut to appear in the MY COMPANY folder, change the value of the attribute to <code>startMenuFolder=&quot;MY COMPANY&quot;</code></td>
</tr>
<tr>
<td><code>icon=&quot;Resources/relapp.ico&quot;</code></td>
<td>Replace the relapp.ico file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\Resources folder with the icon you want displayed.</td>
</tr>
<tr>
<td><code>startMenuDescription=&quot;Pivotal CRM&quot;</code></td>
<td>Replace Pivotal CRM with the text to be displayed in the tool tip for the shortcut. The text is also displayed in the Comment text box on the Shortcut tab of the Properties dialog box for the shortcut.</td>
</tr>
<tr>
<td><code>userLocalProfilePath</code></td>
<td>Specify the path to download the Client Task dll files. The default path is the Operating System Local User Profile path.</td>
</tr>
</tbody>
</table>
where NEWSYSTEM is the name of the additional environment corresponding to the additional Pivotal CRM system with the same name.

Listing 11-1 on page 11-26 displays the lines of code\(^1\) for the environments defined for two Pivotal CRM systems that are named SYSTEMONE and NEWSYSTEM.

Listing 11-4 Edited EnvironmentInstances.xml file

```xml
<?xml version="1.0" encoding="utf-8"?>
<EnvironmentInstances>
  <Environment id="SYSTEMONE" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
  <Environment id="NEWSYSTEM" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
</EnvironmentInstances>
```

4 Save and close the EnvironmentInstances.xml file.

Modifying IafConfig.xml in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe folder

For each environment, the IafConfig.xml file specifies the location of services on the middle tier servers that are used by client computers.

To modify IafConfig.xml

1 Open the copy of IafConfig.xml that was copied from the client computer.

2 Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system.

Table 11-2 on page 11-27 shows the lines of code for an environment defined for a Pivotal CRM named SYSTEMONE.

---

1. Sample code provided in this chapter may not reflect the up-to-date contents of each file.
3 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- `<Environment id="SYSTEMONE" description="first system">`
  with `<Environment id="NEWSYSTEM" description="second system">`
  where NEWSYSTEM is the name of the additional Pivotal CRM system.

- `<DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />`
  with `<DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" />`
  where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

Repeat step 3 for every additional Pivotal CRM system.

4 Save and close the IafConfig.xml file.

---

Modifying IafConfig.xml in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder

This version of IafConfig.xml contains configuration settings for Pivotal Integration 6.0 for Microsoft Office.

To modify IafConfig.xml

1 Open the copy of IafConfig.xml that was copied from the client computer.

2 Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system. Listing 11-5 on page 11-37 shows the lines of code for an environment that is defined for a Pivotal CRM system named SYSTEMONE.
Listing 11-5 Lines of code in the lafConfig.xml file in the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine.exe\bin\Standard\Office Integration folder

```xml
<Environments>
  <Environment id="SYSTEMONE" description="first system">
    <Metadata>
      <Services>
      </Services>
      <LocalizationSearchOrder>
        <Service name="Pivotal Language Dictionary MetaDataService Provider" />  
        <Service name="Pivotal Resource String MetaDataService Provider" />  
      </LocalizationSearchOrder>
    </Metadata>
    <CommandService>
      <CommandProviders>
      </CommandProviders>
    </CommandService>
    <NavigationService>
      <!-- no filters definition means that it'll use the simple aggregator.... -->
      <Filters />
    </NavigationService>
    <PivotalCRM>
      <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />  
      <Help url="Pivotal_Client.chm" />
      <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm" />
      <Settings rightToLeft="false" windowsAuthentication="true" />  
    </PivotalCRM>
  </Environment>
</Environments>
```
3 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- `<Environment id="SYSTEMONE" description="first system">` with `<Environment id="NEWSYSTEM" description="second system">` where NEWSYSTEM is the name of the additional Pivotal CRM system.

- `<DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS1" />` with `<DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" />` where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

4 Repeat step 3 for every additional Pivotal CRM system.

5 Save and close the IafConfig.xml file.

Distributing Modified Files

Distribute the modified files to client computers by performing the following steps:

1 Build a Microsoft Windows Installer (.msi) file containing the modified files. The installer should be capable of installing the files in the correct folder location on client computers.

2 Distribute or “push” the installer to client computers by using Microsoft Active Directory Group Policy or Microsoft Systems Management Server.
12

Installing and Working with Pivotal Portal Resources
Overview

The Pivotal CRM platform 6.0.13 provides functionality that leverages and integrates with Microsoft® Windows SharePoint.

Using Windows SharePoint Services 3.0, Microsoft Office SharePoint Server (MOSS) 2007, Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010, you can design and create Web pages for a SharePoint Web application site collection. Pivotal Portal Resources 6.0.13 allows you to design a Web page with Pivotal Web parts. End users can then view and directly access the following from within the Pivotal Client user interface:

- Web pages
- RSS feeds
- Graphs created with Pivotal CRM data
- Searches with Pivotal CRM data

Prerequisites

In addition to setting up and deploying Pivotal CRM systems, you need to be familiar with aspects of SharePoint central administration. A few of the tasks you need to be familiar with are:

- Creating and managing SharePoint Web applications
- Creating and managing site collections
- Creating libraries, Web pages, Web Part pages
- Adding, managing, and working with SharePoint Web Part page content
- Managing site settings

System Requirements

If you are using Windows SharePoint Services 3.0 or Microsoft Office SharePoint Server (MOSS) 2007, you require Windows Server 2003 Service Pack 2 or Windows Server 2008 Service Pack 2.

If you are using Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010 as the SharePoint Server, then use only 64-bit version of Windows Server 2008 Service Pack 2 or Windows Server 2008 R2 Service Pack 1.
Software Requirements

Install the following software on the SharePoint server:

1. Any one of the following:
   - Windows SharePoint Services 3.0 Service Pack 3
   - Standard or Enterprise Edition of Office SharePoint Server 2007 Service Pack 3
   - Microsoft SharePoint Foundation 2010 Service Pack 1
   - Standard or Enterprise Edition of Microsoft SharePoint Server 2010 Service Pack 1

   Windows SharePoint Services 3.0 is available as a free download from Microsoft. Also, Microsoft SharePoint Foundation 2010 is a part of Windows Server 2008 R2 and is available as a free download with Windows Server 2008 R2.

   **Note:** For Office SharePoint Server 2007

   With Pivotal CRM 6.0.13 there is one SharePoint template for both the Standard and Enterprise versions of Office SharePoint Server 2007. Using one template for both the Standard and the Enterprise editions, eases the maintenance and upgrades of Pivotal CRM 6.0.13 Portal Resources. A set of features which are only a part of the SharePoint Enterprise template have been disabled. The set of features disabled do not impact the Pivotal CRM 6.0.13 Portal Resource deployment and functioning. However, to use these features in SharePoint Enterprise version, enable the features explicitly. For more information refer to Knowlegde Base Article # 11717.

   Upgrading to Pivotal CRM 6.0.13 does not break your existing Portal Pages, but when you create new Portal Pages after installing Pivotal CRM 6.0.13, the Page will be created using the new template.

2. Pivotal Portal Resources 6.0.13


Recommendations and Best Practices

- For performance and scalability purposes maintain separate servers for Microsoft® Windows SharePoint setup, Pivotal Business Server and deployment.
- Do not run the Pivotal Portal Resources installation program from a network location.
- For performance purposes, maintain a separate SharePoint server for the satellite environment.
- Create a new Web application. This is preferred to extending an existing Web application.
Working with Pivotal Portal Pages

To install, set up, and work with Pivotal Portal pages:

1  Install, set up, and configure the SharePoint server
2  Work with Portal Pages

Warning!  The SharePoint administrator should never personalize the default Portal pages in Pivotal Client. Otherwise, the default Portal pages do not appear in the SharePoint server for the administrator to customize the default.

Installing, Setting Up, and Configuring the SharePoint Server

This section details the steps required to install, set up and work with Pivotal Portal Resources on the SharePoint server:

1  Install any one of the following:
   • Windows SharePoint Services 3.0 Service Pack 3
   • Standard or Enterprise Edition of Office SharePoint Server 2007 Service Pack 3
   • Microsoft SharePoint Foundation 2010 Service Pack 1
   • Standard or Enterprise Edition of Microsoft SharePoint Server 2010 Service Pack 1
2  Use SharePoint Products and Technologies Configuration Wizard.
3  Install Pivotal Portal Resources 6.0.13.
4  Create a Web Application.
5  Create a site collection.
6  Edit the web.config file.
7  Grant security permissions in Pivotal CRM.
8  Create document library if required.
9  Populate the document library’s gallery with Web Parts.
10 Create Web Part Pages.
11 Grant site permissions.

Note:  Create a pre-defined Web part gallery. The predefined Web part gallery will enable the end users to select the web parts they want to use easily. Also, assign Portal Visibility permissions to the required searches. This ensures that the end users only see the required searches.
Installing Microsoft SharePoint

Copy the installation files on to the SharePoint computer and run the installation program. For information about Windows SharePoint Services 3.0 Service Pack 3, Standard or Enterprise Edition of Office SharePoint Server 2007 Service Pack 3, Microsoft SharePoint Foundation 2010 Service Pack 1, or Standard or Enterprise Edition of Microsoft SharePoint Server 2010 Service Pack 1, see Microsoft documentation.

Using SharePoint Products and Technologies Configuration Wizard

Before you create and configure the SharePoint portal, run the SharePoint Products and Technologies Configuration Wizard on the SharePoint computer.

To run the SharePoint Products and Technologies Configuration Wizard

>> For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, log on to the SharePoint computer as the administrator. Click Start, point to Programs, point to Administrative Tools, and then click SharePoint Products and Technologies Configuration Wizard. Follow the instructions in the wizard.

For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click Start, point to Programs, click Microsoft SharePoint 2010 Products, and then select SharePoint 2010 Products Configuration Wizard.

The default home page of the SharePoint portal opens in a browser window with the following URL:

http://<computer name>/default.aspx

where computer name is the name of the SharePoint computer. Close the browser window before you install Pivotal Portal Resources 6.0.13.

Installing Pivotal Portal Resources 6.0.13

The installation file for Pivotal Portal Resources is available in the PortalResources6.0.13.zip file. Download the PortalResources6.0.13.zip file from the Product Downloads area in the Aptean Customer or Partner Portals. For more information about the contents of the PortalResources6.0.13.zip file see Appendix A, Contents of Installation Zip Files.

Note: Install Pivotal Portal Resources on the SharePoint computer only after you install any of the supported SharePoint Servers versions.
Installing and Working with Pivotal Portal Resources

To install Pivotal Portal Resources 6.0.13

1 Log on to the SharePoint computer as the administrator.
2 Extract the contents of the PortalResources6.0.13.zip file to any folder on the SharePoint computer.
3 Browse to the folder with the contents of the PortalResources6.0.13.zip file and double-click the setup.exe file if you are using a 32-bit operating system or setup.exe file in the 64-bit folder if you are using a 64-bit operating system.
4 In the Pivotal Portal Resources 6.0.13 InstallShield Wizard click Next.
5 Read and accept the terms of the license agreement, and click Next.
6 In the Pivotal Portal Resources Configuration box:
   a) Type the name of the Pivotal CRM system in the Pivotal System Name box.
      Type the name of the Business Server in the Pivotal Business Server Name box. Type the name in the format http://<computer name>
      where <computer name> is the name of the Business Server. The Port Number can also be added to the Pivotal Business Server name. Type the name in the following format:
      http<s>://<computer name>:<port number>

   Note: The server name and the system name settings are stored in a web.config file of the Web application.

7 Click Install.
8 Click Finish when the installation is complete.

Pivotal Portal Resources 6.0.13 is installed.

Creating a Web Application

Use the SharePoint Central Administration Tool to create a Web application.

Note: It is recommended that you create a new Web application, rather than extending an existing Web application.

To create a Web application

1 Log on to the SharePoint computer as the administrator.
2 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click Start, point to
Installing and Working with Pivotal Portal Resources

Programs, point to Administrative Tools, and then click SharePoint 3.0 Central Administration.

For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click Start, point to Programs, click Microsoft SharePoint 2010 products and then select SharePoint 2010 Central Administration.

3 Click the Application Management tab.

4 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, on the Application Management page, click Create or extend Web application in the SharePoint Web Application Management section.

For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, on the Application Management page, click Manage Web Applications.

5 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, in the Create or Extend Web Application page, click Create a new Web application.

For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, in the Web Applications Management page, click New.

6 In the Create New Web Application page, accept the default settings or specify the settings as per your requirement. Also:

- Note the port number for future reference.
- Select Predefined as the security account for the application pool.
- Click OK.

The SharePoint Web application is created and the Application Created page is displayed.

Creating a Site Collection

After you create the Web application, you need to create a site collection or a top-level Web site to host all the Portal pages.

To create a site collection

1 Log on to the SharePoint computer as the administrator.

2 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click Start, point to Programs, point to Administrative Tools, and then click SharePoint 3.0 Central Administration.

For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click Start, point to Programs, click Microsoft SharePoint 2010 products and then select SharePoint 2010 Central Administration.

3 Click the Application Management tab in the top navigation bar.
4 On the Application Management page, click Create site collection in the SharePoint Site Management section.

5 On the Create Site Collection page:
   a) From the Web Application drop-down, select the Web application you created in Creating a Web Application on page 12-6.
   b) Provide a title and description for the site.
   c) Specify the URL for the site.
   d) In the Template Selection section, choose a template to define the look of the site.
      - Click the Pivotal CRM tab in the Select a template list.
      - Select the Pivotal Blank Site or Pivotal Team Site templates. Use the Pivotal Team Site template if you want a pre-defined, out-of-the-box template for your site.
   e) In the Primary Site Collection Administrator section, type the user name of administrator for the site collection in the User name box. The account of the user need not be in any of the Pivotal CRM security groups, however, the user must belong to the Administrators group on the SharePoint computer.
   f) Click OK.

The site is created and the Top-Level Site Successfully Created page is displayed. The URL for the site is also displayed. Copy the URL for the site and paste the URL in a text file for reference.

Editing the web.config File

If the Business Server and SharePoint Services are not installed on the same computer, edit the web.config file and provide the user name, domain, and password of the domain user account used for impersonation.

To edit the web.config file to specify user details

1 Log on to the SharePoint computer as the administrator.
2 Open Windows Explorer, and navigate to the following folder
   ..\Inetpub\wwwroot\wss\VirtualDirectories\<Port Number>
   where <Port Number> is the port number for the Web application created in Creating a Web Application on page 12-6.
3 Open the web.config file using a text editor.
4 Locate the following line:
   <pvtlImpersonate username="" domain="" password="" />
5 Type the user name, domain, and password of a valid domain user account. For example:
   <pvtlImpersonate username="john" domain="cdc" password="pasw3210rd" />
6 If you do not wish to display currency symbol for the currency values shown in the funnel charts, locate the following line and set the value to "0".
   <add key="ShowCurrencySymbol" value="1" />

7 Save the change and exit the text editor.

The user name, domain, and password of the domain user account details used for impersonation are provided.

You can also encrypt the details in the web.config file using the RSA or DPAPI.

By default, the ASP.NET applications are run under the NT AUTHORITY\Network Service account. When you access encrypted configuration sections using DPAPI with the user store, ensure that your application is running with the same user identity as the identity of the account you used to encrypt the data. Using the DataProtectionConfigurationProvider and DPAPI with the user store requires a small amount of additional configuration in the Web.config file.

If you want to deploy the same encrypted configuration file on multiple servers in a Web farm, you should use the RSAProtectedConfigurationProvider. This provider makes it easy for you to encrypt the data on one server computer and then export the RSA private key needed to decrypt the data. You can then deploy the configuration file and the exported key to the target servers, and then re-import the keys.

To encrypt the details in the web.config file using RSA

1 Open a DOS command-prompt window, and change directory to the location of the aspnet_regiis.exe file.
   The aspnet_regiis.exe file is located in the ..\Windows\Microsoft.NET\Framework\<Version Number> folder where <Version Number> is the version number of the .NET Framework, 2.0 folder.

2 At the command-prompt, type
   Aspnet_regiis.exe -pef "pvtlImpersonate"
   <drive>:\Inetpub\wwwroot\wss\VirtualDirectories\<Port Number>
   where <Port Number> is the port number for the Web application created in Creating a Web Application on page 12-6.

To encrypt the details in the web.config file using DPAPI

1 Open a DOS command-prompt window, and change directory to the location of the aspnet_regiis.exe file.
   The aspnet_regiis.exe file is located in the ..\Windows\Microsoft.NET\Framework\<Version Number> folder where
Installing and Working with Pivotal Portal Resources

<Version Number> is the version number of the .NET Framework, 2.0 folder.

2 Add and configure a protected configuration provider to use the user store. To do this, add the following to the <system.WebServer> section in the web.config file.

```xml
<configProtectedData>
<providers>
<add useMachineProtection="false" keyEntropy="" name="MyUserDataProtectionConfigurationProvider" type="System.Configuration.DpapiProtectedConfigurationProvider, System.Configuration, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a" />
</providers>
</configProtectedData>
```

The web.config file is located at `..\Inetpub\wwwroot\wss\VirtualDirectories\<PortNumber>`, where the `<PortNumber>` is the port number for the web application created in Creating a Web Application on page 12-6.

**Note:** Ensure to set the useMachineProtection to False. This instructs the provider to use the user store. You must also use a unique provider name to prevent errors.

3 At the command-prompt, type:

```
aspnet_regiis -pef "pvtlImpersonate"
<drive>:\Inetpub\wwwroot\wss\VirtualDirectories\<PortNumber> -prov "DataProtectionConfigurationProvider"
```

When encryption of the configuration section is complete, a message is displayed.

**Note:** To decrypt the configuration section, type the following command:

```
Aspnet_regiis.exe -pdf "pvtlImpersonate"
<drive>:\Inetpub\wwwroot\wss\VirtualDirectories\<PortNumber>
```

where `<Port Number>` is the port number for the Web application created in Creating a Web Application on page 12-6. Also, for more information on how set DPAPI, see Microsoft documentation.

Granting Security Permissions in Pivotal CRM

For the Pivotal CRM system, create a new security group for portal administrators. You can also use the Portal Administrator group that is available with the out-of-the-box security groups of Pivotal CMS 6.0.5. Add the domain user account used for impersonation to the newly created security group or to the out-of-the-box Portal Administrator security group. For more information about creating and working with security groups, see the Pivotal Toolkit 6.0.13 Toolkit Guide.

Also grant the Allow XML Impersonation right to the Client connection type.
To grant security permissions

1. Add the domain user to the Pivotal CRM system
2. Add the domain user to the Portal Administrator security group
3. Allow XML Impersonation

Adding the Domain User to the Pivotal CRM system

Add the domain user account used for impersonation to the Pivotal CRM system. The domain user account used for impersonation is the user specified in Editing the web.config File on page 12-8. For more information about adding a user to the Pivotal CRM system, see To add users to the Pivotal CRM system on page 10-41.

Adding the Domain User to the Portal Administrator Security Group

Add the domain user account used for impersonation to the Portal Administrator security group in the Pivotal CRM system. If you have created a new security group for Portal Administrators, add the domain user account used for impersonation to this group. For more information about adding the domain user to a security group, see To grant security permissions to users on page 10-42.

Allowing XML Impersonation

Grant Allow XML Impersonation rights to the Client connection type of the security group you created for portal administration, or to the out-of-the-box Portal Administrator security group.

To allow XML impersonation

1. Log on to the computer where Pivotal Toolkit 6.0.13 is installed.
2. Click Start, point to Programs, point to CDC Software. Point to Pivotal CRM and then select Pivotal Toolkit.
3. Click the Security Business Object and then select Manage Security.
4. In the Security window, expand the security group you created, or expand the Portal Administrator group, and click the Client connection type.
5. In the Client Permissions window for the security group, click the User Impersonation tab.
6. Double-click in the Allow XML Impersonation area.
7. Click OK.

The Allow XML Impersonation right is granted to the Client connection type of the specific security group.
Assigning Security Permissions for Mobile Users

Assign security permissions for Mobile users to ensure that Portal Pages are available for Mobile Clients. Ensure to add the mobile user to the Pivotal Portal Members Group in SharePoint before assigning the security permissions.

To Assign Security Permissions

1. Log on with administrator rights to the Customization System.
2. On the eTab, click Security, and then click Manage Security.
3. In the tree pane of the Security window, expand the desired security group, for example Base CMS Features and click the Client connection type.
4. In the Security Permissions window, click the Tables tab.
5. Select Personalized_Portal_Page and assign the following security permissions:
   - Create
   - Read
   - Modify
   - Delete
6. In the Security Permissions window, click the Queries tab.
8. In the Security Permissions window, click the Search Results Lists tab.
9. Double-click Personalized_Portal_Page and assign the following security permissions for Personalized Portal Page:
   - Scriptable
   - Default
10. In the Security Permissions window, click the Active Forms tab.
11. Double-click Personalized_Portal_Page and assign the following security permissions for Personalized Portal Page:
   - Scriptable
   - Default
12. In the tree pane of the Security window, expand the desired security group, for example Base CMS Features and click the Mobile connection type.
13. In the Security Permissions window, click the Tables tab.
15. In the Security Permissions window, click the Queries tab.
16. Select **My Portal Page for Portal?** and assign the **Run** security permission.

### Creating the Document Library

Create a document library if you selected the **Pivotal Blank Site** template in *To create a site collection* on page 12-7.

#### To create a document library

1. Log on to the SharePoint computer as the administrator.
2. Open Internet Explorer.
3. In the **Address** bar, type the URL of the SharePoint site you created and press ENTER.
4. For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click the **Site Actions** menu and then click **Create**.
   
   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click **Site Actions**, and then select **More Options**.
   
5. For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click **Document Library** under **Libraries** on the **Create** page.
   
   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click **Document Library**, and then:
   - Type a name and description for the links and headings that will appear throughout the site.
   - Select the navigation and document version history.
   - Select **Web Part Page** as the document template for the document library.
6. Click **Create**.

The document library is created.

### Populating the Document Library’s Gallery with Pivotal Web Parts

Populate the document library’s gallery with Web Parts. You can use the Web Parts provided by Pivotal, or use the ones provided by SharePoint Services. The Pivotal Web Parts are:

- Pivotal Graph Web Part
- Pivotal RSS Web Part
- Pivotal Search Web Part
- Pivotal Page Viewer Web Part
**To populate a document library’s gallery with Web Parts**

1. Log on to the SharePoint computer as the administrator.
2. Open Internet Explorer.
3. In the **Address** bar, type the URL of the SharePoint site you created and press ENTER.
4. Click the **Site Actions** menu and then click **Site Settings**.
5. For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, in the **Site Settings** page, click **Web Parts** in the **Galleries** column. In the **Web Part Gallery** page, click **New**.
   
   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, select **Web parts** from **Galleries**. Select **Documents** from **Library Tools** menu, and then click **New Document**.

6. In the **Web Part Gallery: New Web Parts** page, select the Web Part Type Names listed in *Table 12-1* on page 12-14:

<table>
<thead>
<tr>
<th>Web Part Type Name</th>
<th>Type of Web Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>CdcSoftware.Pivotal.Engine.UI.WebParts.PivotalGraphWebPart</td>
<td>Pivotal Graph Web Part</td>
</tr>
</tbody>
</table>

   **Note:** In addition to the Web Part Names listed in *Table 12-1* on page 12-14, you can also select the other listed Web Parts.

7. Click **Populate Gallery**.

   The **Web Part Gallery** page is displayed with all the different selected Web Parts.

**Creating Web Part Pages**

You can add Web parts to a Web page using Web parts provided by SharePoint Services or Pivotal Portal Resources 6.0.13. A Web Part Page is made of many Web Parts. Each Web Part has a title bar, a frame and a content area.

**To create a Web Part Page**

1. Log on to the SharePoint computer as the administrator.
2. Open Internet Explorer.
3 In the Address bar, type the URL of the SharePoint site you created and press ENTER.

4 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click the Site Actions menu and then click Create.

   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, click Site Actions, and then click More Options.

5 On the Create page, click Web Part Page.

6 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, in the New Web Part Page:
   • Type a file name for the Web Part Page.
   • Select a layout for the Web Part Page.
   • Select the document library in the Document Library. Ensure to select the document library you created in To create a document library on page 12-13.

   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, select Shared Documents from the document library and specify the details.

7 Click Create.

8 The Web Part Page is displayed in the edit mode with the different Web Part zones, each with a Add a Web Part toolbar.

9 Click the Add a Web Part toolbar.

10 For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, in the Add Web Parts - Webpage Dialog dialog box, select the Pivotal Web Parts to add from the All Web Parts area.

   For Microsoft SharePoint Foundation 2010 or Standard or Enterprise Edition of Microsoft SharePoint Server 2010, select Miscellaneous from the Categories navigation bar, and then select Web Part.

11 Click Add.

   The Pivotal Web Part is added. Click tool pane to specify the link for each Web part. For more information about specifying the link for each web part, see Working with Pivotal Web Parts on page 12-15.

**Working with Pivotal Web Parts**

You can do the following for each added Pivotal Web Part:

- Remove a Web Part from the current view
- Delete a Web Part permanently from a Web page
- Rearrange Web Parts on a Web page
- Export and import Web Parts
For more information about working with Web Parts, see Microsoft documentation.

Click **tool pane** on each Pivotal Web Part to specify the graph, RSS feed, search, or URL.

**To specify details for Pivotal Graph Web Parts**

1. Click **tool pane** on the Pivotal Graph Web Part Editor box.
2. In the Graph Editor:
   - Select the graph and the search from the list of available graphs and searches.
   - Specify the width and the height of the graph.
   - Specify the Appearance, Layout, and Advanced details.
3. Click **OK**.

The graph is displayed in the Pivotal Graph Web Part.

**To specify details for Pivotal RSS Web Parts**

1. Click **tool pane** on the Pivotal RSS Web Part Editor box.
2. In the RSS Editor:
   - Select the RSS feed from the list of RSS feeds.
   - If you select **Your RSS feed**, then specify the URL of the RSS feed.
   - Specify the number of feed items to be displayed.
   - Specify the Appearance, Layout, and Advanced details.
3. Click **OK**.

The RSS feed items are displayed in the Pivotal RSS Web Part.

**To specify details for Pivotal Search Web Parts**

1. Click **tool pane** in the Pivotal Search Web Part box.
2. In the **Search Editor** box:
   - For the search results, select the number of records that should be displayed per page.
   - Select the table to be searched.
   - Select the name of the search.
   - Specify the search parameters if any.
   - Specify the Appearance, Layout, and Advanced details.
3. Click **OK**.

The results of the search are displayed in the Pivotal Search Web Part.

**Note:** For Portal Resources, on clicking the Foreign Key link, the default form is always displayed. The customizer cannot write notifications to open a different form.
To specify details for Pivotal URL Web Parts

1. Click tool pane in the Pivotal URL Web Part box.
2. In the Page Viewer Editor box:
   • Specify the URL of the Web page to be displayed.
   • Specify the Appearance, Layout, and Advanced details.
3. Click OK.

The Web page is displayed in the Pivotal URL Web Part.

After you have created the Web Part page and the Web Parts, grant site permissions.

Granting Site Permissions

In addition to granting users security permissions detailed in Granting Security Permissions in Pivotal CRM on page 12-10, add users to the different SharePoint security groups:

- Owners
- Members
- Visitors

Each group grants users different security permission levels. Table 12-2 on page 12-17 lists a few of the various security permission levels.

Table 12-2 Security Permissions Levels

<table>
<thead>
<tr>
<th>Permission Level</th>
<th>Description</th>
</tr>
</thead>
</table>
| Full Control     | This permission level is granted to users who belong to the Owners SharePoint group for each site. This group has all permissions.  
                   | **Note:** To restore Portal pages, grant the full control permission level to the PCS user. |
Installing and Working with Pivotal Portal Resources

For more information about all the available security permission levels and security groups, see Microsoft documentation.

To add users to a SharePoint Security Group for Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007

1. Log on to the SharePoint computer as the administrator.
2. Open Internet Explorer.
3. In the Address bar, type the URL of the SharePoint site you created and press ENTER.
4. For Windows SharePoint Services 3.0 or Standard or Enterprise Edition of Office SharePoint Server 2007, click the Site Actions menu and then click Site Settings.
5. Click People and groups under the Users and Permissions column.
6. In the Quick Launch area on the People and Groups page, click Groups.
7. On the People and Groups: All Groups page, click the link for the group to which you want to add users.
8. Click New, and then click Add Users.
9. On the Add Users: page for the SharePoint site:
   - Add the names of the users
   - Grant the required permissions.
10. Click OK.

Table 12-2 Security Permissions Levels

<table>
<thead>
<tr>
<th>Permission Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Users who are granted design permissions can create lists and document libraries, edit pages and apply themes, borders, and style sheets in the Web site. You need not assign users who are granted design permissions to any SharePoint group for the SharePoint site.</td>
</tr>
<tr>
<td>Contribute</td>
<td>Users who are granted Contribute permissions can add, edit, and delete items in existing lists and document libraries. Assign users who are granted Contribute permissions to the Members SharePoint group for the SharePoint site.</td>
</tr>
<tr>
<td>Read</td>
<td>Users who are granted Read permissions belong to the Visitors SharePoint group and have only read-only access. They can only view the created Web pages. <strong>Note:</strong> If you do not want users to modify or personalize Portal pages, add them to the Visitors SharePoint group.</td>
</tr>
</tbody>
</table>

For more information about all the available security permission levels and security groups, see Microsoft documentation.
The required permissions for the SharePoint site are granted to the users.

**To add users to a SharePoint Security Group for Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010**

1. Log on to the SharePoint computer as the administrator.
2. Open Internet Explorer.
3. In the **Address** bar, type the URL of the SharePoint site you created and press ENTER.
4. Click **Site Actions**, and then click **Site Settings**. Then click **Site Permissions**.
5. On the **Permissions** page select **Grant Permissions**.
6. In the **Users/Groups**: area select add the names of the users.
7. In the **Grant Permissions** area select the required permission from the **Add users to a SharePoint group** drop-down list.
8. Click **OK**.

**Note:** For Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010, ensure that the Members security group has both **Design** and **Contribute** permissions enabled, so that users who are a part of the Members security group are able to add Pivotal CRM Web Parts.

While using basic authentication for Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010 ensure that the following alternate access mapping settings are made for individual Web applications used. Ensure that the alternate mapping settings are specified to work with predefined Pivotal CRM Web parts.

**To specify the Alternate Access Mapping Settings**

1. Click **Start**, point to **Programs**, click **Microsoft SharePoint 2010 products** and then select **SharePoint 2010 Central Administration**.
2. Click **Application Management** and then select **Configure Alternate Access Mappings** under **Web Applications**.
3. On the **Alternate Access Mappings** page, select **Add Internal URLs**.
4. Select the web application created in **Creating a Web Application** on page 12-6, from the **Alternate Access Mapping Collection** drop-down list.
5. In the **Add Internal URL** text box specify the internal URL in the following format:
   
   http://<SharePoint Server IP Address>:<Port Number>

6. Click **Save**.
Working with Portal Pages

To display the SharePoint Web pages in Pivotal Client 6.0.13, do the following:

- In Pivotal Administration Console, for a Pivotal CRM system, ensure that the URL of the SharePoint site is the same as the URL in the Portal Server box on the Portal Server tab of the System Properties dialog box. For more information about system properties for a Pivotal CRM system, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.
- Specify the Pivotal Portal page.
- Associate commands to display the Portal page.
- Grant search, search result lists, reports, graphs, and portal security permissions for the Pivotal CRM security groups.

For more information about specifying Pivotal Portal pages, creating commands, and granting security permissions, see the Pivotal Toolkit 6.0.13 Toolkit Guide.

Depending on security permissions granted for users in the SharePoint site, end users can either view or personalize the displayed Pivotal Portal page. For more information about end user actions to work with Web pages in Pivotal Client, see the Pivotal Client 6.0.13 Help.


Restoring and Saving Portal Pages for a Pivotal CRM System

You can export and import your customized Web Part pages as files with the .ppf file extension using Pivotal Administration Console. If you have created and exported Portal pages for a Pivotal CRM system you can:

- Restore the exported Portal pages.
- Save and back up the exported Portal pages.

Note: A sample Pivotal CMS 6.0.5 Portal Page file is available along with the installation files for Pivotal CMS 6.0.5 in the CMS605.zip file. For more information, see the Pivotal CMS 6.0.5 Release Notes.
Restoring Portal Pages

Use the **Restore System** command in Pivotal Administration Console to restore Portal pages for a Pivotal CRM system. You need to be a part of the Portal Administrator security group to restore the out-of-the-box Pivotal CMS 6.0.5 Portal page files. For information about the **Restore System** command, see *To restore a Pivotal CRM System* on page 4-10.

To restore Portal pages, if you are using the Standard or Enterprise Edition of Office SharePoint Server 2007, do the following on the SharePoint server and the computer where administrative tasks are performed:

- Clear the **Internet Explorer Enhanced Security Configuration** check box in the **Windows Components Wizard** dialog box and follow the steps to complete the wizard. The **Windows Components Wizard** is available from the **Add/Remove Windows Components** option in the **Add or Remove Programs** console.
- Grant the Full Control security permission level to the **PCS** user. For more information about permission levels, see *Table 12-2* on page 12-17.

**Note:** You cannot restore the out-of-the-box Pivotal CMS 6.0.5 Portal Page files across different versions of SharePoint (for example, Standard or Enterprise Edition of Office SharePoint Server to Microsoft SharePoint Server 2010).

For End Users with Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010

You can use the Pivotal Administrative Console provided back up and restore functionality to migrate your Portal Pages from WSS 3.0 or Microsoft Office SharePoint Server (MOSS) 2007 to Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010. This procedure is suitable if your end users have not personalized the Portal Pages. If the Portal Pages have been personalized then the end users will lose their personalization changes.

**To migrate to Microsoft SharePoint 2010 using Pivotal Administration Console**

1. Back up the existing portal pages using the Pivotal Administration Console.

2. Convert the .ppf files created in *Step 1*, to Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010 format.
Using the PPF Converter Utility provided in PortalResources60SP8.zip.

To convert the .ppf files, run the following command on a machine running Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010:

```cmd
PPFConverter -s "<source ppf file path>" -d "<destination of the ppf file path>"
```

For example:

```cmd
PPFConverter -s "c:\Source\Source.ppf" -d "c:\Destination\Destination.ppf"
```

Where:
- PPFConverter is the name of the PPF Converter utility which has been provided.
- `-s` is the Source .ppf file. This must be a fully qualified file path.
- `-d` is the path where the new .ppf file will be created. This must be a fully qualified file path.

**Note:** Run the command prompt as an administrator on a SharePoint server machine which is running Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010. The utility should be run on the destination Microsoft SharePoint 2010 machine. The utility reads some of the configurations of the destination Microsoft SharePoint 2010 environment and changes the .ppf files accordingly. There is no log file created for the error messages on running the command prompt.

3 Create a new Web Application and Site Collection on the Microsoft SharePoint 2010 deployment server using Pivotal Templates. For information about how to create Web Applications and Site Collection, see *Pivotal CRM 6.0.13 Installation and Deployment Guide*.

4 Change the Portal Server URL in the Pivotal Administration Console for the Pivotal System to point to the new Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010.

5 Restore the .ppf files to the new Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010 deployment server in the Pivotal Administration Console to create the shared pages.

6 Set the information in the `<pvtImpersonate>` tag in the web.config file. For more information, see the *Pivotal CRM 6.0.13 Installation and Deployment Guide*.

7 Set the user security permissions on the newly created pages on Microsoft SharePoint Foundation 2010, or Microsoft SharePoint Server 2010 server. For more information, see the *Pivotal CRM 6.0.13 Installation and Deployment Guide*.

8 Restart Pivotal Business Server.
Backing Up a System

Before making any changes to a Pivotal CRM system, use the Backup System command to back up the Pivotal CRM system in the master system environment. For example, you may want to back up a system before upgrading from your Offline System. When you back up a system, the Business Module, Enterprise Data, are backed up to .rdf files, and Portal pages are backed up to .ppf files.

**Note:** If you want to make a copy of the system with a different database ID, do not use the Backup System command. Use the Replicate command instead. For example, when you set up a Development environment, replicate the Business Module, Enterprise Data, and Portal pages from the master system in the Production environment.

Before taking a back up of Portal pages, specify the URL of the portal server in the Portal Server box on the Portal Server tab of the System Properties dialog box in Pivotal Administration Console. After you type the URL in the Portal Server box, click Test to test the URL. If the test fails, add the URL of the portal server in the Local Intranet zone on the Security tab of the Internet Options dialog box in Internet Explorer.

After adding the URL of the portal server to the Local Intranet zone, test the URL again:

- For a SyncStream 6.0 Server Components installation, exit Pivotal Administration Console, restart the DSM service, restart Pivotal Administration Console, and click the Test button on the Portal Server tab.
- For a SyncStream 6.0 Desktop Components installation, exit Pivotal Administration Console, wait for the msync.exe process to end, restart Pivotal Administration Console, and click the Test button on the Portal Server tab.

For more information about the System Properties dialog box, see the Pivotal SyncStream 6.0.13 Pivotal Administration Console Help.

**To back up a Pivotal CRM system**

1. Log on to the administration computer where Pivotal Administration Console is installed.
2. Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console, expand Data Synchronization, and then expand the server to display the name of the Pivotal CRM system.
3. Right-click the system name and select Backup System.
4. In the Save System dialog box:
   a) Select the Save Business Module check box to back up the Business Module.
Installing and Working with Pivotal Portal Resources

b) The default location where the .rdf files for the Business Module are created is displayed. Click **Browse** to change the default location.

c) Select the **Save Enterprise Data** check box if you are backing up the Enterprise Data.

d) The default location where the .rdf files for the Enterprise Data are created is displayed. Click **Browse** to change the default location.

e) Select the **Save Portal Pages** check box if you are backing up Portal pages.

f) The default location where the *.ppf files for the Portal pages are created is displayed. Click **Browse** to change the default location.

**Note:** If the portal server and SharePoint site are not specified on the **Portal Server** tab of the **System Properties** dialog box, the **Save Portal Pages** option in the **Save System** dialog box is disabled.

5  Click **Save** to save the system.

**Note:** The back up only backs up the shared version of the portal pages. The user personalization done by the end users is not backed up.

You can restore these files to another Pivotal CRM system.

**Note:** If you use the command to back up Pivotal CRM that is Unicode compliant, the Business Module, and Enterprise Data .rdf files are copied to Unicode formatted .rdf files. It is not possible to restore a non-Unicode system from Unicode formatted .rdf files.

---

**Repairing or Removing Pivotal Portal Resources**

You can repair or remove Pivotal Portal Resources 6.0.13 using the **Add or Remove Programs** dialog box in the Control Panel.

**To repair the Pivotal Portal Resources installation**

1  Log on to the SharePoint server as the administrator.
2  Click **Start**, point to **Settings** and then click **Control Panel**.
3  Double-click **Add or Remove Programs** in the **Control Panel**.
4  Select **Pivotal Portal Resources 6.0** from the list of currently installed programs in the **Add or Remove Programs** window.
5  Click **Change**.
6  In the **Pivotal Portal Resources 6.0.13 - InstallShield Wizard**, select **Repair** and then click **Next**.
7 Click **Finish** when the process is complete.
Pivotal Portal Resources 6.0.13 is repaired.

**To remove Pivotal Portal Resources**

1 Follow steps 1 to 4 as detailed in *To repair the Pivotal Portal Resources installation* on page 12-24.
2 Click **Remove**.
3 Click **Yes** in the confirmation box to confirm the removal of Pivotal Portal Resources 6.0.13.
4 Click **Finish** when the process is complete.
Pivotal Portal Resources 6.0.13 is removed.

**Multiple Environment Support**

During the installation of Pivotal Portal Resources, you need to specify the name of a Pivotal CRM system and the name of the computer that hosts the Business Server. A reference to this Pivotal CRM system and the Business Server is automatically added to the web.config file for each Web application you create. If you have Pivotal CRM systems defined for different environments, edit the web.config file for each Web application.

**To edit the web.config file for multiple environment support**

1 Log on to the SharePoint computer as the administrator.
2 Open **Windows Explorer**, and navigate to the following folder

   `..\Inetpub\wwwroot\wss\VirtualDirectories\<Port Number>`

   where `<Port Number>` is the port number for the Web application.
3 Open the web.config file using a text editor.
4 Locate the following lines:

   ```xml
   <appSettings>
     <add key="SystemName" value="<nameofPivotalCRMsystem>" />
     <add key="ServerName" value="<nameofthePBSserver>" />
   </appSettings>
   ```
5 Replace:
   - `<nameofPivotalCRMsystem>` with the name of the additional Pivotal CRM system.
   - `<nameofthePBSserver>` with the name of the computer that hosts Business Server.

**Note:** Do not use the localhost as the Pivotal Business Server.
6 Save the change and exit the text editor.

The sites you define and create for the Web application are now available to the Pivotal CRM system specified in the `web.config` file.

If you have Pivotal CRM systems defined for different environments, create a Web application corresponding to each environment. Edit the `web.config` file for each Web application to specify the following:

- Name of the Pivotal CRM system
- Name of the computer that hosts Business Server
- User name, domain, and password of the domain user account used for impersonation.

For more information about specifying the user name, domain, and password of the domain user account used for impersonation, see *Editing the web.config File* on page 12-8.
Installing Pivotal Synchronization Service 6.0 for Microsoft Exchange
Overview

Using the Pivotal Synchronization Service for Microsoft Exchange, you can make changes to Outlook meetings or tasks using an application such as Microsoft Outlook Web Access (OWA) and have the changes synchronized to Pivotal CRM.

OWA is a Microsoft Web application which directly interacts with a user's mailbox on Exchange Server.

Using Pivotal Synchronization Service for Microsoft Exchange, you can only synchronize changes to an appointment or task which has already been linked to Pivotal CRM. The changes made by users are synchronized with Pivotal CRM. You can create new appointments or tasks, however, you cannot link them to Pivotal CRM.

Pivotal Synchronization Service for Microsoft Exchange can be installed on the Pivotal Business Server or on a stand-alone server.

Prerequisites

The administrator should have experience in working with:

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010

**Note:** Pivotal Synchronization Service for Microsoft Exchange is not supported for Windows Vista and Windows 7. Pivotal Synchronization Service for Microsoft Exchange can only be installed on a Server Machine. Also, due to issues with Microsoft Exchange while executing expansion queries, the maximum years of expansion for recurring meetings or appointments has been limited to six months.

System Requirements

Microsoft .NET Framework 4 has to be installed on the server designated to install Pivotal Synchronization Service for Microsoft Exchange.

Installing Pivotal Synchronization Service for Microsoft Exchange

Install Pivotal Synchronization Service for Microsoft Exchange to enable you to make changes to Outlook appointments and tasks using an application such as Outlook Web Access and have those changes synchronized to Pivotal CRM.
Download the installation files for Pivotal Synchronization Service for Microsoft Exchange (PSME6.0.13.zip file) from the Product Downloads area in the Aptean Customer Portal and Partner Portal.

To install Pivotal Synchronization Service for Microsoft Exchange

1. On the server designated to install Pivotal Synchronization Service for Microsoft Exchange, log on with administrator rights.

2. Extract the contents of the PSME6.0.13.zip file to any folder on the designated server computer.

3. Browse to the Pivotal Synchronization Service for Microsoft Exchange folder and double-click the setup.exe.

4. In the Pivotal Synchronization Service 6.0 for Microsoft® Exchange - InstallShield Wizard dialog box, click Next.

5. In the License Agreement dialog box, select the I accept the terms in the license agreement option and click Next.

6. In the Custom Setup dialog box, click Next.

7. In the Services Account dialog box, type the domain name in the Domain box. Type the username in the User Name box and type the password in the Password box.

8. Click Next.

9. In the CRM Production system details dialog box, type the Pivotal CRM system name in the Pivotal System Name box, and type the Pivotal Business Server name in the Pivotal Business Server Name box.

10. Click Next.

11. In the Ready to Install the Program dialog box, click Install.

12. Click Finish.

Pivotal Synchronization Service for Microsoft Exchange is installed on the designated server.

Specifying Configuration Settings

After installing Pivotal Synchronization Service for Microsoft Exchange, specify the configuration settings for the following:

- Pivotal Toolkit
- Pivotal Administration Console
- Pivotal Synchronization Service for Microsoft Exchange
Specifying Pivotal Toolkit Settings

For Pivotal Synchronization Service for Microsoft Exchange to function properly, configure the following customization settings:

1. Create the Exchange Synchronization security group in Pivotal Toolkit.
2. Grant the security permissions to the user to be synchronized to the Exchange Synchronization security group.

To create the Exchange Synchronization security group in Pivotal Toolkit

1. Click Start, point to Programs, CDC Software, and then click Pivotal CRM.
2. Click Pivotal Toolkit.
3. In the Pivotal Login dialog box, select the Customization System from the System drop-down list.
4. Click OK.
5. On the eTab, click Security and then click Manage Security. The Security editor is displayed.
6. Right-click anywhere in the editor, and click New Group.
7. Type Exchange Synchronization and press ENTER.
The Exchange Synchronization security group is created.

To grant security permissions to the user

1. On the server designated to run Pivotal Synchronization 6.0 for Microsoft Exchange, where the Pivotal CRM system is defined, click Start, point to Programs, point to Pivotal, and then click Pivotal Administration Console.
2. In the servers pane of the Pivotal Administration Console, expand the appropriate server listed under Data Synchronization, and then select the Pivotal CRM system.
3. Right-click the Pivotal CRM system name and select Connect. The right-pane displays the Pivotal CRM users.
4. In the right-pane, select the Users radio button from the View panel above the right-pane to display Pivotal CRM users. Right-click the User ID to be synchronized with the Exchange Synchronization security group and point to Add to Group. Select the Exchange Synchronization security group.
5. Close the Pivotal Administration Console window.
The security permissions are granted to the user.
Installing Pivotal Synchronization Service 6.0 for Microsoft Exchange

Ensure that the service account user is part of the following:

- Base CMS Features Security Group
- Exchange Synchronization Security Group
- Administrators Group on the computer where Pivotal Synchronization Service for Microsoft Exchange is installed

### Specifying Pivotal Administration Console Settings

Ensure that the following Pivotal Administration Console settings are configured for Pivotal Synchronization Service for Microsoft Exchange to function properly:

**>> Set the Exchange Server details.**

**To set the Exchange Server details**

1. On the server designated to run Pivotal SyncStream, where the Pivotal CRM system is defined, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**.
2. In the servers pane of the **Pivotal Administration Console**, expand the appropriate server listed under **Data Synchronization**, and then select the Pivotal CRM system.
3. Right-click the Pivotal CRM system name and select **System Properties**.
4. Select the **Exchange Server** tab.
5. Type the Exchange Server URL in the **Exchange Server** box. The Exchange Server URL is the Client Access Server URL. Specify the courier account details in the **Username**, **Password**, and **Domain** boxes. For information on creating a courier account on the Exchange Server, see *Setting up a Courier Account on Exchange Server 2007 or Exchange Server 2010* on page 13-9.
6. Click **OK**.

The Exchange Server details are set.

### Specifying Pivotal Synchronization Service for Microsoft Exchange Settings

For Pivotal Synchronization Service for Microsoft Exchange to function properly, configure the following Pivotal Synchronization Service for Microsoft Exchange settings:

1. *Pivotal Synchronization Exchange Server credentials*
2. *Pivotal CRM System name and the Pivotal Business Server name in the* SynchronizationConfiguration.xml.
Installing Pivotal Synchronization Service 6.0 for Microsoft Exchange

To set the Pivotal Exchange Synchronization Service credentials

1. Click **Start**, point to **Programs**, click **Administrative Tools**, and then click **Component Services**.

2. In the **Component Services** window, select the **Services** tree view.

3. The right-pane displays all the services installed on your computer. Right-click Pivotal Exchange Synchronization Service and select **Properties**.

4. To specify the user account that the service can use to log on, click the **Log On** tab. Select the **This Account** option, and click **Browse**, and then specify a user account in the **Select User** dialog box. Click **OK**. Ensure that user is a licensed Pivotal CRM user, and a part of the Pivotal Synchronization Security Group.

5. Type the password for the user account in the **Password** box. Type the password again in the **Confirm Password** box and then click **OK**.

The Pivotal Exchange Synchronization Service credentials are set.

To set the Pivotal CRM system name and the Pivotal Business Server name

1. In Windows Explorer in the installation location, double-click the **Office Integration Server** folder.

2. Select and open the **SynchronizationConfiguration.xml** in any XML editor such as Notepad.

3. Specify the Pivotal CRM system name between the `<CRMSystem>` and `</CRMSystem>` nodes.

4. Specify the Pivotal Business Server name between the `<PIDSServer>` and `</PIDSServer>` nodes.

5. Ensure that the value between the `<CompletedActivitySaveForWarning>` and the `</CompletedActivitySaveForWarning>` nodes is specified as **true**.

Setting the value to **true** ensures that the changes made using Outlook Web Access are synchronized to Pivotal CRM.

This setting is used only when setting **Allow save for completed activity** in the Toolkit **Global Options** dialog box is set to **Show Warning**.

Setting the value to **false** ensures that the changes made using Outlook Web Access are not synchronized to Pivotal CRM.

6. Save the **SynchronizationConfiguration.xml** file.

The Pivotal CRM System name and the Pivotal Business Server name is set.

---

**Note:** Follow the steps below only if you have not specified the required details in the **Services Account** dialog box and the **CRM production system details** dialog box while installing Pivotal Synchronization Service for Microsoft Exchange.
Starting Pivotal Synchronization Service for Microsoft Exchange

For Pivotal Synchronization Service for Microsoft Exchange to function properly, ensure you do the following:

>> Start the Pivotal Exchange Synchronization Service.

To start the Pivotal Exchange Synchronization Service

1. Click Start, point to Programs, click Administrative Tools, and then click Component Services.
2. In the Component Services window, select the Services tree view.
3. The right-pane displays all the services installed on your computer. Right-click Pivotal Exchange Synchronization Service and select Properties.
4. Click the General tab. In the Startup type box, click Automatic. Click Start in the Service status.
5. Click OK.

The Pivotal Exchange Synchronization Service is started.

Additional Installation Methods

This section details additional methods for installing Pivotal Synchronization Service for Microsoft Exchange, including specific instructions for a silent installation of Pivotal Synchronization Service for Microsoft Exchange. You can run the Pivotal Synchronization Service for Microsoft Exchange installation program by using specific command-line parameters. You can also use the JavaScript file provided in the PSME6.0.13.zip file to perform a silent installation.

Using JavaScript Files or Command-Line Parameters for Installation

Use the JavaScript files provided in the PSME6.0.13.zip to silently install Pivotal Synchronization Service for Microsoft Exchange. If required, open the JavaScript file in an editor and provide the required values. Table 12-3 on page 12-8 details the JavaScript files provided for installing Pivotal Synchronization Service for Microsoft Exchange. You can also run the Pivotal Synchronization Service for Microsoft Exchange installation program using command-line parameters to control the installation options available. Use a combination of switches to run the Pivotal Synchronization Service for Microsoft Exchange installation program for a typical or custom installation.

Note: Ensure that the JavaScript file is in the same directory as setup.exe.
Modifying, Repairing, or Uninstalling Pivotal Synchronization Service for Microsoft Exchange

The Pivotal Synchronization Service for Microsoft Exchange installation software detects previously installed components of Pivotal Synchronization Service for Microsoft Exchange. If components are detected, one of the following conditions exist:

- Pivotal Synchronization Service for Microsoft Exchange has already been installed. In this case, use the installation software to uninstall Pivotal Synchronization Service for Microsoft Exchange altogether.
- Pivotal Synchronization Service for Microsoft Exchange has already been installed but is not functioning correctly. If this is the case, use the installation software to repair the Pivotal Synchronization Service for Microsoft Exchange installation.

To repair Pivotal Synchronization Service for Microsoft Exchange

1. Log on as the administrator to the computer designated to run Pivotal Synchronization Service for Microsoft Exchange.
2. Click **Start**, point to **Settings**, and click **Control Panel**.
3. Double-click **Add/Remove Programs** in the **Control Panel** window.
4. Select Pivotal Synchronization Service 6.0 for Microsoft® Exchange from the list of currently installed programs in the **Add/Remove Programs** dialog box.
5. Click **Change**.
6. In the **Program Maintenance** dialog box, select the **Repair** option and click **Next**.
7. Click **Install**.
8. Click **Finish** when the process is complete.

Pivotal Synchronization Service for Microsoft Exchange is repaired.
To uninstall Pivotal Synchronization Service for Microsoft Exchange

1. Follow steps 1 to 3 as detailed in *To repair Pivotal Synchronization Service for Microsoft Exchange* on page 13-8.

2. In the **Program Maintenance** dialog box select the **Remove** option and click **Next**.

3. Click **Finish** when the process is complete.

Pivotal Synchronization Service for Microsoft Exchange is uninstalled.

**Uninstalling Using Command-Line Parameters**

You can uninstall Pivotal Synchronization Service for Microsoft Exchange using silent uninstall commands.

**To uninstall from the command prompt**

```bash
>> At the command prompt, type
Msiexec.exe /x {BB4C065D-B0E9-4D05-B479-75370C15A2D2} /q.
```

Pivotal Synchronization Service for Microsoft Exchange is uninstalled.

**Creating a Courier Account on Microsoft Exchange Server**

Pivotal Synchronization Service for Microsoft Exchange synchronizes changes to meetings, appointments, and tasks to Pivotal CRM for all the users specified in the Exchange Synchronization security group. To do this, a courier account needs to be set up on the Exchange server. This courier account is a domain user account and has access to all the required mailboxes on Microsoft Exchange server. Before creating a courier account on the Exchange Server, ensure that the courier account has a mailbox on the Exchange Server.

**Note:** Ensure that the user account for whom the courier access is provided is not part of the Domain Administrators group or the Domain Exchange Servers group. Also, ensure that while creating a courier account, the logged in user is an Exchange Administrator on the Exchange Server.

**Setting up a Courier Account on Exchange Server 2007 or Exchange Server 2010**

If you do not have a courier account on Exchange Server 2007 or Exchange Server 2010, then create a Active Directory User on Exchange Server 2007 or Exchange Server 2010, and then assign the requisite permissions on the Mailbox Database or Individual Mailboxes to provide courier account access.
Providing Security Permissions to the Courier Account on Exchange Server 2007 or Exchange Server 2010

Provide the security permissions to the Courier Account for one of the following:

- **Mailbox Database**
  This option provides courier account access to all the user mailboxes on the Exchange server. You can either provide requisite security permissions to the default mailbox database or create a new mailbox database. If you create a new mailbox database, all the synchronizing users need to be moved to the new mailbox database.

  **Note:** While giving courier account access to all the mailboxes in the default mailbox could be security risk for you, creating a new mailbox store could add additional administrative tasks for you.

- **Individual Mailboxes**
  This option provides the courier account access to only the required number of user mailboxes.

  **Note:** Providing courier access to individual mailboxes could be time consuming because each individual mailbox’s rights need to be changed.

For details on removing the security permissions provided to the Courier Account created on Exchange Server 2010, see *Removing Permissions to the Courier Account for Exchange Server 2007 or Exchange Server 2010*.

Providing Permissions to the Mailbox Database

Perform the following steps to provide security permissions to the mailbox database on Exchange Server 2007 or Exchange Server 2010:

1. **Create a Mailbox Database**
2. **Move the User Mailboxes to the Mailbox Database**
3. **Provide Permissions to the Mailbox Database**

  **Note:** The user performing the steps should be an Exchange Administrator. Also, perform steps 1 and 2 only if you want to create a new mailbox database and give permissions to the specified user mailboxes in the new mailbox database. If you want to give permissions to the default mailbox database proceed to step 3.
Creating a Mailbox Database on Exchange Server 2007 or Exchange Server 2010

Create a mailbox database to store all the user mailboxes which need to be synchronized with the Pivotal Database in:

- *Exchange Server 2007*
- *Exchange Server 2010*

**To Create a Mailbox Database on Exchange Server 2007**

1. Click **Start**, point to **Programs**, and then point to **Microsoft Exchange Server 2007**.
2. Select **Exchange Management Console**.
3. Double-click **Server Configuration** and then double-click **Mailbox**.
4. Right-click **First Storage Group** and select **New Mailbox database**.
5. In the **New Mailbox Database** dialog box, specify the name of the mailbox database in the **Mailbox database name** field. Ensure that the **Mount this database** checkbox is selected.
6. Click **New**. The database filepath is created automatically.
7. Click **Finish**. The mailbox database is created.

**To Create a Mailbox Database on Exchange Server 2010**

1. Click **Start**, point to **Programs**, and then point to **Microsoft Exchange Server 2010**.
2. Select **Exchange Management Console**.
3. Double-click **Organization Configuration** and then double-click **Mailbox**.
4. In the **Actions** pane select **New Mailbox Database**.
5. In the **New Mailbox Database** dialog box, specify the name of the mailbox database in the **Mailbox database name** field. Also, specify the name of the server in the **Server name** field.
6. Click **New**. The database file path and the Log folder path is created automatically.
7. Click **Next**, and then click **New**.
8. Click **Finish**. The mailbox database is created.
Moving the User Mailboxes to a Mailbox Database on Exchange Server 2010

Move the user mailboxes which need to be provided with courier access to a mailbox database in:

- Exchange Server 2007
- Exchange Server 2010

To move the User Mailboxes to the Mailbox database in Exchange Server 2007

1. Click Start, point to Programs, and then point to Microsoft Exchange Server 2007.
2. Select Exchange Management Console.
3. Double-click Recipient Configuration.
4. Select the user mailboxes which need to be moved to the mailbox database. Right-click and select Move Mailbox.
5. In the Move Mailbox dialog box, click Browse. Select the mailbox database to which the user mailboxes need to be moved in the Select Mailbox Database dialog box.
6. Click OK, and then click Next.
7. Click Next. Select when you want the user mailboxes to be moved to the select mailbox database in the Move Schedule area.
8. Click Next, and then click Move.

The user mailboxes are moved to the selected mailbox database.

Note: The time taken to move the user mailboxes could be very high if there are a lot of mailboxes being moved or if the individual mailbox size is very high.

To move the User Mailboxes to the Mailbox database in Exchange Server 2010

1. Click Start, point to Programs, and then point to Microsoft Exchange Server 2010.
2. Select Exchange Management Console.
3. Double-click Recipient Configuration.
4. Select the user mailboxes which need to be moved to the mailbox database. Right-click and select New Local Move Request.
5. In the New Local Move Request dialog box, click Browse. Select the mailbox database to which the user mailboxes need to be moved in the Select Mailbox Database dialog box.
6. Click OK and then click Next.
7. Click Next and then click New.
8. Click Next and then click Move.
The user mailboxes are moved to the selected mailbox database.

**Note:** The time taken to move the user mailboxes could be very high if there are a lot of mailboxes being moved or if the individual mailbox size is very high.

### Providing Permissions to the Mailbox Database on Exchange Server 2007 or Exchange Server 2010

To provide permissions to the Mailbox Database on Exchange Server 2010, set the receive-as permission by following the steps outlined below:

**Note:** This mailbox database could either be the default one or the one created by you using the steps outlined above.

**To set the receive-as permission to a mailbox database**

1. In **Microsoft Exchange Server**, select **Exchange Management Shell**.
2. In the **Exchange Management Shell** command prompt, type the command: `Add-ADPermission -Identity "<DN of mailbox database>" -User <Courier Account user> -ExtendedRights Receive-As`. For example, `Add-ADPermission -Identity "TestMailbox" -User TestUser -ExtendedRights Receive-As`.
3. Restart the Microsoft Exchange Information Store service.

The receive-as permission to a mailbox database using the distinguished name of the mailbox database is set.

### Providing Permissions to the Individual Mailboxes

Follow the steps outlined to provide permissions to individual mailboxes on Exchange Server 2007 or Microsoft Exchange Server 2010.

**To provide permissions for Individual Mailboxes**

1. In **Microsoft Exchange Server**, select **Exchange Management Shell**.
2. In the **Exchange Management Shell** command prompt, type the command: `Add-MailboxPermission -Identity "<User whose mailbox is to be accessed>" -User <Courier account user> -AccessRights FullAccess`. For example, `Add-MailboxPermission -Identity "syncuser1" -User "courieruser" -AccessRights FullAccess`.
3. Repeat steps 1-3 for all users who are a part of the Exchange Synchronization Group.
The permission for the individual mailboxes on Exchange Server 2007 or Exchange server 2010 is set.

**Note:** To execute the command you must be a part of the Exchange Administrator role and the Local Administrator Group.

---

**Removing Permissions to the Courier Account for Exchange Server 2007 or Exchange Server 2010**

You can remove the security permissions provided to the Courier Account for either of the following:

- Mailbox Database
- Individual Mailboxes

---

**Removing Permissions from the Mailbox Database**

To remove permissions to the Mailbox Database on Exchange Server 2007 or Exchange Server 2010, remove the receive-as permission from the Mailbox Database.

**To remove the receive-as permission from a specific mailbox database**

1. In Microsoft Exchange Server, select Exchange Management Shell.
2. In the Exchange Management Shell command prompt, type the command `Remove-ADPermission -Identity "<DN of mailbox database>" -User "<"Courier Account user">" -ExtendedRights Receive-As`.
3. Restart the Microsoft Exchange Information Store service.

The receive-as permission to a mailbox database using the distinguished name of the mailbox database is removed.

---

**Removing Permissions from the Individual Mailboxes**

Follow the steps outlined to remove permissions from individual mailboxes on Exchange Server 2007 or Exchange Server 2010.

**To remove permissions from Individual Mailboxes**

1. In Microsoft Exchange Server, select Exchange Management Shell.
2. In the Exchange Management Shell command prompt, type the command `Remove-MailboxPermission -Identity "syncuser1" -User "courieruser" -AccessRight FullAccess`.
3. Repeat steps 1-3 for all users who are a part of the Exchange Synchronization Group.

The permission for the individual mailboxes on Exchange Server 2007 or Exchange server 2010 is removed.
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Installing and Configuring Pivotal Research Services
Overview

Pivotal Research Services 6.0.13 provides Microsoft Office users with the ability to quickly access Pivotal information from Microsoft Office applications. This information is displayed in the Research pane of Microsoft Office.

Use Pivotal Research Services to:

- View Pivotal data from within the Microsoft Office suite of products.
- Insert Pivotal data into your Office document or copy it to the clipboard for pasting elsewhere.
- Open the Web site of a company displayed in the Research pane. The Web site is opened in the default browser.
- Open Microsoft Outlook to compose an e-mail message to the contact displayed in the Research pane. An e-mail message window is opened in which the To box is filled with the contact’s e-mail address.

Using out-of-the-box Pivotal Research Services, the user can access Pivotal information for the following entities:

- Companies
- Contacts
- Leads
- Employees
- Opportunities
- Support Incidents
- Orders

For information about using and registering Pivotal Research Services, see *Pivotal Research Services 6.0 User Guide*. For information about customizing Research Services, see *Pivotal Research Services 6.0 Customization Guide*.

Pre-Installation Tasks

Before you install Pivotal Research Services 6.0.13, install the following Pivotal products:

- Pivotal SyncStream
- Business Server
- Pivotal Toolkit
- Pivotal Client

Pivotal Research Services 6.0.13 supports the following Microsoft applications:

- Microsoft Office
- Microsoft Internet Explorer
For the versions of Microsoft applications, see the system requirements of Business Server and Pivotal Client in *Pivotal CRM 6.0.13 Compatibility Guide*.

Installation and configuration of Pivotal Research Services comprises the following steps:

1. **Installing Pivotal Research Services**
2. **Importing the Transporter (.rtr) Files**
3. **Modifying the Configuration File**

## Installing Pivotal Research Services

This section details the procedure to install Pivotal Pivotal Research Services on the computer that hosts Pivotal Business Server. Configure Pivotal Research Services after installing it on the Pivotal Business Server computer. After installation and configuration, Pivotal Research Services users need to register the services on their computers. For information about registering services, see *Pivotal Research Services 6.0.13 User Guide*.

You can also install Pivotal Pivotal Research Services using command-line parameters or JavaScript files. This type of installation is called silent installation. For more information about silent installation, see *Deploying Pivotal Research Services Throughout the Enterprise* on page 14-8.

Pivotal Research Services 6.0 is delivered in the RS60.zip file available for download from the Product Downloads area at the [Aptean Customer or Partner Portals](https://www.aptean.com). For more information about the contents of the RS60.zip file, see Appendix A, "Contents of Installation Zip Files."

**To install Pivotal Research Services 6.0.13 on the server**

1. Extract the contents of the RS60.zip file to a folder on the computer where the Pivotal Business Server is installed.
2. In Windows Explorer, browse to the folder with the extracted contents.
3. Double-click setup.exe and follow the on-screen installer instructions.
4. In the **Welcome** dialog box, click **Next**.
5. In the **License Agreement** dialog box:
   a) Select the **I accept the terms in the license agreement** option.
   b) Click **Next**.
6 Click **Install** to begin the installation.

Pivotal Research Services files are installed in the OfficeResearch sub-folder located under the Pivotal Business Server installation folder.

For example, if the Pivotal Business Server files are installed in the ..\CDC Software\Pivotal CRM\Business Server folder, then the Research Services files are installed in the ..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch folder.

7 Click **Finish** when the installation process is complete.

Research Services is installed.

**Note:** Verify if the .rtr and .csv files exist in the Business Module Extensions folder within the Pivotal Research Services 6.0 folder as these files need to be imported into the Customization System.

### Importing the Transporter (.rtr) Files

Pivotal Pivotal Research Services contains three transporter files. You need to import one of these transporter files into the Customization System:

- **Pivotal Research Services Minimum.rtr**
  
  This file contains the software components required by Pivotal Research Services 6.0.13. No out-of-the-box Pivotal Research Services or security settings are provided in this .rtr file. Import this file if you want to maintain your existing security settings and design your own Pivotal Research Services.

- **Pivotal Research Services Typical.rtr**
  
  This file contains the OfficeProviderASR.dll AppServer Rule and out-of-the-box Pivotal Research Services. Import this .rtr file if you want to use out-of-the-box Pivotal Research Services.

- **Pivotal Research Services Complete.rtr**
  
  This file contains the OfficeProviderASR.dll AppServer Rule, out-of-the-box Pivotal Research Services, and out-of-the-box security settings for Pivotal Research Services. Import this .rtr file if you want to use out-of-the-box Pivotal Research Services and security settings for the Base CMS Features and Support Manager security groups.

**To import the Pivotal Research Services Complete transporter file**

1 Log on to the Customization System.

2 Select the **Transporter** Business Object from the eTab menu.

3 Select **Import Elements from File**.

4 Browse to the extracted contents of the RS60.zip file, double-click the Business Module Extensions folder, and select the .rtr file that you want to import.
5 Click **Continue** in the **Importing Elements from Pivotal Research Services Complete.rtr** dialog box.

6 Click **Close** in the **Importing Elements from Pivotal Research Services Complete.rtr** dialog box.

When the .rtr file has been successfully imported, a message is displayed.

7 Click **OK** in the message box.

If you import the Pivotal Research Services Typical.rtr or the Pivotal Research Services Complete.rtr file, you also need to import the ResearchServicesPopulateStrings.csv file.

**Note:** You do not need to import the ResearchServicesPopulateStrings.csv file if you import the Pivotal Research Services Minimum.rtr file.

---

### Running the LoggedInstall.js File

Run LoggedInstall.js file to perform a logged installation of Pivotal Research Services. This file installs Pivotal Research Services and creates a verbose log file, PivotalPivot Research Services.log in the C:\Documents and Settings\<User Name>\Local Settings\Temp folder.

### Importing the ResearchServicesPopulateStrings.csv File

To customize Pivotal Pivotal Research Services to other languages, import the ResearchServicesPopulateStrings.csv file. The ResearchServicesPopulateStrings.csv file contains the English language dictionary entries for out-of-the-box Pivotal Research Services.

You can import the ResearchServicesPopulateStrings.csv file only if you have imported the Pivotal Research Services Typical.rtr or the Pivotal Research Services Complete.rtr file.

**To import the ResearchServicesPopulateStrings.csv file**

1 Log on to the Customization System.

2 Select **Pivotal Agents**, and then click **List of Agents** from the eTab.

3 In the **Agents** window, expand **Language**, then expand **Import and Export**, and click **Import Populate Strings**.

4 In the **Instruction** dialog box, click **OK**.

5 Select the ResearchServicesPopulateStrings.csv file, and click **Open**.
Installing and Configuring Pivotal Research Services

6  In the **Message - Import System Strings** message box, click **OK** after the import is complete.

The `ResearchServicesPopulateStrings.csv` file is imported into the Pivotal Toolkit.

---

Modifying the Configuration File

When you install Pivotal Pivotal Research Services, the `Web.config` file is created in the `..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch` folder. The `Web.config` file contains settings required by Pivotal Pivotal Research Services to access Pivotal Business Server. These settings need to be modified to reflect the name of your Production System.

**To modify the `Web.config` file**

1  In Windows Explorer, navigate to the `..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch` folder.

2  Open the `Web.config` file using a text editor.

3  Locate the following line of code:

   ```xml
   <add key="systemName" value="Insert System Name Here">
   ```

4  Replace `Insert System Name Here` with the name of your Production System. For example, if your Production System name is Master, the configuration setting will be:

   ```xml
   <add key="systemName" value="Master">
   ```

5  Save and close the `Web.config` file.

---

Verifying the Installation

You can validate whether your Pivotal Research Services installation has been successful by verifying the following:

- **OfficeResearch** virtual folder is within the `epower` virtual folder
- **OfficeProviderASR.dll** AppServer Rule is within the Server Tasks folder

**To verify OfficeResearch virtual folder is within the epower virtual folder**

1  Click **Start**, point to **Settings**, and click **Control Panel**.

2  In **Control Panel**, double-click **Administrative Tools**.

3  In the **Administrative Tools** window, double-click **Internet Information Services (IIS) Manager**.
4 In the **Internet Information Services (IIS) Manager** window, expand your server name, expand Web Sites, Default Web Site, and then expand epower.

Verify that the OfficeResearch virtual folder is created within the epower virtual folder. The OfficeResearch virtual folder is mapped to the ..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch physical folder.

**To verify OfficeProviderASR.dll AppServer Rule within the Server Tasks folder**

1 Click **Start**, point to **All Programs**.
2 Select **CDC Software, Pivotal CRM** and then click **Pivotal CRM**.
3 This opens **Pivotal Client**.
4 Navigate to the ..\CDC Software\Pivotal CRM\Business Server\Server Tasks folder.
5 The Server Tasks folder contains all the App Server Rules and Server Tasks for the particular system.
6 Verify that the **OfficeProviderASR.dll** AppServer Rule exists in the Server Tasks folder.

**Note:** If you do not see **OfficeProviderASR.dll** in the Server Tasks folder, perform an action that would cause Business Server to startup and load server tasks to the Server Tasks folder. One option is to connect to Pivotal CRM system using Pivotal Client.

### Uninstalling Pivotal Research Services

Uninstall Pivotal Research Services from the **Control Panel**.

**To uninstall Pivotal Research Services from the Control Panel**

1 In the **Start** menu, point to **Settings**, and click **Control Panel**.
2 In the **Control Panel** window, double-click **Add or Remove Programs**.
3 In the **Add or Remove Programs** dialog box:
   - Select **Pivotal Research Services 6.0**, and click **Remove**.
   - Click **Yes** when asked for a confirmation to remove **Pivotal Research Services 6.0** from your computer.
4 Click **Finish** when the uninstallation process is complete.

Pivotal Research Services 6.0 is uninstalled.
Deploying Pivotal Research Services Throughout the Enterprise

Additional Installation Methods

Pivotal Research Services 6.0.13 can also be installed without user intervention, and this installation is called silent installation.

Before starting the silent installation, edit the SilentInstall.js file and specify the default configuration parameters. If you do this, you do not need to modify the Web.config file after installing Pivotal Research Services 6.0.13.

To edit the Pivotal Research Services SilentInstall.js file

1. Open the SilentInstall.js file using a text editor. This file is available in the RS60.zip file.

2. Locate the following line of code:
   ```javascript
   mySystemName = "";
   ```

3. Enter the name of your Production System within the quotation marks.
   For example, if the name of your Production System is Master, the configuration setting will be:
   ```javascript
   mySystemName = "Master";
   ```

4. Save and close the SilentInstall.js file.

This procedure sets the system name configuration in the SilentInstall.js file. You can now proceed with the silent installation of Pivotal Research Services.

To perform a silent installation of Pivotal Research Services

1. Double-click the SilentInstall.js file that was extracted from the RS60.zip file.

An hourglass indicates that the silent installation is in progress. After installation, the hourglass changes back to the cursor.

After the installation is complete, you need to:

2. Import the transporter files.
   For information about importing the transporter files, see Importing the Transporter (.rtr) Files on page 14-4.

   For information about modifying the Web.config file, see Modifying the Configuration File on page 14-6.
Deploying Pivotal Research Services on Mobile Computers

If you install Pivotal Research Services 6.0.13 on a mobile computer, you cannot import the .rtr file. This is because only one Pivotal CRM system (the Production System) can exist on a mobile computer. A mobile computer cannot have a Customization System. However, the mobile computer needs the updated Business Module configured for Pivotal Pivotal Research Services.

Use the Pivotal Administration Console to execute the Upgrade From Offline System command, and update the mobile computer's Business Module.

Deploying the Configuration File on Mobile Computers

In a scenario where Pivotal Pivotal Research Services has to be deployed to numerous mobile computers, it becomes cumbersome to change the system name setting in the Web.config file for each of the mobile computers.

To avoid changing the setting in the Web.config file for every mobile computer on which Pivotal Research Services 6.0.13 is installed, do the following:

1. Create the Web.config file for mobile computers
2. Distribute the Web.config file to the mobile computers using the Send Code Update command in Pivotal Administration Console.

Creating the Web.config File for Mobile Computers

If Pivotal Pivotal Research Services is installed on mobile computers, you need to change the system name setting in the Web.config file for each mobile computer. To avoid doing this, create a single Web.config file for the mobile computers.

To create a Web.config file for mobile computers

1. In the main computer, browse to the ..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch directory.
2. Open the Web.config file using a text editor.
3. Locate the following line of code:
Replacing Insert System Name Here with the name of the Pivotal CRM system in the mobile computer. For example, if the name of the Pivotal CRM system in the mobile computer is Mobile, the configuration setting will be:

```
<add key="systemName" value="Mobile"/>
```

5. On the **File** menu, click **Save As**, and save the file in another folder.

The file that you just created is the Web.config file for mobile computers.

### Distributing the Web.config File to Mobile Computers

After creating the Web.config file for mobile computers, distribute this file to the mobile computers in which Pivotal Pivotal Research Services is installed.

**To distribute the Web.config file to mobile computers**

1. On the administrative computer, from the **Start** menu, point to **All Programs**, then point to **CDC Software, Pivotal CRM** and then click Pivotal Administration Console.

2. In the **Servers** pane of the Pivotal Administration Console, expand **Data Synchronization** and then the server on which Pivotal Pivotal Research Services is installed, and connect to the production system.

3. In the **Users** pane, right-click the mobile user's user ID, and select **Send Code Update**.

4. In the **Send Code Update** dialog box:
   a) In the **Subject** text box, type a subject for the code update. This subject is displayed as the subject line of the e-mail message that contains the code update notification. This is an optional field.
   b) In the **Attachment** text box, click **Browse** to browse to the directory that contains the configuration file for mobile computers and select the Web.config file.

5. In the **Note** text area, type a note for the mobile recipient. This note is displayed when the messages are received. This is an optional field.

6. Synchronize the mobile computers for the code update message to be displayed in a dialog box, when a mobile user starts Pivotal CRM.

7. When you run Pivotal CRM on the mobile computer to process the messages, **Do you want to start the update now?** is displayed. Click **Yes** to open the Web.config file.
8 Save the Web.config file in the ..\CDC Software\Pivotal CRM\Business Server\www\OfficeResearch folder. The existing Web.config file is overwritten by the new Web.config file that contains the name of the mobile Pivotal CRM system.

**Note:** The procedure for creating a Web.config file and distributing it to mobile computers works only if the Pivotal CRM systems in all the mobile computers have the same name. If the mobile computers have different Pivotal CRM system names, you need to manually change the system name setting in the Web.config file for each mobile computer.

For more information about the code update feature, see *Pivotal SyncStream 6.0.13 Pivotal Administration Console Help*. 
Installing Pivotal Driver for Crystal Reports
Overview

This chapter details how to install Pivotal Driver for Crystal Reports. If Crystal Reports and Pivotal Driver for Crystal Reports are installed on client computers, end users can design and work with Pivotal CRM reports using Pivotal Client.

Prerequisites

Ensure that the following are installed on the client computer:

- Pivotal CRM 6.0.10 Prerequisites or later
- Crystal Reports 2008

Installing Pivotal Driver for Crystal Reports

The installation files for Pivotal Driver for Crystal Reports are available along with the installation files for Pivotal Client (PDCR6.0.13.zip file). Download the PDCR6.0.13.zip file from the Product Downloads area at Apteon Customer or Partner Portals. For more information about the installation zip files, see Appendix A, Contents of Installation Zip Files.

Install Pivotal Driver for Crystal Reports on each client computer.

To install Pivotal Driver for Crystal Reports

1. Log on to the client computer as the end user.
2. Extract the contents of the PDCR6.0.13.zip file to any folder on the client computer.
3. Browse to the folder with the contents of the PDCR6.0.13.zip file and double-click the PivotalDriverForCrystalReports.msi file.
4. In the Report Driver 6.0 for Crystal Reports (v.6.0.1300) - InstallShield Wizard dialog box, click Next.
5. Accept the terms of the license agreement, and click Next.
6. Type the User Name and Organization, and click Next.
7. Click Next to accept the destination folder to which Pivotal Driver for Crystal Reports will be installed. To change the directory to which files are installed, click Change and browse to the folder where you want to install Pivotal Driver for Crystal Reports and click OK, and then click Next.
8. Click Install.
9. Click Finish when the installation is complete.
Pivotal Driver for Crystal Reports is installed. Installing the Pivotal Driver for Crystal Reports also installs Pivotal System Manager.

## Configuring Pivotal Driver for Crystal Reports

To configure Pivotal Driver for Crystal Reports, do the following:

- Create ODBC Connections
- Define a System

### Creating ODBC Connections

Create ODBC connections to the Production Business Module and Production Enterprise Data SQL Server databases.

### Creating ODBC Connections for SQL Server

This section is specific to SQL Server deployments. Oracle users, refer to Creating ODBC Connections for Oracle on page 15-5.

You need to create ODBC data source names (DSN) to the Production Business Module and Production Enterprise Data SQL Server databases.

**To create a connection for the Production Business Module database on the client computer**

1. Log on to the client computer with administrative permissions.
2. Click Start, point to Programs, CDC Software, click Pivotal CRM, and then click Pivotal System Manager.
3. In the Pivotal System Manager dialog box, click New.
4. In the New System dialog box, click ODBC.
5. In the ODBC Data Source Administrator dialog box, click the System DSN tab, and then click Add.
6. In the Create New Data Source dialog box, click SQL Server, and then click Finish.
7. In the Create a New Data Source to SQL dialog box, do the following:
   - In the Name box, type ProductionBM. The name can have embedded spaces and can be the same as the database name.
   - In the Description text box, type a description of the data source.
   - In the Server drop-down list, click the name of the SQL Server computer.
8. Click Next.
Installing Pivotal Driver for Crystal Reports

9 In the **Create a New Data Source to SQL Server** dialog box, click **Next**.
This accepts the default, which is Windows NT authentication.

**Note:** Pivotal supports only Windows NT Authentication.

10 In the **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

11 In the **Database** drop-down list, select **ProductionBM**, and then click **Next**.

12 Click **Finish**.

13 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.
The message in the window indicates whether or not the ODBC connection has been properly set up.
If the test results are successful, click **OK**.
If the connection was unsuccessful, verify the settings you entered and repeat steps 1 to 11.

14 Click **OK**.
A connection for the Production Business Module database on the client computer is created.

**To create a connection for the Production Enterprise Data database on the client computer**

1 Follow steps 1 to step 6 of **To create a connection for the Production Business Module database on the client computer** on page 15-3.

2 In the **Create a New Data Source to SQL** dialog box, do the following:
   - In the **Name** box, type **ProductionED**. The name can have embedded spaces and can be the same as the database name.
   - In the **Description** box, type a description of the data source.
   - In the **Server** drop-down list, click the name of the SQL Server computer.

3 Click **Next**.

4 In the **Create a New Data Source to SQL Server** dialog box, click **Next**.
This accepts the default, which is NT authentication.

**Note:** Pivotal supports only NT Authentication.
5 In the **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

6 In the **Database** drop-down list, select *ProductionED*, and then click **Next**.

7 Click **Finish**.

8 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.
   The message in the window indicates whether or not the ODBC connection has been properly set up.
   If the test results are successful, click **OK**.
   If the connection was unsuccessful, verify the settings you entered and repeat steps 1 to 6.

9 Click **OK**.

   You are now ready to define a system, as detailed in *Defining a System* on page 15-7.

---

### Creating ODBC Connections for Oracle

This section is specific to Oracle deployments. SQL Server users, refer *Creating ODBC Connections for SQL Server* on page 15-3.

You need to create ODBC data source names (DSN) to the Production Business Module and Production Enterprise Data Oracle databases.

**To create a connection for the Production Business Module on the client computer**

1 On the client computer, log on with administrative permissions.

2 Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal System Manager**.

3 In the **Pivotal System Manager** dialog box, click **New**.

4 In the **New System** dialog box, click **ODBC**.

5 On the **System DSN** tab, click **Add**.

6 In the **Create New Data Source** dialog box, select the Oracle ODBC driver listed as *Oracle in <Oracle_Home>*, and then click **Finish**.
7 In the **Oracle ODBC Driver Configuration** window, do the following:
   - In the **Data Source Name** box, type the name for the ProductionBM using the `<OracleService_name>`.`<schema_name>` notation.
   - In the **Data Source Description** box, type a description for the ProductionBM data source.
   - In the **TNS Service Name** box, type the service name, or make a selection from the drop-down list.
   - In the **User ID** field, type the user name for the schema owner.
   - On the **Oracle** tab, make sure that **Enable LOBs** is selected.

8 Click **Test Connection**.

9 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

10 If the connection succeeds, click **OK** in the **Testing Connection** message box.

   If the connection fails, make sure that:
   - The schema name exists in the database.
   - The schema owner’s name and password were typed correctly.

**To create a connection for the Production Enterprise Data on the client computer**

1 Follow steps 1 to 6 of *To create a connection for the Production Business Module on the client computer* on page 15-5.

2 In the **Oracle ODBC Driver Configuration** window, do the following:
   - In the **Data Source Name** box, type the name for the ProductionED using the `<OracleService_name>`.`<schema_name>` notation.
   - In the **Data Source Description** box, type a description for the ProductionED data source.
   - In the **TNS Service Name** text box, type the service name, or make a selection from the drop-down list.
   - In the **User ID** box, type the user name for the schema owner.
   - On the **Oracle** tab, make sure that **Enable LOBs** is selected.

3 Click **Test Connection**.

4 In the **Oracle ODBC Driver Connect** dialog box, type the password for the schema owner, and then click **OK**.

5 If the connection succeeds, click **OK** in the **Testing Connection** message box.

   If the connection fails, make sure that:
   - The schema name exists in the database.
   - The schema owner’s name and password were typed correctly.
You are now ready to define a system, as detailed in *Defining a System* on page 15-7.

### Defining a System

A Pivotal CRM system is a pair of ODBC data sources: one points to the Business Module database, and the other points to the Enterprise Data database. You need to set up the system by pairing the Business Module and Enterprise Data data source names created in the previous section.

**To define a master system**

1. On the client computer, log on with administrative permissions.
2. Click **Start**, point to **Programs, CDC Software**, click **Pivotal CRM**, and then click **Pivotal System Manager**.
3. In the **Pivotal System Manager** dialog box, click **New**.
4. In the **System Name** box, type a name for the system. For example, `Companyname System`.
5. In the **Business Module** drop-down list, select `ProductionBM`.
6. In the **Enterprise Data** drop-down list, select `ProductionED`.
7. Under **This system definition is available for**: select **Anyone who uses this computer (all users)**.
   This ensures that the system definition is visible to the administrative computer user, as well as other users.
8. On the **Toolkit** tab, select **Ignore Permissions**, and then click **OK**.
9. In the **Pivotal System Manager** dialog box, click **Close**.

The system definition now appears in the Pivotal System Manager **System Name** drop-down list.

To design reports, run Crystal Reports Designer and select **Pivotal** as an available data source, and then import the report into Pivotal Client as a user report. For more information about working with reports, see the *Pivotal Client 6.0.13 Help*.

### Silent Installation

To install Pivotal Driver for Crystal Reports, use the `PivotalDriverForCrystalReportsSilentInstall.js` file provided along with the installation files for Pivotal Client (`PDCR6.0.13.zip`).
To run PivotalDriverForCrystalReportsSilentInstall.js on Windows XP or Windows Server 2003

1. Extract the contents of the PDCR6.0.13.zip file to any folder on the client computer.
2. Browse to the folder with the extracted files.
3. Double-click the PivotalDriverForCrystalReportsSilentInstall.js file to run the installation program.

Pivotal Driver for Crystal Reports is installed.

To run PivotalDriverForCrystalReportsSilentInstall.js on Windows Vista, Windows 7, or Windows Server 2008

1. Extract the contents of the PDCR6.0.13.zip file to any folder on the client computer.
2. Open the command prompt window using the Run as administrator option.
3. Change directory to the location containing the extracted contents of the PDCR6.0.13.zip file.
4. Type PivotalDriverForCrystalReportsSilentInstall.js at the command prompt.

Pivotal Driver for Crystal Reports is installed.

Modifying, Repairing, or Uninstalling Pivotal Driver for Crystal Reports

Modify, repair, or uninstall Pivotal Driver for Crystal Reports from the Control Panel.

To modify Pivotal Driver for Crystal Reports

1. Log on as the administrative user.
2. Click Start, point to Settings, and click Control Panel.
3. Double-click Add or Remove Programs.
4. Click Report Driver 6.0 for Crystal Reports (v.6.0.1300), and then click Change.
5. Click Next in the InstallShield Wizard.
6. In the Program Maintenance dialog box, click Modify, and then click Next.
7. Click Next.
8. Click Install.
9. Click Finish when the installation is complete.

Pivotal Driver for Crystal Reports is modified.
To repair Pivotal Driver for Crystal Reports

1 Repeat steps 1 to 5 as detailed in the procedure To modify Pivotal Driver for Crystal Reports on page 15-8.

2 In the Program Maintenance dialog box, click Repair, and then click Next.

3 Click Install.

4 Click Finish when the process is complete.

Pivotal Driver for Crystal Reports is repaired.

To uninstall Pivotal Driver for Crystal Reports

1 Repeat steps 1 to 5 as detailed in the procedure To modify Pivotal Driver for Crystal Reports on page 15-8.

2 In the Program Maintenance dialog box, click Remove, and then click Next.

3 Click Remove.

4 Click Finish when the process is complete.

Pivotal Driver for Crystal Reports is uninstalled.

Uninstalling Using Command-Line Parameters

You can uninstall Pivotal Driver for Crystal Reports using silent uninstall commands.

To uninstall from the command prompt

>> At the command prompt, type
msiexec /x {961C1F25-2BA9-417A-BA5F-49BEBC238BE6} /qn.

Pivotal Driver for Crystal Reports is uninstalled.
16

Setting up Mobile Systems
Prerequisites for Setting up Mobile Systems

Verify that you have completed all necessary preparations listed in Table 16-1 on page 16-2.

Table 16-1 Preliminary tasks for setting up a mobile system

<table>
<thead>
<tr>
<th>On This Computer</th>
<th>Do The Following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Directory</td>
<td>Create a mobile user in the domain where the mobile system resides.</td>
</tr>
<tr>
<td>Mobile computer</td>
<td>Add the mobile user to the Power Users or Administrators local group (optional). For more information, see Specifying Permissions on page 16-3.</td>
</tr>
</tbody>
</table>

Note: For mobile computers, only Pivotal Packaged Client is supported.

Mobile Deployment Considerations

Before deploying mobile systems, do the following:

- Verify if mobile systems meet system requirements
- Set up and test security groups
- Prepare a training plan
- Determine connection requirements
- Calculate disk space requirements
- Prepare a deployment plan

Ensuring Mobile Systems Meet System Requirements

To successfully deploy a mobile system, the mobile computer needs to meet the minimum system requirements listed in Pivotal CRM 6.0 Compatibility Guide. Verify all system requirements before deploying and installing mobile components.

Setting Up and Testing Security Groups

Before deploying mobile systems, set up the required security permissions and filters.

These filters and permissions control the data sent to the mobile system. For example, territory management limits the data seen by mobile users to only areas inside their assigned territory.
You can test security changes in a development environment. If you have not set up a development environment, see the *Pivotal Toolkit 6.0.13 Toolkit Guide*.

### Preparing a Training Plan

It is important to train users to synchronize data correctly and regularly. Training users to use the Mobile Synchronization Status application will help them administer the synchronization process.

### Determining Connection Requirements

It is important to consider how users connect remotely to the master system to synchronize their systems. Consider options such as dial-up connections and Virtual Private Networks (VPN).

### Calculating Disk Space Requirements

The amount of disk space required by mobile users is determined by the following:

- The size of the local database.

  The mobile computer must store a local copy of the Business Module and Enterprise Data. The parent system sends the data to the mobile computer in the form of compressed synchronization messages. After data is downloaded to the mobile computer, they need to be first restored to temporary files.

### Preparing a Deployment Plan

Review the installation process in this chapter and prepare a deployment plan, considering the following factors:

- To complete the installation process, the administrator requires access to the parent DSM server and the mobile user’s computer.
- The installation process is easier if the mobile computer is connected to the LAN during the installation process. This is especially true when a large replication set (or data set) needs to be sent to the mobile system.
- Deploying Pivotal Packaged Client on mobile computers.

### Specifying Permissions

To install mobile SyncStream components, do one of the following:

- Add the mobile user to the administrators local group on the mobile computer, and install and configure software while logged on as the mobile user.
- Log on to the mobile computer as the local administrator and perform the installation. Complete post-installation tasks while logged on as the mobile user.
To run Pivotal Client on the mobile computer:

- Log on as the mobile user.
- The mobile user either belongs to the Power Users or the Administrators local group.

**Note:** Power User permissions are the minimum required permissions for a mobile user. If the user is only a member of the Power Users group, the administrator will need to create an SQL login mapped to the Power Users group that grants `db_owner` access to the mobile Business Module, mobile Enterprise Data, and SyncStream databases. If the user is a member of the local administrators group, the user is authenticated using the built-in SQL login group BUILTIN\Administrators.

## Creating Mobile Systems

This section details the procedure to create mobile systems.

**To create mobile systems**

1. **Prepare the parent system**
2. **Install Pivotal CRM Prerequisites**
3. **Install mobile software**
4. **Access the Web store**
5. **Send a new mobile system**

## Preparing the Parent System

This section details the procedures to prepare the parent system for mobile deployment.

**To prepare the parent system**

1. **Add users to the Pivotal CRM system**
2. **Specify user properties**
3. **Assign licenses to mobile users**
4. **Add users to Pivotal CRM security**

## Adding Users to the Pivotal CRM System

Add users to the Pivotal CRM system. For more information, see **To add users to the Pivotal CRM system** on page 10-41.

## Specifying User Properties

Enter each mobile user’s e-mail address and HTTP Message Server on the parent system.
If you have not set up an administrative computer for the parent system, do the following on the parent system’s DSM server.

**To specify the mobile user's properties**

1. On the parent system’s administrative computer, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Click **Pivotal Administration Console**.

2. In the **Servers** pane, right-click **Data Synchronization**, and then click **Register Server**.

3. In the **Register Server** dialog box, click **Browse**, select the DSM server name from the list of servers, and then click **Register**.

4. In the **Servers** pane, expand **Data Synchronization**, and then expand the registered DSM server until you see the name of the parent system.

5. Double-click the parent system name.

6. In the **Users** pane, right-click the user, and then click **User Properties**.

7. In the **Email Address** box, type the user’s e-mail address.

8. In the **HTTP Message Server** box, click the name of the HTTP Message Server for the mobile’s parent system.

   If the DSM Server was not registered, then the HTTP Message Server may also not be registered. To select the right Message Server in the **HTTP Message Server** box, make sure the HTTP Message Server is registered from the HTTP Message Server branch.

9. In the **Language** drop-down list, select the user’s language.

10. Click **Apply**, and then click **OK**.

Specifying an e-mail address and the HTTP Message Server for the user does the following:

- Creates the UserIDXPTn user on the HTTP Message Server, and adds it to the PivotalHTTPSyncUsers local group on that computer. n will have different values in UserIDXPTn.

- Creates a Webstore folder for this user on the HTTP Message Server.

- Creates and sends an e-mail containing a URL to a page that enables the user to set up access to their system’s Webstore folder on the HTTP Message Server.

**Assigning Licenses to Mobile Users**

Assign licenses to mobile users. For more information, see *To assign licenses to users or groups* on page 6-7.
Adding Users to Pivotal CRM Security

Add users to the appropriate security groups. Security groups determine the information synchronized to the user’s mobile system and whether the user can read, modify, or delete this information. Security groups need to be created by customization specialists. For more information about security groups, see the *Pivotal Toolkit 6.0.13 Toolkit Guide*.

If a user is a part of multiple security groups, the filters in these groups may interact to produce unexpected results. Always test the security setup in a development environment before deploying mobile systems in the production environment.

For more information about adding users to security groups, see *To grant security permissions to users* on page 4-13.

Installing Pivotal CRM 6.0.10 Prerequisites or Later

Install Pivotal CRM 6.0.10 Prerequisites or later before you install Pivotal CRM.

**Note:** Before end users install Pivotal CRM, you (the administrator) must install all prerequisites on the mobile computer using the Pivotal CRM 6.0.10 Prerequisites installer. The Pivotal CRM 6.0.10 Prerequisites installer automatically sets the *Windows Presentation Foundation Font Cache 3.0.0.0 or 4.0.0.0* service *Startup* type to *Automatic*, and also sets the *Microsoft .NET Framework NGEN v4.0.xxxxx* service *Startup* type to *Manual*. This improves the startup performance of Pivotal Client 6.0.13.

**To install Pivotal CRM 6.0.10 Prerequisites**

1. Log on as the administrator on the mobile computer.
2. Extract the contents of the Pivotal CRM 6.0.10.1 Prerequisites (PREREQ6.0.10.zip) file to any folder on the mobile computer. The PREREQ6.0.10.zip file has installation files for Pivotal CRM 6.0.10 Prerequisites. Download the PREREQ6.0.10.zip file from the Product area at [Aptean Customer or Partner Portals](#).
3. Close Microsoft Outlook.
4. Browse to the folder with the contents of the PREREQ6.0.10.1.zip file and double-click the setup.exe.
5. In the *Pivotal CRM 6.0 Prerequisites - InstallShield Wizard*, click *Next*.
6. Accept the license agreement and click *Next*.
7. Click *Next*.
8. Click *Install*.
9. Click *Finish*. 
After installing Pivotal CRM 6.0.10 Prerequisites or later, restart the computer.

**The `setup.exe` installs the following:**

- Microsoft VSTO 2010 Tools for Office Runtime
- Microsoft .NET Framework 4
- Microsoft Visual C++ 2010 Runtime Libraries
- Microsoft Office Primary Interop Assemblies for Outlook 2007, or Outlook 2010.

The Pivotal CRM 6.0.10 Prerequisites or later installation also adds a new MAPI Message Store Provider (Pivotal CRM) to the `MAPISVC.INF`. The Message Store Provider can be added as a Data File to the Outlook profile to view Pivotal CRM Contacts, Leads, or Partners in Outlook. For more information, see the *Pivotal Integration 6.0 for Microsoft Outlook Help*.

### Installing Pivotal Mobile Software

The procedures in this section require local administrator permissions on the mobile computer.

**To install Pivotal mobile software**

1. **Install SyncStream mobile components**
2. **Install the mobile component of Business Server**
3. **Install Pivotal Packaged Client**
4. **Add additional environments (Optional)**

### Installing SyncStream Mobile Components

Before you install the mobile components on the mobile computer, stop all Pivotal applications such as Pivotal Business Server.

If you are re-installing any mobile components or running the installer in **modify** mode, you need to stop the `HttpSyncStat.exe`, and `Msync.exe` applications.

- To stop `HttpSyncStat.exe`, right-click the **Mobile Synchronization Status** icon in the Windows taskbar, and then click **Exit**.
- To stop `Msync.exe`, click the **Data Synchronization Client** icon in the Windows taskbar, and then click **Stop**.

The SyncStream installer creates mobile databases and ODBC data sources automatically. Ensure that the following conditions are met if SQL server is installed manually:

- SQL server is installed in the default instance: MSSQLSERVER
- TCP/IP protocol is enabled
- SQL Browser service is enabled and set to start automatically

Download installation files for Pivotal SyncStream 6.0.13 (PSS6.0.13withSQL.zip file) from the Product Downloads area at Aptean Customer or Partner Portals.

For more information about the contents of the PSS6.0.13withSQL.zip file, see Appendix A, Contents of Installation Zip Files.

To install SyncStream


2. Browse to the folder with the contents of the zip file and double-click the setup.exe file. If you are using PSS6.0.13.zip file, step 3 is not displayed.

3. Select the following:
   - **Pivotal SyncStream 6.0.13** check box to install Pivotal SyncStream 6.0.13.

4. Click **Install**.

5. Click **Next**.

6. Select the option to accept the license agreement and click **Next**.

7. Type the **User Name** and **Organization**, and then click **Next**.

8. Select **Mobile Components**, and then click **Next**.

9. Select the **Empty SQL Databases** check box. Type the domain and user name and then click **Next**.

   **Note:** If you have installed SQL Server as a named instance, the SyncStream installer is unable to create empty databases. Manually create databases by following the procedure **Manually Creating Mobile Databases** on page 16-9.

10. Click **Next** to install to the default location. To specify a different location for installation, log files, and temporary files click **Change Current Destination Folder**, browse to the new location and click **OK**, and then click **Next**.

11. Click **Install**.
11 Click Finish when the installation is complete. The mobile components of SyncStream are installed.

Manually Creating Mobile Databases

If you have installed SQL Server as a named instance, you must manually create databases on the mobile computer.

If mobile databases already exist, and you wish to use the same databases, proceed to step 32.

step 32 and after need to be performed only on mobile computers with Pivotal Packaged Client 6.0.13 installed. If you are using Pivotal SyncStream 6.0 Service Pack 7 and higher in an eRelationship r5.9 deployment, you do not need to perform these steps on mobile computers running Active Access r5.9 or Windows Access r5.9.

To manually create mobile databases

1 Browse to the folder with the contents of the PSS6.0.13.zip file.
2 Browse to the PSS 6.0 folder, and double-click the SQL2005 folder.
3 Modify createMobileDB.sql to enable creation of Business Module, Enterprise Data, and SyncStream databases. Replace all instances of ?0? with the path to the folder where the database files for the new databases are to be created. Replace all instances of ?1? with the user name of the mobile user.

Note: Include the name of the domain when specifying the user name of the mobile user. Specify the domain and user name following the format domain\username.

4 In SQL Server Management Studio Express, open and execute the createMobileDB.sql file. The Business Module, Enterprise Data, and SyncStream databases are created.

5 Navigate to the SyncStream installation folder (the default path is C:\Program Files\CDC Software\Pivotal CRM\SyncStream) and double-click SysMgr.exe.

On operating systems with User Account Control (UAC) enabled, such as Windows 7 or Windows Vista, you must run Pivotal Administration Console as an administrator. To run Pivotal Administration Console as an administrator, right-click sysmgr.exe, and select Run as administrator.

6 In the Servers pane of Pivotal Administration Console, right-click Data Synchronization, and click System Manager.

7 In the Pivotal System Manager dialog box, click New.

8 In the New System dialog box, click ODBC.

9 In the ODBC Data Source Administrator dialog box, click the System DSN tab, and then click Add.
10 In the **Create New Data Source** dialog box, click **SQL Server**, and then click **Finish**.

11 In the **Create a New Data Source to SQL** dialog box, do the following:
   - In the **Name** text box, type Mobile BM.
   - In the **Description** text box, type a description for the data source.
   - In the **Server** text box, type 127.0.0.1.

12 Click **Next**.

13 In the **Create a New Data Source to SQL Server** dialog box, click **Next**.
   This accepts the default, which is NT authentication.

14 In the **Create a New Data Source to SQL Server** dialog box, select the **Change the Default database to** check box.

15 In the **Database** drop-down list, click mobile_bm, and then click **Next**.

16 Click **Finish**.

17 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source**.
   The message in the window indicates whether or not the ODBC connection has been properly set up.
   If the test results are successful, click **OK**.
   If the connection was unsuccessful, verify the settings.

18 Click **OK**.

19 The ODBC connection for the Business Module is created. Repeat steps 9 to 18 to create an ODBC connection for the Enterprise Data. Repeat the steps again, to create an ODBC connection for the SyncStream database.

20 In the **New System** dialog box, type a system name for the target system in the **System Name** box.

21 Select Mobile BM from the **Business Module** drop-down list.

22 Select Mobile ED from the **Enterprise Data** drop-down list.

   **Note:** For the target system you define, ensure that the ODBC data sources connect to the correct databases.

23 In the This system definition is available for area, select the **Anyone who uses this computer (all users)** check box.

24 Click **OK**.

25 In the **Pivotal System Manager** dialog box, click **Close**.
26 In the Pivotal Administration Console window, expand **Data Synchronization**, then expand the registered DSM server until the Pivotal CRM systems are displayed.

27 Right-click the Production system and click **System Properties**.

28 In the **Properties** dialog box, click **Browse** beside the **File Path** box to specify the path to the `FilePath` folder.

29 In the **Browse for Folder** dialog box, click **OK**.

30 In the **Properties** dialog box, click **OK**.

31 Close Pivotal Administration Console.

32 On Windows XP mobile computers, ensure that the following have been installed, in order:
   a) Internet Information Services (IIS)
   b) ASP.NET

**Note:** You may need to manually configure ASP.NET by using the ASP.NET IIS Registration Tool (`Aspnet_regiis.exe`). See [http://msdn.microsoft.com/en-us/library/k6h9cz8h%28VS.90%29.aspx](http://msdn.microsoft.com/en-us/library/k6h9cz8h%28VS.90%29.aspx) for more details.

33 On Windows XP mobile computers, execute the following SQL statements in SQL Server Management Studio Express:

```
Listing 16-1 SQL statement for Windows XP mobile computers

declare @localAccount nvarchar(255)
set @localAccount = host_name()+'\ASPNET'

use <Mobile Enterprise Data database name>
exec sp_grantlogin @localAccount
exec sp_grantdbaccess @localAccount
exec sp_addrolemember 'db_datareader',@localAccount
```

**Note:** Replace `<Mobile Enterprise Data database name>` with the name of the Enterprise Data database of the mobile computer. Usually, the name of the database is `mobile_ed`.

34 On Windows Vista and Windows 7 mobile computers, execute the following SQL statements in SQL Server Management Studio Express:
The Pivotal CRM mobile system is defined.

**Installing the Mobile Component of the Business Server**

On the mobile computer, install the Mobile Component of the Business Server. For more information, follow the instructions in **Installation** on page 7-9. Also complete the steps detailed in **Configuring Pivotal Business Server** on page 7-12.

**Installing Pivotal Packaged Client**

Install Pivotal Packaged Client on the mobile computer. Pivotal Packaged Client consists of:

- Pivotal Client 6.0.13
- CDC Software Smart Client Framework 4.0
- Pivotal Integration 6.0.13 for Microsoft Outlook
- Pivotal Portal Resources 6.0.13

**Note:** User Authentication is not supported on Mobile Systems.

1. Log on to the Terminal Server or Citrix Server as an Administrator.

**Note:** Pivotal Packaged Client can also be installed on the Terminal Server or Citrix Server through a Remote Desktop Connection. Ensure that you use the Remote Desktop Connection in console mode while installing Pivotal Packaged Client.

2. Extract the contents of the PivotalPackagedClient6.0.13.zip file.

3. Browse to the folder with the contents of the PivotalPackagedClient6.0.13.zip file and run PivotalPackagedClient.msi.

---

**Listing 16-2 SQL statement for Windows Vista and Windows 7 mobile computers**

```sql
use <Mobile Enterprise Data database name>
exec sp_grantlogin 'NT AUTHORITY\NETWORK SERVICE'
exec sp_grantdbaccess 'NT AUTHORITY\NETWORK SERVICE'
exec sp_addrolemember 'db_datareader','NT AUTHORITY\NETWORK SERVICE'
```

**Note:** Replace `<Mobile Enterprise Data database name>` with the name of the Enterprise Data database of the mobile computer. Usually, the name of the database is `mobile_ed`.
4 In the **Custom Setup** screen, click **Next**.

5 In the **Pivotal Client Configuration** screen, specify details as shown in the table below.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment name</td>
<td>Specify an environment name. It is recommended that this name should be the same as the Pivotal CRM System name in upper case.</td>
</tr>
<tr>
<td>Environment description</td>
<td>Specify a brief description of the environment.</td>
</tr>
<tr>
<td>Pivotal system name</td>
<td>Specify the name of the Pivotal CRM System defined in Pivotal Administration Console.</td>
</tr>
<tr>
<td>Pivotal Business Server name</td>
<td>Specify the name of the Pivotal Business Server.</td>
</tr>
</tbody>
</table>

6 **Optional:** In the **Pivotal Client Configuration** screen, click **Advanced Options** to override the default for the parameters in the table below.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application title</td>
<td>The text to be displayed in the Pivotal CRM login window.</td>
</tr>
<tr>
<td>Start menu name</td>
<td>The text to be displayed in the <strong>Start</strong> menu shortcut for Pivotal Packaged Client.</td>
</tr>
<tr>
<td>Start menu folder</td>
<td>The name of the <strong>Start</strong> menu folder in which the Pivotal CRM shortcut should be displayed.</td>
</tr>
<tr>
<td>Start menu description</td>
<td>The text to be displayed in the tool tip for the shortcut. The text is also displayed in the <strong>Comment</strong> text box on the <strong>Shortcut</strong> tab of the <strong>Properties</strong> dialog box for the shortcut.</td>
</tr>
</tbody>
</table>

7 Click **Next**.

8 In the **Pivotal Client Configuration – Advanced** dialog, either proceed with the default destination folder or click **Change** to specify where to store the Client Task dll files.

   If the administrator specifies the folder path while installing Pivotal Packaged Client, the Client Task dll files are downloaded to the path specified. The Client Task dll files are shared by all the users using Pivotal Client on that machine. If the administrator does not specify the folder path while installing Pivotal Packaged Client, then individual folders are created in the **Documents and Settings** folder, which contains all the Client Task dll files downloaded for the logged-in users.

**Note:** When specifying the path for the Client Task dll download during Pivotal Packaged Client installation, ensure that the destination folder has Read/Write permissions, and if the network path is provided, ensure that the path is accessible and has Read/Write permissions.
9 Optionally specify the following settings:
   - **Form Display Layout** - Specify how the form layout should be displayed. By default, the **Right to Left** option is set to False.
   - **Windows Authentication** - Specify what authentication mode should be used. By default, the **Windows Authentication** option is set to True, which means that Windows Authentication is enabled.

10 Click **Next**.
11 Click **Finish** to complete the installation.

Pivotal Packaged Client is installed on the Terminal Server or Citrix server.

**Note:** It is mandatory to have Windows Installer 4.5 installed on ADS 2003 Server when installing or upgrading to Pivotal Packaged Client 6.0.13.

### Installing Pivotal Packaged Client Using Command-Line Parameters

Install Pivotal Packaged Client using silent install commands.

**To install using command-line parameters**

At the command prompt, type:

```
msiexec.exe /I "PivotalPackagedClient.msi" /quiet
ADDLOCAL=Pivotal_Packaged_Client,Common,OfficeIntegration,PBS,Pivotal_Client_Mobile_System ENV=<"Environment Name"> ENVDESC=<"Environment Description"> SYSTEMNAME=<"Name of the Production System"> PBSSERVER=<"Name of the Pivotal Business Server Computer"> /Lv* "C:\PivotalClientinstall.log
```

Pivotal Packaged Client is installed.

### Assigning Security Permissions for Mobile Users

Assign security permissions for Mobile users to ensure that Portal Pages are available for Mobile Clients. Ensure to add the mobile user to the Pivotal Portal Members Group in SharePoint before assigning the security permissions.

**To Assign Security Permissions**

1 Log on with administrator rights to the Customization System.
2 On the eTab, click **Security**, and then click **Manage Security**.
3 In the tree pane of the **Security** window, expand the desired security group, for example **Base CMS Features** and click the **Client** connection type.
4 In the **Security Permissions** window, click the **Tables** tab.
5 Select **Personalized_Portal_Page** and assign the following security permissions:
   - Create
   - Read
   - Modify
   - Delete

6 In the **Security Permissions** window, click the **Queries** tab.

7 Double-click **Personalized_Portal_Page**, and assign the **Scriptable** security permission for **My Portal Page for Portal?** and **Sys : My Portal Page for Portal?**

8 In the **Security Permissions** window, click the **Search Results Lists** tab.

9 Double-click **Personalized_Portal_Page** and assign the following security permissions for **Personalized Portal Page**:
   - Scriptable
   - Default

10 In the **Security Permissions** window, click the **Active Forms** tab.

11 Double-click **Personalized_Portal_Page** and assign the following security permissions for **Personalized Portal Page**:
   - Scriptable
   - Default

12 In the tree pane of the **Security** window, expand the desired security group, for example **Base CMS Features** and click the **Mobile** connection type.

13 In the **Security Permissions** window, click the **Tables** tab.

14 Select **Personalized_Portal_Page** and assign the **Read** security permission.

15 In the **Security Permissions** window, click the **Queries** tab.

16 Select **My Portal Page for Portal?** and assign the **Run** security permission.

**Creating Additional Environments for the Mobile Computer**

(Optional)

Create an additional environment on the mobile computer, so that mobile users can also connect to the Pivotal CRM system of the master or satellite system in the online mode. This step is optional.

For more information about environments, see Table 10-1 on page 10-7.

**To add an environment**

1 Administrator tasks
   a) Preliminary Steps
Defining the Additional Environment

To define the environment on the mobile computer, use an XML editor and edit the files listed in Table 16-2 on page 16-16. Add the definition of the environment (additional Pivotal CRM system) in each file. Each environment you define corresponds to a Pivotal CRM system name.

To edit the EnvironmentInstances.xml file

1 Log on to the mobile computer as the administrator.
2 Open Windows Explorer.
3 Browse to C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration
4 Open the EnvironmentInstances.xml file using an XML editor.
5 Locate the Environment id code for the existing Pivotal CRM system. For example, the lines for a Pivotal CRM system named MOBILE are:

   <Environment id="MOBILE" description="">
     <Instances><Instance name="PivotalClient"/></Instances>
   </Environment>

6 Copy the following lines of code and paste it below the </Environment> tag for the existing Pivotal CRM system.

   <Environment id="MASTER" description="">
     <Instances>
       <Instance name="PivotalClient"/>
     </Instances>
   </Environment>

Preliminary Steps

Before you configure the mobile computer, define and set up the additional Pivotal CRM system. For more information, see To set up Pivotal CRM systems on page 4-5.

Note: It is recommended that you specify Pivotal CRM system names in uppercase, without spaces.
where \texttt{MASTER} is the name of the additional environment corresponding to the Pivotal CRM system with the same name of the master system.

\textit{Listing 16-3} on page 16-17 lists the lines of code for the environments defined for two Pivotal CRM systems that are named \texttt{MOBILE} and \texttt{MASTER}.

\textbf{Listing 16-3 Edited EnvironmentInstances.xml file}

```xml
<?xml version="1.0" encoding="utf-8"?>
<EnvironmentInstances>
  <Environment id="MOBILE" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
  <Environment id="MASTER" description="">
    <Instances>
      <Instance name="PivotalClient"/>
    </Instances>
  </Environment>
</EnvironmentInstances>
```

7. Save and close the EnvironmentInstances.xml file.

\textbf{To edit the IafConfig.xml files}

- \textit{To edit the Pivotal Client IafConfig.xml file}
- \textit{To edit the Outlook Integration IafConfig.xml file (Pivotal Packaged Client Deployment)}

\textbf{To edit the Pivotal Client IafConfig.xml file}

1. Log on to the mobile computer as the administrator.
2. Browse to \texttt{C:\Program Files\CDC\Software\PivotalClient\PivotalClient.PerMachine\exe}.
3. Open the \texttt{IafConfig.xml} file with any XML editor.
4. Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system. \textit{Table 16-4} on page 16-18 shows the lines of code for an environment defined for a Pivotal CRM named \texttt{MOBILE}.
Listing 16-4 Lines of code in the Pivotal Client lafConfig.xml file

```xml
<Environment id="MOBILE" description="Mobile system">
    <Metadata>
        <Services>
        </Services>
        <LocalizationSearchOrder>
            <Service name="Pivotal Language Dictionary MetaDataService Provider" />
            <Service name="Pivotal Resource String MetaDataService Provider" />
        </LocalizationSearchOrder>
    </Metadata>
    <CommandService>
        <CommandProviders>
        </CommandProviders>
    </CommandService>
    <NavigationService>
        <!-- no filters definition means that it'll use the simple aggregator..... -->
    </NavigationService>
    <PivotalCRM>
        <DefaultSystem systemName="MOBILE" serverUrl="http://MOBILEPC1"/>
        <Help url="Pivotal_Client.chm"/>
        <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm"/>
        <Settings rightToLeft="false" windowsAuthentication="true"/>
    </PivotalCRM>
</Environment>
```
5 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing mobile Pivotal CRM system. Replace
   
   • <Environment id="MOBILE" description="Mobile system">
     with <Environment id="MASTER" description="Master system">
     where MASTER is the name of the parent master or satellite Pivotal CRM system.
   
   • <DefaultSystem systemName="MOBILE" serverUrl="http://MOBILEPC1" />
     with <DefaultSystem systemName="MASTER" serverUrl="http://MASTERPBS" />
     where MASTER is the name of the parent master or satellite Pivotal CRM system and MASTERPBS is the name of the Business Server for the parent master or satellite deployment.

6 Save and close the IafConfig.xml file.

To edit the Outlook Integration IafConfig.xml file (Pivotal Packaged Client Deployment)

1 Log on to the mobile computer as the administrator.

2 Browse to the C:\Program Files\CDC Software\PivotalClient\PivotalClient.PerMachine\exe\bin\Standard\Office Integration folder.

3 Open the IafConfig.xml file with any XML editor.

4 Locate and select the lines of code for the environment that is defined for the existing Pivotal CRM system.
Listing 16-5  Lines of code in the Outlook Integration ifConfig.xml file (Pivotal Packaged Client Deployment)

```xml
<Environments>
  <Environment id="SYSTEMONE" description="first system">
    <Metadata>
      <Services>
      </Services>
      <LocalizationSearchOrder>
        <Service name="Pivotal Language Dictionary MetadataService Provider" />
        <Service name="Pivotal Resource String MetaDataService Provider" />
      </LocalizationSearchOrder>
    </Metadata>
    <CommandService>
      <CommandProviders>
        <CommandProvider name="CRM" class="CDC Software.Pivotal.Engine.Client.CommandProvider.PivotalCommandProvider"
          assembly="Pivotal.Engine.Client.CommandProvider,Version=6.0.13.0, Culture=neutral, PublicKeyToken=null" repository="PivotalClient" useLocalizationFilter="false" />
      </CommandProviders>
    </CommandService>
    <NavigationService>
      <!-- no filters definition means that it'll use the simple aggregator.... -->
    </NavigationService>
    <PivotalCRM>
      <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS" />
      <Help url="Pivotal_Client.chm" />
      <WorkflowHelp url="PivotalHelp\Visual_Workflow_Help.chm" />
      <Settings rightToLeft="false" windowsAuthentication="true" />
    </PivotalCRM>
  </Environment>
</Environments>
```
5 Copy and paste the lines of code selected in the previous step below the </Environment> tag of the environment defined for the existing Pivotal CRM system. Replace:

- <Environment id="SYSTEMONE" description="first system"> with <Environment id="NEWSYSTEM" description="second system"> where NEWSYSTEM is the name of the additional Pivotal CRM system.
- <DefaultSystem systemName="SYSTEMONE" serverUrl="http://PBS1" /> with <DefaultSystem systemName="NEWSYSTEM" serverUrl="http://PBS" /> where NEWSYSTEM is the additional Pivotal CRM system and PBS is the name of the Business Server.

6 Repeat step 5 for every additional Pivotal CRM system.

7 Save and close the IafConfig.xml file.

The IafConfig.xml files are edited.

Accessing the Webstore

Before you can send a new mobile system, authenticate the mobile user's profile by connecting to their Webstore folder in the HTTP Message Server of the parent system. When the inbox (Webstore folder) is created for the mobile user, the same token is downloaded on the mobile machine. The token contains connectivity information that allows the mobile user to connect to the HTTP Message Server in order to retrieve and deploy synchronization messages.

Do one of the following:

- Open an e-mail message. This needs to be done by the mobile user, as it requires logging in to their e-mail messaging application.
- Navigate directly to a Web page. This needs to be done by the system administrator who is setting up the mobile system.

Both methods require a network connection.

To authenticate through an e-mail message

1 On the mobile computer, log on as the mobile user.

2 Open the e-mail messaging application, and then open the e-mail message with the subject Local Configuration.

3 Click the URL, and then click Yes when prompted to download a plug-in.

A browser window opens displaying a progress message. Your configuration is confirmed with the following message.

Configuration Succeeded
To authenticate through a Web page

1  On the mobile computer, open Internet Explorer and go to http://<computername>/SyncStream/Admin/Config/MIS.htm. Replace computername with the name of the HTTP Message Server where the user’s Webstore folder resides.

2  In the User Name text box, type the name of the user for this computer. The user name field is case-sensitive.

3  In the System drop-down list, select the system for the user. The names are in the format Servername-Systemname.

4  Click Configure Local System. This performs the same actions as if you clicked the URL in the local configuration e-mail. If the user name is incorrect, a message is displayed.

The user’s profile is now authenticated for their Webstore folder in the HTTP Message Server.

Sending a New Mobile System

To begin the mobile synchronization process, the parent system sends the Business Module, a subset of the Enterprise Data, and the FilePath contents to the mobile system.

To send a new mobile system

1  Start mobile synchronization from the parent system
2  Download synchronization messages
3  Restore data to the mobile system

You can check for notifications of certain synchronization events in the notification log on the parent system. For more information, see the Pivotal SyncStream 6.0.13 Administration Guide and the Pivotal SyncStream 6.0.13 Mobile Synchronization Status Help.

If you have not set up an administrative computer for the parent system, do the following on the DSM server of the parent system.

Mobile Synchronization with SQL Server

This section is specific to SQL Server deployments. Oracle users, refer to the procedure detailed in Mobile Synchronization with Oracle on page 16-23.
To start mobile synchronization on the parent system

1 On the parent administrative computer, log on with administrator permissions.

2 Click Start, point to Programs, point to CDC Software, and then point to Pivotal CRM. Then, click Pivotal Administration Console.

3 On the Servers pane, expand Data Synchronization, then expand the registered DSM server until you see the parent system name.

4 If the DSM server is running, stop and then restart the server. If the system is not running, right-click the parent system name, and then click Start DSM. Data synchronization begins when (Running: <source system name>) appears beside the server name. Stopping the DSM first is required only when security changes were made in the current DSM session. You need to restart the server only once for each set of security changes and not for each start of a mobile synchronization process. If in the current DSM session there were no security changes made, there is no need to restart the DSM.

5 On the Users pane, right-click the mobile user name, and then click Start Synchronization.

   To select multiple users or groups, select user IDs by using one of the following methods:
   • Hold SHIFT for contiguous selection
   • Hold CTRL for non-contiguous selection

   Right-click the selection, and then click Start Synchronization. In the Start Synchronization dialog box, select Start Mobile Synchronization and then click OK.

   A Send System progress dialog box is displayed. The processing time depends on the size of the data set being replicated.

6 When the process is complete, click Close.

Mobile Synchronization with Oracle

This section is specific to Oracle deployments. SQL Server users, refer to the procedure detailed in Mobile Synchronization with SQL Server on page 16-22.

To start mobile synchronization on the parent system

1 On the parent administrative computer, log on with administrator permissions.

2 Click Start, point to Programs, point to Pivotal, and then click Pivotal Administration Console.

3 On the Servers pane, expand Data Synchronization, then expand the registered DSM server until you see the parent system name.
If the DSM server is running, stop and then restart the server. If the system is not running, right-click the parent system name, and then click **Start DSM**. Stopping the DSM first is required only when security changes were made in the current DSM session. You need to restart the server only once for each set of security changes and not for each start of a mobile synchronization process. If in the current DSM session there were no security changes made, there is no need to restart the DSM.

In the **Pivotal Login** dialog box, type the user’s ID and password for the parent system’s Oracle user, and then click **OK**.

In the **Pivotal Login** dialog box, type the user’s ID and password for the parent system’s Oracle user, and then click **OK**.

On the **Users** pane, right-click the mobile user name, and then click **Start Synchronization**.

To select multiple users or groups, select user IDs by using one of the following methods:

- Hold SHIFT for contiguous selection
- Hold CTRL for non-contiguous selection

Right-click the selection, and then click **Start Synchronization**. In the **Start Synchronization** dialog box, select **Mobile Synchronization**.

A **Send System** progress dialog box is displayed. The processing time depends on the size of the data set being replicated.

When the process is complete, click **Close**.

### Downloading Synchronization Messages

This section details the procedure to download synchronization messages.

**To download synchronization messages**

1. On the mobile computer, connect to the network, either through a modem or through the LAN, and log on as the mobile user.

2. If the Mobile Synchronization Status application is not running, click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then click **Mobile Synchronization Status**.

3. On the Windows taskbar, double-click the **Mobile Synchronization Status** icon.

4. In the **Settings** tab, ensure the **Automatically receive data when a connection exists** check box is selected.

5. In the **Summary** tab, ensure that the **Automatic Startup** check box is selected and that a valid system is specified.

6. Click **Start** in the Data Synchronization Status area if the DSM is not running.
When the Pivotal Mobile Synchronization Status application detects the connection, it automatically downloads synchronization messages from the Webstore folder of the mobile system on the HTTP Message Server. You need not repeat this procedure again, as the mobile system will upload or download messages as soon as a connection with the HTTP Message Server is established.

To view the progress of the download

>> In the Mobile Synchronization Status window, click the Status tab and look at the message under Receiving.

Restoring Data

To restore downloaded synchronization messages to the new Pivotal CRM databases on the mobile, start the mobile DSM.

To restore data

1. Log on to the mobile computer as the administrator or the mobile user.
2. You will see the Pivotal Restore System dialog box displayed informing you that the Pivotal Administrator has sent a mobile system. Process the new mobile system to ensure that the mobile Pivotal CRM system is up to date. Select either of the following options:
   - Process Now to process the mobile system immediately.
   - Remind Me in and then select the time interval after which a reminder is to be displayed.
3. Click OK.
   The restore process can take several hours, depending on the size of the databases.
4. The Restore System dialog box displays the progress of the restore command. Click Stop to stop the progress.

To delay the restore process

>> In the Pivotal Restore System dialog box, select the Remind me in option, and then select 2, 5 or 10 minutes from the drop-down list. When the specified time has elapsed, you are prompted to complete the restore process.

To hide the progress meter during the restore process

>> In the Synchronization Progress dialog box, click Close. This does not stop the restore process.
   The warning concerning the system upgrade persists even if you close the Synchronization Progress dialog box.
To stop the restore process

>> In the Synchronization Progress dialog box, click Stop, and then click Close. Restart the DSM using the Mobile Synchronization Status application to resume the restore process.

Starting the Pivotal Administration Console

Installing the mobile components also automatically installs Pivotal Administration Console, which is a tool for administrators. Pivotal Administration Console is not displayed on the Pivotal CRM submenu.

To start the Pivotal Administration Console on a mobile system

>> In Windows Explorer, navigate to the \Pivotal CRM\SyncStream subfolder (the default path is C:\Program Files\CDC Software\Pivotal CRM\SyncStream) and double-click SysMgr.exe.

Best Practices

1  When working with mobile systems, the mobile computer must not connect to the CDC Software Smart Client Framework Web page of the master or satellite system.

2  To work with a Pivotal CRM system in the offline mode, run Pivotal CRM and connect to the mobile environment defined on the mobile computer.

3  To connect to the master system, run Pivotal CRM and select the master system environment defined on the mobile computer.

4  If Internet Explorer 7, 8 and 9 is installed on the mobile computer, add the local server (http://<local server name>) to the list of trusted sites in the Internet Options dialog box of Internet Explorer, where local server name is the name of the mobile computer.

5  For Pivotal Integration 6.0 for Microsoft Outlook to function properly when Microsoft Outlook is closed, the user should download and store the offline Microsoft Outlook address book.

For instructions for silent installation of Pivotal SyncStream using Command Line parameters and uninstalling Pivotal SyncStream components, see Setting up the Master System on page 8-1.
17

Troubleshooting
Troubleshooting

Overview

This appendix provides basic troubleshooting information. For current troubleshooting information, see *Troubleshooting Pivotal CRM 6.0* available from the Product Documentation area of Product Downloads area in the Aptean Customer Portal and Partner Portal.

FAQ: What are the log files available and how do I change the location

*Table 17-3* on page 17-2 displays the Client side log file, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.

<table>
<thead>
<tr>
<th>Log File and Description</th>
<th>Location of the Log File</th>
<th>Configuration File Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pivotal Integration 6.0 for Microsoft Outlook</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OfficeIntegration.log</td>
<td>\Documents and Settings\username\CDC Software</td>
<td>Location: ..\Program Files\CDC Software\SmartUpdator\40\Packages\PivotalOfficeIntegration\OI\afconfig\6.0.x.x\bin\Standard\OfficeIntegration\IafConfig.xml. Change: Locate, and replace the code &quot;${USERPROFILE}\CDC Software\OfficeIntegration.log&quot; with the path where you want the OfficeIntegration.log to be available, for example c:\Pivotal CRM\OfficeIntegration.log.</td>
</tr>
<tr>
<td>Logs errors related to Pivotal Integration 6.0 for Microsoft Outlook.</td>
<td>..\Documents and Settings\username\CDC Software For Windows Vista and Windows 7 operating systems: ..\users\username\CDC Software</td>
<td></td>
</tr>
<tr>
<td><strong>Pivotal Client 6.0</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The Server side logs for Pivotal Integration 6.0 for Microsoft Outlook can be found in the Application log of the Event Viewer. The Client side logs for Pivotal Integration 6.0 for Microsoft Outlook can also be found in the Application log of the Event Viewer, provided the user has administrator rights.
### Table 17-3 Client side Log Files (Continued)

<table>
<thead>
<tr>
<th>Log File and Description</th>
<th>Location of the Log File</th>
<th>Configuration File Changes</th>
</tr>
</thead>
</table>
| PivotalClient.log        | ..\Documents and Settings\<username>\LocalSettings\Application Data\CDC Software\Smart Client\PivotalClient.<InstanceServerName>.exe | **Location:** ..\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\6.0.x.x\IafC onfig.xml.  
**Change:** Locate and replace the code "$(LocalUserData)/PivotalClient.log" with the path where you want the PivotalClient.log to be available.  
In a Pivotal Packaged Client deployment, locate and replace the code "$(RoamingData)/PivotalClient.log" with the path where you want the PivotalClient.log to be available. |
| IafTrace.log             | ..\Documents and Settings\edexceluser\Local Settings\Temp directory | The path of this file cannot be changed. |
| SmartLauncher.log        | ..\Documents and Settings\<username>\LocalSettings\Application Data\CDC Software\Smart Client\PivotalClient \<PBSServer Name> | **Location:** ..\Program Files\CDC Software\Smart Updater\40\Instances\PivotalClient\SmartLaunche r.exe.config  
**Change:** Locate and replace the code "$(LocalUserData)/SmartLauncher.log" with the path where you want the SmartLauncher.log to be available. |

Table 17-4 on page 17-4 displays the list of the Pivotal Toolkit log files, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.
### Table 17-4 Pivotal Toolkit Log Files

<table>
<thead>
<tr>
<th>Log File and Description</th>
<th>Location of the Log File</th>
<th>Configuration File Changes</th>
</tr>
</thead>
</table>
| FormsDesigner.log        | ..\Program Files\CDC Software\Pivotal CRM\Pivotal Toolkit\Logs | **Location:** ..\Program Files(x86)\CDC Software\Pivotal CRM\Pivotal Toolkit\IafConfig.xml  
**Change:** Locate and replace the code "$(LocalUserData)/FormsDesigner.log" with the path where you want the FormsDesigner.log to be available. |
| Relation.err             | Available at the root of the C drive. | The location of this file cannot be changed, |
| Relation.log             | Available at the root of the C drive. | You can change the location of the Relation.log by launching Pivotal Toolkit, and then selecting Advanced > Setup. Then select the Log SQL to File check box, and change the location to the path where you want the Relation.log file to be available. |

**Table 17-4** on page 17-4 displays the details of the log file present on the Deployment Server, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.

### Table 17-5 Updater Log File

<table>
<thead>
<tr>
<th>Log File and Description</th>
<th>Location of the Log File</th>
<th>Configuration File Changes</th>
</tr>
</thead>
</table>
| Updater.log              | ..\Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40\Logs | **Location:** ..\Program Files\CDC Software\Smart Updater\40\UpdaterServiceWebApp\40\IafConfig.xml  
**Change:** Locate and replace the code "Log\Updater.log" with the path where you want the Updater.log to be available. |

**Table 17-5** on page 17-5 lists the details of the of log file related to Pivotal Synchronization Service 6.0 for Microsoft Exchange present on Microsoft Exchange Server, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.

Table 17-6 on page 17-5 lists the details of the of log file related to Pivotal Synchronization Service 6.0 for Microsoft Exchange present on Microsoft Exchange Server, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.
Troubleshooting

Table 17-7 on page 17-5 lists the details of the log file related to Portal Resources which is present on the SharePoint server, the location of the respective configuration file, and the code in the configuration file which can be modified to change the location of the log file.

Table 17-7 Portal Resources Log File

<table>
<thead>
<tr>
<th>Log File and Description</th>
<th>Location of the Log File</th>
<th>Configuration File Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal.log</td>
<td>c:\PortalLog folder</td>
<td>Location: c:\PortalLog\portal.config Change: Locate and replace the code &quot;c:\PortalLog\portal.log&quot; with the path where you want the Portal.log to be available.</td>
</tr>
</tbody>
</table>

The SyncStream log collector enables administrators to collect all the SyncStream log files on a server in a single zip file. To launch the SyncStream Log Collector, browse to the SyncStream installation folder on your server and double-click SyncStreamLogCollector.exe.

For more information about Log Collector usage, including command line options, see the Pivotal SyncStream Administration Guide.

SyncStream logs are stored in the location specified in the Log files text box on the General tab of the Server Properties dialog box. The default location is ..\CDC Software\Pivotal CRM\SyncStream\Logs.

To specify the location for the SyncStream log files

1 In Pivotal Administration Console, right-click the DSM server and click Properties.

2 The Log files field on the File Locations tab specifies the path to the SyncStream log files. You can change this location and specify your own path.
FAQ: How do I change the logging level of the logs created

The logging level of the log files can be changed by modifying the configuration file associated to each log file as listed in the FAQ: What are the log files available and how do I change the location on page 17-2. Table 17-8 on page 17-6 displays the details of the logging levels of the log files, and the configuration file changes to change the logging level of the log files.

Table 17-8 Log Levels of the log files

<table>
<thead>
<tr>
<th>Log File</th>
<th>Log Levels</th>
<th>Configuration File changes to change the Log Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>OfficeIntegration.log for Pivotal Integration 6.0 for Microsoft Outlook</td>
<td>Levels of Verbosity:</td>
<td>Change: In the IafConfig.xml file, locate, and replace the logging level in the code &lt;level value=&quot;WARN&quot; /&gt; with the logging level of your choice. For example, &lt;level value=&quot;INFO&quot; /&gt;. By default in the IafConfig.xml, the logging level is set to WARN.</td>
</tr>
<tr>
<td></td>
<td>1) ERROR: Least verbose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) WARN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) INFO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) DEBUG: Most verbose</td>
<td></td>
</tr>
<tr>
<td>OfficeIntegration.log for Pivotal Synchronization Service 6.0 for Microsoft Exchange</td>
<td>Levels of Verbosity:</td>
<td>Change: In the IafConfig.xml file, locate, and replace the logging level in the code &lt;level value=&quot;WARN&quot; /&gt; with the logging level of your choice, for example: &lt;level value=&quot;INFO&quot; /&gt;. By default in the IafConfig.xml, the logging level is set to WARN.</td>
</tr>
<tr>
<td></td>
<td>1) ERROR: Least verbose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) WARN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) INFO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) DEBUG: Most verbose</td>
<td></td>
</tr>
<tr>
<td>Portal.log</td>
<td>Levels of Verbosity:</td>
<td>Change: In the Portal.Config file locate, and replace the logging level in the code &lt;level value=&quot;DEBUG&quot; /&gt; with the logging level of your choice, for example: &lt;level value=&quot;INFO&quot; /&gt;. By default in the Portal.Config file, the logging level is set to WARN.</td>
</tr>
<tr>
<td></td>
<td>1) ERROR: Least verbose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) WARN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) INFO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) DEBUG: Most verbose</td>
<td></td>
</tr>
</tbody>
</table>
## Troubleshooting

### Levels of Verbosity:

1) **ERROR**: Least verbose
2) **WARN**
3) **INFO**
4) **DEBUG**: Most verbose

### Change:

In the `IafConfig.xml` file, locate and replace the logging level in the code `<level value="WARN" />` with the logging level of your choice, for example: `<level value="INFO" />`. By default in the `IafConfig.xml`, the logging level is set to **WARN**.

### Log Levels of the log files (Continued)

<table>
<thead>
<tr>
<th>Log File</th>
<th>Log Levels</th>
<th>Configuration File changes to change the Log Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PivotalClient.log</td>
<td>Levels of Verbosity:</td>
<td><strong>Change:</strong> In the <code>IafConfig.xml</code> file, locate, and replace the logging level in the code <code>&lt;level value=&quot;WARN&quot; /&gt;</code> with the logging level of your choice, for example: <code>&lt;level value=&quot;INFO&quot; /&gt;</code>. By default in the <code>IafConfig.xml</code>, the logging level is set to <strong>WARN</strong>.</td>
</tr>
<tr>
<td></td>
<td>1) ERROR: Least verbose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) WARN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) INFO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) DEBUG: Most verbose</td>
<td></td>
</tr>
<tr>
<td>FormsDesigner.log</td>
<td>Levels of Verbosity:</td>
<td><strong>Change:</strong> In the <code>IafConfig.xml</code> file, locate and replace logging level in the code <code>&lt;level value=&quot;WARN&quot; /&gt;</code> with the logging level of your choice, for example: <code>&lt;level value=&quot;INFO&quot; /&gt;</code>.</td>
</tr>
<tr>
<td></td>
<td>1) INFO: Most Verbose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) DEBUG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) ALL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) WARN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5) ERROR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6) FATAL: Least Verbose</td>
<td></td>
</tr>
<tr>
<td>Relation.err</td>
<td>The verbosity of these log files cannot be changed.</td>
<td></td>
</tr>
<tr>
<td>Relation.log</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Troubleshooting

#### FAQ: Pivotal Integration 6.0 For Microsoft Outlook

I cannot view the Pivotal CRM Toolbar in Microsoft Outlook after I have launched Pivotal Client

Pivotal CRM Add-In has not been registered on the client machine. The Pivotal CRM toolbar is not displayed in Microsoft Outlook.

**To register Pivotal CRM Add-In on the Client machine**

1. Click **Start**, point to **Programs**, and then click **CDC Software**, point to **Pivotal CRM**, and then click **Pivotal CRM**.

2. In the **Pivotal CRM** login window:
   a) Click the **Options** drop-down list.

### Table 17-8 Log Levels of the log files (Continued)

<table>
<thead>
<tr>
<th>Log File</th>
<th>Log Levels</th>
<th>Configuration File changes to change the Log Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IafTrace.log</td>
<td>The log levels of this file cannot be changed.</td>
<td></td>
</tr>
</tbody>
</table>
| SmartLauncher.log    | Levels of Verbosity:  
1) ERROR: Least verbose  
2) WARN  
3) INFO  
4) DEBUG: Most verbose | In the `SmartLauncher.exe.config` file perform the following steps:  
1) Add the following node as a child node in the `IafConfiguration` node:  
   ```xml  
   <log4net>  
   <root>  
   <level value="WARN" />  
   </root>  
   </log4net>  
   ```  
2) Replace the logging level in the code `<level value="WARN" />` with the logging level of your choice, for example: `<level value="INFO" />`. |
| Updater.log          | Levels of Verbosity:  
1) ERROR: Least verbose  
2) WARN  
3) INFO  
4) DEBUG: Most verbose | Change: In the `IafConfig.xml` file, locate and replace the logging level in the code `<level value="WARN" />` with the logging level of your choice, for example: `<level value="INFO" />`. By default in the `IafConfig.xml`, the logging level is set to `WARN`. |
b) Select the environment from the **Environment** drop-down list. Every environment corresponds to a Pivotal CRM system.

c) Click **Pivotal CRM** to log on to the Pivotal CRM system.
Pivotal Client opens.

3 From the **Tools** menu select **Options**.

4 In the **Options** dialog box select the **Outlook Add-in** tab. The Active Add-in area reads **No Outlook Integration add-in has been installed**.

5 Click **Install Add-In** in the Available Add-In area.
Pivotal Integration 6.0 For Microsoft Outlook is registered. The Pivotal CRM toolbar available in Outlook.

### How do I install updates for Pivotal Integration 6.0 For Microsoft Outlook if the automatic update process fails?

When updates are not installed automatically, you can install them manually on the Client computer.

**To install updates for Pivotal Integration 6.0 For Microsoft Outlook**

1 Repeat steps 1 to 3 outlined in *To register Pivotal CRM Add-In on the Client machine* on page 17-8 and proceed to step 2.

2 In the **Options** dialog box in the Update Available area click **Install Add-In Update**.

Updates for Pivotal Integration 6.0 For Microsoft Outlook are installed on the Client computer.

### Attachments for linked interactions appear blank

**Problem:** Contents of attachments for linked interactions appear blank when the interaction is opened in Pivotal Client by another user or if the interaction has been deleted from Outlook.

**Resolution:** Pivotal Integration for Microsoft Outlook has a configuration setting to restrict the type and size of attachments that will be saved in the database. This configuration option is available in the **Global Options** dialog box in Pivotal Toolkit. For attachments that are excluded from being saved to the Pivotal CRM database, only a placeholder will be saved in the database, with no content.
Troubleshooting Pivotal Client

Error communicating with RemoteSmartUpdater. Please check the log for more details.

Possible Causes

- The CDC Software Manager could not connect to the deployment server.
- This error usually occurs when installing or running Pivotal Client, or the CDC Software Manager.

Resolution

On the deployment server, verify if the ASP.NET 4.0 Web Service Extension is listed and allowed.

To verify if the ASP.NET v4.0 Web Service Extension is listed and allowed

1. Click Start and then click Run.
2. Type inetmgr in the Run dialog box and click OK.
3. In the Internet Information Services (IIS) Manager window, click Web Service Extensions.
4. Verify if the ASP.NET 4.0 server extension is listed in the Web Service Extensions pane.
5. If ASP.NET is not listed in the list of Web Service Extensions, then register ASP.NET on the IIS Web Server.
   a) Open a DOS command-prompt window and change the directory to <windows directory>\Framework\v4.0.xxxxx\directory
   b) Run the following command:
      aspnet_regiis -i-enable
      This will register the ASP.NET extension.
      For more information about this command type aspnet_regiis -? in the Run dialog box and click OK.
6. Allow the ASP.NET Web service extension using IIS Manager.
   a) Click Start and then click Run.
   b) Type inetmgr in the Run dialog box and click OK.
   c) In the Internet Information Services (IIS) Manager window, expand Web Service Extensions.
   d) Right-click the ASP.NET v4.0 Web Service Extension in the Web Service Extension pane and select Allowed.

If the error persists, check the IafTrace.log file to view the error message. The log file is located in the temp folder.
To access the log file

>> Click **Start** and then click **Run**. Type the `%temp%\Iaftrace.log` command in the **Run** dialog box and click **OK**.

1 If you see a log entry for error accessing `<windows directory>\system32\log\updater.log`, then do the following:
   a) Change the `C:\Program Files\CDC Software\SmartUpdater\UpdaterServiceWebApp\40\IafConfig.xml` config file.
   b) Create a log entry to a folder where ASP.NET users have rights to create and modify files.

The configuration entry for the log file is in the following format:
`<LogFile>log\updater.log</LogFile>`

2 If you see a log entry for error accessing `<windows directory>\temp\<some csharp file>.cs`, then grant the ASP.NET user permissions to the `<windows directory>\temp` folder.

If you see an error with `System.Web.Services.Protocols.SoapException: Server was unable to process request. ---> Unable to generate a temporary class (result=1). Source file 'C:\Windows\TEMP\<some csharp file>.0.cs' could not be found Or No inputs specified, then grant Read and List Folder Contents permissions to Users(<Machine name>\Users) in the **Security** tab.

3 If you see a log entry for error accessing `<windows directory>\assembly\IafConfig.xml`, then do the following:
   a) Go to Global Assembly Cache `<windows directory>\assembly`.
   b) Remove the registered `CdcSoftware.Ios.dll` file.

If none of the above work, run the IAF virtual directory with anonymous access.

To run the IAF virtual directory with anonymous access

1 Click **Start** and then click **Run**.
2 Type `inetmgr` in the **Run** dialog box and click **OK**.
3 In the **Internet Information Services (IIS) Manager** window, expand **Web Sites** and then expand **IAF**.
4 Right-click **IAF** and select **Properties**.
5 Click the **Directory Security** tab, click **Edit** in the **Authentication and access control** area.
6 In the **Authentication Methods** window:
   a) Select the **Enable anonymous access** check box.
   b) Type the **User name** and **Password**.
   c) Click **OK**.
7 Click **OK**.
8 Close the **Internet Information Services (IIS) Manager** window.
9  Click **Start** and then click **Run**.

10  Type `iisreset` in the **Run** dialog box and click **OK**.

**Unable to Run Pivotal Client using the Run As option**

**Problem**

You cannot run Pivotal Client using the Run as option with another user account.

**Resolution**

To run Pivotal Client with another user account using the Run as option, do the following:

1  Log on to the client computer as **User A**.

2  Copy the **Pivotal CRM** shortcut and rename it to **Pivotal CRM User A**.

3  Log off the client computer as **User A**.

4  Log on to the client computer as **User B**.

5  Install Pivotal Client using the CDC Software Manager.

6  Copy the **Pivotal CRM** shortcut to a folder that can be accessed by **User A**.

7  Rename the **Pivotal CRM** shortcut to **Pivotal CRM User B**

8  Log off the client computer as **User B**.

9  Log on to the client computer as **User A**.

10 Right-click the **Pivotal CRM User B** shortcut and select **Run as**.

11 Select **The following user**.

12 Type the user name and password

13 Click **OK**.

Pivotal Client opens.

**The install process requires the system to be restarted**

**Problem**

Installation error requiring reboot.

**Possible Cause**

The `PendingFileRenameOperations` registry value is not removed from the \HKLM\SYSTEM\CurrentControlSet\Control\Session Manager\ registry key.

**Resolution**

If this registry value exists and has a value, Pivotal Client prompts you to reboot before going ahead with installation tasks.
Why is it that I'm unable to launch Pivotal Client in an Oracle environment?

Pivotal Business Server may not have started as it may not have been able to connect to the Oracle database, which in turn causes Pivotal Client to not start.

**Possible Cause**

1. .NET Framework 4 must be installed before installing Oracle Client, or else the Oracle Data Provider for .NET 4 will not be installed.
2. Wrong version of Oracle Client is installed.
3. If Oracle Data Provider for .NET 4 is not installed on the Pivotal Business Server.
4. On 64-bit Windows, the 64-bit Oracle Client and/or Oracle drivers is installed instead of the 32-bit Oracle Client and Oracle drivers.

**Resolution**

1. Install .NET Framework 4 and install Oracle Data Provider for .NET 4.
2. Uninstall the incorrect version of Oracle Client and install the correct version of Oracle Client.
3. Install the Oracle Data Provider for .NET 4.
4. Uninstall the 64-bit Oracle client and associated drivers and install the 32-bit Oracle Client and associated drivers.

Unable to browse any ASP.Net page in the IAF Directory

**Possible Cause**

The ASP.Net version is 2.0.

**Resolution**

Set the ASP.Net version of all the products to 4.0 in the IAF Directory.

**Troubleshooting Pivotal SyncStream**

Unable to Restore RDF Files

**Problem**

Unable to restore RDF files using the **Restore System** dialog box of Pivotal Administration Console

**Possible Cause**

The FilePath folder is not specified for the Pivotal CRM system.

**Resolution**

Specify the FilePath folder. For more information, see *To specify the FilePath folder* on page 4-12.
Troubleshooting Portal Pages

Unable to back up and restore Portal pages

Problem

The **Restore Portal Pages** and **Save Portal Pages** boxes are disabled in the **Restore System** and **Save System** dialog boxes of Pivotal Administration Console.

Possible Cause

The URL of the portal server is not specified for the Pivotal CRM system in the Portal Server box (**System** tab of the **System Properties** dialog box) in Pivotal Administration Console.

Resolution

Specify the URL of the portal server in the **Portal Server** box on the **System** tab of the **System Properties** dialog box in Pivotal Administration Console.

To specify the URL of the Portal server

1. Log on to the computer where the Pivotal CRM system is defined.
2. Click **Start**, point to **Programs**, point to **CDC Software**, and then point to **Pivotal CRM**. Then, click **Pivotal Administration Console**, expand **Data Synchronization**, and then expand the server to which the Pivotal CRM system is connected.
3. Right-click the name of the Pivotal CRM system, and then click **System Properties**.
4. Click the **Portal Server** tab.
5. Type the URL of the portal server in the **Portal Server** box.
6. Click **Test**. If the test fails, add the URL of the Portal Server to the Local Intranet zone on the **Security** tab of the **Internet Options** dialog box in Internet Explorer.
7. After adding the URL of the portal server to the Local Intranet zone, test the URL again:
   - For a SyncStream 6.0 Server Components installation, exit Pivotal Administration Console, restart the DSM service, restart Pivotal Administration Console, and click the **Test** button on the **Portal Server** tab.
   - For a SyncStream 6.0 Desktop Components installation, exit Pivotal Administration Console, wait for the `msync.exe` process to end, restart Pivotal Administration Console, and click the **Test** button on the **Portal Server** tab.
8. Click **OK**.

The URL of the portal server is specified.
Contents of Installation Zip Files
Contents of Installation Zip Files

Overview

The installation files for Pivotal CRM 6.0.13 are available for download as zip files in the Product Downloads area in the Apteon Customer Portal and Partner Portal.

Table A-1 on page A-2 lists the various zip files available for download.

Table A-1 Zip files available for download

<table>
<thead>
<tr>
<th>To install</th>
<th>Download</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC Software Smart Client Framework 4.0</td>
<td>SCF4.0.4.33.zip</td>
</tr>
<tr>
<td>Pivotal Client 6.0.13</td>
<td>PC6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Packaged Client 6.0.13</td>
<td>PivotalPackagedClient6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Integration 6.0.13 for Microsoft Outlook</td>
<td>PIM06.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Synchronization Service 6.0.13 for Microsoft Exchange</td>
<td>PSME6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal CRM 6.0.10 Prerequisites</td>
<td>PREREQ6.0.10.zip</td>
</tr>
<tr>
<td>Pivotal SyncStream 6.0.13 (without SQL Server 2008 R2 Express Edition with Advanced Services)</td>
<td>PSS6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal SyncStream 6.0.13 (with SQL Server 2008 R2 Express Edition with Advanced Services)</td>
<td>PSS6.0.13withSQL.zip</td>
</tr>
<tr>
<td>Pivotal Business Server 6.0.13</td>
<td>PBS6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Toolkit 6.0.13</td>
<td>TK6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Research Services 6.0.13</td>
<td>RS60.zip</td>
</tr>
<tr>
<td>Pivotal Portal Resources 6.0.13</td>
<td>PortalResources6.0.13.zip</td>
</tr>
<tr>
<td>Pivotal Web Services Generator 6.0</td>
<td>WSG60.zip</td>
</tr>
<tr>
<td>Pivotal Driver for Crystal Reports</td>
<td>PDCR6.0.13.zip</td>
</tr>
</tbody>
</table>

Contents Of Zip Files

<table>
<thead>
<tr>
<th>File Name</th>
<th>Target sub folder of extracted file (if applicable)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCF4.0.4.33.zip (ClickOnce Deployment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CdcSmartClientFramework32* __.msi</td>
<td></td>
<td>Installs CDC Smart Client Framework 4.0 on either a 32-bit or 64-bit operating system.</td>
</tr>
<tr>
<td>CdcSmartClientFramework64* __.msi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC6.0.13.zip (ClickOnce Deployment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>setup.exe</td>
<td></td>
<td>Installs Pivotal Client 6.0.13 on the deployment server with a 32-bit operating system.</td>
</tr>
</tbody>
</table>

(Sheet 1 of 6)
<table>
<thead>
<tr>
<th>File Name</th>
<th>Target sub folder of extracted file (if applicable)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoggedInstall.js</td>
<td></td>
<td>JavaScript file for logged installation of Pivotal Client 6.0.13 on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td></td>
<td>JavaScript file for silent installation of Pivotal Client 6.0.13 on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>setup.exe</td>
<td>64bit</td>
<td>Installs Pivotal Client 6.0.13 on the deployment server with a 64-bit operating system.</td>
</tr>
<tr>
<td>LoggedInstall.js</td>
<td>64bit</td>
<td>JavaScript file for logged installation of Pivotal Client 6.0.13 on the deployment server with a 64-bit operating system.</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td>64bit</td>
<td>JavaScript file for silent installation of Pivotal Client 6.0.13 on the deployment server with a 64-bit operating system.</td>
</tr>
<tr>
<td>PIMO6.0.13.zip (ClickOnce Deployment)</td>
<td></td>
<td>Use this file to install Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>setup.exe</td>
<td></td>
<td>Use this file to install Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>PIMO 6.0 SP5.rtr</td>
<td></td>
<td>Import this file using Pivotal Toolkit to include elements related to Pivotal Integration 6.0 For Microsoft Outlook and Lotus Notes.</td>
</tr>
<tr>
<td>CDC.Cer</td>
<td></td>
<td>Before end users can work with Microsoft Office 2010, import the CDC.Cer certification authority into the Enterprise NTAUTH store. For more information on how to import the CDC.Cer certification authority into the Enterprise NTAUTH store, see Microsoft Documentation.</td>
</tr>
<tr>
<td>LoggedInstall.js</td>
<td></td>
<td>JavaScript file for logged installation of Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td></td>
<td>JavaScript file for silent installation of Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 32-bit operating system.</td>
</tr>
<tr>
<td>setup.exe</td>
<td>64bit</td>
<td>Use this file to install Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 64-bit operating system.</td>
</tr>
<tr>
<td>LoggedInstall.js</td>
<td>64bit</td>
<td>JavaScript file for logged installation of Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 64-bit operating system.</td>
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<tr>
<td>SilentInstall.js</td>
<td>64bit</td>
<td>JavaScript file for silent installation of Pivotal Integration 6.0.13 for Microsoft Outlook on the deployment server with a 64-bit operating system.</td>
</tr>
</tbody>
</table>
## Contents of Installation Zip Files

<table>
<thead>
<tr>
<th>File Name</th>
<th>Target sub folder of extracted file (if applicable)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment Synchronization</td>
<td></td>
<td>This folder contains a sample application which demonstrates how to store Interaction attachments externally. Please read the Read_Me.docx file in this folder for more information.</td>
</tr>
<tr>
<td>vstor40_x86.exe</td>
<td>VSTO 4.0 Service Pack 1</td>
<td>Upgrade to VSTO 4.0 Service Pack 1 if you plan to upgrade to Microsoft Office 2010 Service Pack 1 for 32-bit systems. The VSTO 4.0 Service Pack 1 installer is available in the PIMO 6.0.13.zip file or you can download it from <a href="http://go.microsoft.com/fwlink/?LinkId=158917">http://go.microsoft.com/fwlink/?LinkId=158917</a>.</td>
</tr>
</tbody>
</table>
| PivotalPackagedClient6.0.13.zip (Packaged Client Deployment) |                                                     | Pivotal Packaged Client consist of the following:  
• CDC Smart Client Framework  
• Pivotal Client  
• Pivotal Integration 6.0 For Microsoft Outlook  

**Note:** Use the installation program if you are planning for a Packaged Client Deployment. The installation program is not to be used for a ClickOnce Deployment. |
| CleanupForContactIntegration.exe                    |                                                     | To be run on the client computer for each user for Contact Integration functionality to work with the Pivotal Packaged Client Deployment.  
If the client computer had Pivotal Client installed using the ClickOnce Deployment method, then perform the following tasks:  
• Uninstall Pivotal Client.  
• Run CleanupForContactIntegration.exe.  
• Install Pivotal Packaged Client. |
| PSME6.0.13.zip                                       |                                                     | Use this file to install Pivotal Synchronization Service 6.0.13 for Microsoft Exchange on the designated server. |
| setup.exe                                            |                                                     | JavaScript file for logged installation of Pivotal Synchronization Service 6.0.13 for Microsoft Exchange. |
| LoggedInstall.js                                      |                                                     | JavaScript file for silent installation of Pivotal Synchronization Service 6.0.13 for Microsoft Exchange. |
| SilentInstall.js                                      |                                                     |JavaScript file for silent installation of Pivotal Synchronization Service 6.0.13 for Microsoft Exchange. |
| PREREQ6.0.10.zip                                     |                                                     | (Sheet 3 of 6) |
## Contents of Installation Zip Files

<table>
<thead>
<tr>
<th>File Name</th>
<th>Target sub folder of extracted file (if applicable)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>setup.exe</td>
<td></td>
<td>Use this file to install Pivotal CRM 6.0.10 Prerequisites or later if you are using Microsoft 2010 Service Pack 1, to upgrade VSTO 4.0 to VSTO 4.0 Service Pack 1. <strong>Note:</strong> Installing Pivotal CRM 6.0.10 Prerequisites or later will upgrade VSTO 4.0 to VSTO 4.0 Service Pack 1.</td>
</tr>
<tr>
<td>o2007pia.msi</td>
<td>ISSetupPrerequisites</td>
<td>Use this file to install Microsoft Office 2007 Primary Interop Assemblies.</td>
</tr>
<tr>
<td>o2010pia.msi</td>
<td></td>
<td>Use this file to install Microsoft Office 2010 Primary Interop Assemblies.</td>
</tr>
<tr>
<td>vcredist_x86.exe</td>
<td></td>
<td>Use this file to install Microsoft Visual C++ 2010 Runtime Libraries.</td>
</tr>
<tr>
<td>vstor40_x64.exe</td>
<td></td>
<td>Use this file to install VSTO 4.0 runtime on 64-bit machines.</td>
</tr>
<tr>
<td>vstor40_x86.exe</td>
<td></td>
<td>Use this file to install VSTO 4.0 runtime on 32-bit machines.</td>
</tr>
<tr>
<td>wic_x64_enu.exe</td>
<td></td>
<td>Use this file to install .NET Framework 4 on 64-bit machines with Windows XP Service Pack 2 or Windows Server 2003.</td>
</tr>
<tr>
<td>wic_x86_enu.exe</td>
<td></td>
<td>Use this file to install .NET Framework 4 on 32-bit machines with Windows XP Service Pack 2 or Windows Server 2003.</td>
</tr>
<tr>
<td>dotNetFx40_Full_x86_x64.exe</td>
<td>Other Prerequisites</td>
<td>Use this file to install .NET Framework 4.</td>
</tr>
<tr>
<td>vs90_piaredist.exe</td>
<td>Other Prerequisites</td>
<td>Use this file to install Microsoft Primary Interoparability Assemblies.</td>
</tr>
<tr>
<td>Set of 16 Windows Installer 4.5 installation files</td>
<td>Windows Installers 4.5</td>
<td>Use these files to install Windows Installer 4.5 on various operating systems.</td>
</tr>
<tr>
<td>PSS6.0.13.zip</td>
<td>Setup.exe</td>
<td>Use this file to install Pivotal SyncStream 6.0.13.</td>
</tr>
<tr>
<td>buildSyncStreamDB.sql</td>
<td>Local Store</td>
<td>Creates the non-Unicode SyncStream database in a SQL Server environment.</td>
</tr>
<tr>
<td>buildSyncStreamDB_oracle.sql</td>
<td></td>
<td>Creates the SyncStream database in an Oracle environment.</td>
</tr>
<tr>
<td>buildSyncStreamDBUnicode.sql</td>
<td>Local Store</td>
<td>Creates the SyncStream database in a SQL Server environment.</td>
</tr>
<tr>
<td>demo.ldf</td>
<td>Licensing</td>
<td>License file for demo purposes. This license file expires on Dec. 31st, 2013.</td>
</tr>
<tr>
<td>PSS6.0.13withSQL.zip</td>
<td>Setup.exe</td>
<td>Use this file to install Pivotal SyncStream 6.0.13 and Microsoft SQL Server 2008 R2 Express Edition With Advanced Services.</td>
</tr>
<tr>
<td>buildSyncStreamDB.sql</td>
<td>Local Store</td>
<td>Creates the non-Unicode SyncStream database in a SQL Server environment.</td>
</tr>
<tr>
<td>buildSyncStreamDB_oracle.sql</td>
<td>Local Store</td>
<td>Creates the SyncStream database in an Oracle environment.</td>
</tr>
</tbody>
</table>

(Sheet 4 of 6)
### Contents of Installation Zip Files

<table>
<thead>
<tr>
<th>File Name</th>
<th>Target sub folder of extracted file (if applicable)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>buildSyncStreamDBUnicode.sql</td>
<td></td>
<td>Creates the SyncStream database in a SQL Server environment.</td>
</tr>
<tr>
<td>demo.ldf</td>
<td>Licensing</td>
<td>License file for demo purposes. This license file expires on Dec. 31st, 2013.</td>
</tr>
<tr>
<td>SilentMobileInstall.js</td>
<td></td>
<td>JavaScript file for silent installation of Pivotal Business Server 6.0.13 on a mobile computer.</td>
</tr>
<tr>
<td>LoggedInstall.js</td>
<td></td>
<td>JavaScript file for a logged installation of Pivotal Toolkit 6.0.13.</td>
</tr>
<tr>
<td>SilentInstall.js</td>
<td></td>
<td>JavaScript file for a silent installation of Pivotal Toolkit 6.0.13.</td>
</tr>
<tr>
<td>addadmin.sql</td>
<td>Script Templates</td>
<td>Script files to be used for an Oracle-based deployment.</td>
</tr>
<tr>
<td>adduser.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>adduserapprole.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>alteruserapprole.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>charset.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>configapprole.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>ftconfig.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>grant_privs.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>install.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>pckgupdate.sql</td>
<td></td>
<td>Description for the script files.</td>
</tr>
<tr>
<td>rlangdict.csv</td>
<td>Language Dictionary</td>
<td>Strings specific to Pivotal CRM 6.0, Smart Client Framework add-ins such as History, Navigation, and Favorites, Smart Client Framework, Pivotal Integration 6.0 for Microsoft Outlook, and Form runtime. Also contains a Unicode file for a Unicode customization system.</td>
</tr>
<tr>
<td>rlangdict - Unicode.csv</td>
<td></td>
<td>Strings specific to Pivotal CRM 6.0, Smart Client Framework add-ins such as History, Navigation, and Favorites, Smart Client Framework, Pivotal Integration 6.0 for Microsoft Outlook, and Form runtime. Also contains a Unicode file for a Unicode customization system.</td>
</tr>
<tr>
<td>TK r6.0.13 - Customization Module.rdf</td>
<td></td>
<td>Non-Unicode Customization Module for a Customization System.</td>
</tr>
<tr>
<td>TK r6.0.13 - Customization Module - Unicode.rdf</td>
<td></td>
<td>Unicode Customization Module for a Customization System.</td>
</tr>
<tr>
<td>PortalResources6.0.13.zip</td>
<td></td>
<td>Use this file to install Pivotal Portal Resources 6.0.13 on a 32-bit operating system.</td>
</tr>
<tr>
<td>File Name</td>
<td>Target sub folder of extracted file (if applicable)</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>setup.exe</td>
<td>64bit</td>
<td>Use this file to install Pivotal Portal Resources 6.0.13 on a 64-bit operating system.</td>
</tr>
<tr>
<td>PDCR6.0.13.zip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PivotalDriverForCrystalReports.msi</td>
<td></td>
<td>Use this file to install Pivotal Report Driver for Crystal Reports.</td>
</tr>
<tr>
<td>PivotalDriverForCrystalReportsSilentInstall.js</td>
<td></td>
<td>Use this JScript file for silent installation of Pivotal Driver 6.0.13 for Crystal Reports.</td>
</tr>
<tr>
<td>PREREQ6.0.10_LN.zip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>setup.exe</td>
<td></td>
<td>Use this file to install Pivotal CRM 6.0.10 Prerequisites on client machines running Lotus Notes or not running any email client.</td>
</tr>
<tr>
<td>dotNetFx40_Full_x86_x64.exe</td>
<td>ISSetupPrerequisites</td>
<td>Use this file to install Microsoft .NET Framework 4. This .NET Framework needs to be installed on all client machines and server machines running Pivotal CRM products.</td>
</tr>
<tr>
<td>vcredist_x86.exe</td>
<td></td>
<td>Use this file to install Microsoft Visual C++ 2010 Runtime Libraries.</td>
</tr>
<tr>
<td>wic_x64_enu.exe</td>
<td></td>
<td>Install this package before installing Microsoft .NET Framework 4 on Windows 2003 Server and Windows XP SP2 64-bit machines.</td>
</tr>
<tr>
<td>wic_x86_enu.exe</td>
<td></td>
<td>Install this package before installing .NET Framework 4 on Windows 2003 Server and on Windows XP SP2 32-bit machines.</td>
</tr>
<tr>
<td>vs90_piaredist.exe</td>
<td></td>
<td>Use this file to install Microsoft Primary Interoperability Assemblies 2005.</td>
</tr>
</tbody>
</table>

**Note:** The PREREQ6.0.10_LN.zip was released after the Pivotal CRM 6.0.10 release. This zip folder is available for download on the [Aptean Customer Portal and Partner Portal.](#)
Non-Production License Files
Overview

The demo license file for non-production systems provided along with the installation files for Pivotal SyncStream 6.0.13 (PSS6.0.13.zip and PSS6.0.13withSQL.zip files) expire on December 31st, 2013. For more information about the demo license file for non-production systems provided in PSS6.0.13.zip and PSS6.0.13withSQL.zip, see Demo License File on page 6-3.

This appendix provides information about obtaining and using new demo license files.

Obtaining New Demo License Files

Download new demo license files from the Aptean Customer or Partner Portals.

To obtain the new demo license files

1. Log on to the Aptean Customer or Partner Portals.
2. Click Product Downloads, and then click License Keys.
3. Download the required demo license files.

Note: The demo license files downloaded from the Aptean Customer or Partner Portals will expire within 12 months from the date of download.
Production License File Request: Sample Format
Requesting for a Production License File

Request for a production license file for a Production System. For more information, see Requesting a Production License File on page 6-4.

To request for a production license file, use the sample format provided in Listing 0-1 on page C-2.

Listing 0-1  Production License File Request: Sample Format

<table>
<thead>
<tr>
<th>LAN licenses required:&lt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile licenses required:&lt;&gt;</td>
</tr>
</tbody>
</table>

Ensure that you provide the .llck file when requesting a production license file. For more information on generating the .llck file, see Generating the Locking Code on page 6-4.
Code Based Tasks in Workflow
Listing Code Based Tasks in Workflows

You can use the code file-based Client and Server Tasks in the Run Function component of a workflow. Use this component to select a method and run the method as a part of a workflow.

If you need to use code file-based Client methods within workflows, you need to rebuild Client task assemblies using Visual Studio 2010.

The process to list the code file-based Client and Server Tasks involves the following steps:

1. Converting the project to Visual Studio 2010.
2. Choosing the methods to list in Run Function.
3. Importing the code files.
4. Creating a Server Task. This step is required only for listing Server Tasks.
5. Providing security permissions.

To convert a project to Visual Studio 2010

1. Open the .csproj file with the Client Tasks in Visual Studio 2010.
2. In the Visual Studio Conversion Wizard dialog box, click Finish.
3. On the Conversion Complete page, click OK.
4. In the Solution Explorer, right-click the project and click Properties.
5. In the Properties dialog, on the Build tabbed page, select Release from the Configuration drop-down list.
6. On the Application tabbed page, select .NET Framework 4 from the Target framework drop-down list.
7. In the Target Framework Change confirmation box, click Yes.
8. In the Solution Explorer, under the References node, add the missing assemblies, if any.
9. Save the solution. Do not close the solution.

To choose the methods to list in Run Function

1. Open the .cs file that contains the methods to be listed.
2. To list a Command Handler Client Task, include [ClientTaskCommand], and for an Application Handler Client Task include [ApplicationHandler] above the methods that needs to be listed.

The figure below, illustrates an example of a Command Handler Client Task.
3  Save the file and repeat step 1 through step 3 for other files in the project that may contain methods that you want to list.

4  In the Solution Explorer, right-click the solution and click Rebuild Solution.

5  Close the solution file.

**To import the code files**

1  Open Pivotal Toolkit.

2  On the eTab, click Code Files, and then click Import Code File.

3  In the Code File Importer dialog box, specify the path for the Client Task files. Ensure that you point to the bin/Release folder of the project.

4  Select the name of the DLL from the list of assemblies and click Import Selected Files.

5  Specify the path to the referenced DLLs.

6  In the confirmation dialog box, click OK.

**To create a Server Task**

1  On the eTab, click Server Task, click New, and then click Server Task (Code File).

2  In the Server Task (Code File) -Add dialog box, specify the following information:
   a) Server Task name.
   b) Select .NET from the Type drop-down list.
   c) Select the name of the imported DLL from the File drop-down list.
   d) Type fully-qualified name of the assembly in the Full Class Name box. The fully-qualified name must be specified in the <Namespace Name>.<Class Name> format. For example, if you are creating a Server Task to list the methods under the PimEmail class of the Interaction Services Server Task, specify the fully-qualified name as

```csharp
[ClientTaskCommand]
public virtual void Process()
{
    // Initialize Related Elements
    this.Initialize();

    // Create Call Plan if required
    this.CreateCallPlanDataFromTemplate();

    // Get Linked Table Ids & Record Ids
    toDoLinks = this.GetTableRecordLinks();

    // Check the call plan
    if (defaultCallPlanId == null)
    {
        return;
    }

    // Code to list the methods
    // ...
```
Code Based Tasks in Workflow


In the above example, CdcSoftware.Pivotal.Applications.Core.Server.InteractionServices is the name space name and PimEmail is the class name.

3 Click **Save**.

**To provide security permissions to display a method**

1 on the **eTab**, click **Security**, and then click **Manage Security**.

2 In the **Security** dialog box, open the **Client** connection type for a relevant security group.

3 To list Server Task methods:
   a) Click the **Server Task** tab.
   b) Find the Server Task that you created. Double-click the **Can View Methods** column next to the Server Task name to provide permissions.
   c) Click **Apply**.

4 To list Client Tasks:
   a) Click the **Application Handlers** or **Command Handlers** tab, based on the type of the Client Task.
   b) Find the Client Task from the list and double-click the Client Task name to list the underlying methods.
   c) To list a method in a workflow, provide **Visible** permissions. To do this, double-click the **Visible** column next to a method name.
   d) Click **Apply**.
Old and New Terminology
Table E-1 on page E-2 lists the new products that are introduced with Pivotal CRM 6.0.

Table E-1 Pivotal CRM 6.0: New Products and Components

<table>
<thead>
<tr>
<th>Pivotal CRM 6.0 Term</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC Software Smart Client Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Client</td>
<td>Client on end user computers to access Pivotal CRM systems</td>
<td>Chapter 1, Introducing Pivotal CRM</td>
</tr>
<tr>
<td>Pivotal Integration for Microsoft® Outlook®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Toolbar for Microsoft® Outlook®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Contact Integration for Microsoft® Outlook®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIM Integration Data Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Synchronization Service for Microsoft® Exchange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Portal Resources (Includes Pivotal WebParts, Web Service for Deployment, Web Service for Customization, and Web Site Templates)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pivotal Driver for Crystal Reports (Contains the Pivotal drivers for Crystal Report Designer and Pivotal System Manager for configuring Pivotal CRM systems)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table E-2 on page E-2 lists the new terms that are introduced with Pivotal CRM 6.0.

Table E-2 Pivotal CRM 6.0 Terms

<table>
<thead>
<tr>
<th>Pivotal CRM 6.0 Term</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Client</td>
<td>Client on end user computers to access Pivotal CRM systems</td>
<td>Chapter 1, Introducing Pivotal CRM</td>
</tr>
<tr>
<td>Portal page</td>
<td>A SharePoint portal page with Pivotal Web Parts</td>
<td>Chapter 12, Installing and Working with Pivotal Portal Resources</td>
</tr>
<tr>
<td>Deployment server</td>
<td>Windows Server 2003 or Windows Server 2008 computer with the following installed:</td>
<td>Chapter 10, Pivotal CRM ClickOnce Deployment</td>
</tr>
<tr>
<td></td>
<td>• CDC Software Smart Client Framework</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pivotal Client</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pivotal Integration 6.0 For Microsoft Outlook</td>
<td></td>
</tr>
<tr>
<td>Instance</td>
<td>Installed applications on the deployment server are instances.</td>
<td>Table 10-1 on page 10-7</td>
</tr>
<tr>
<td>Environment</td>
<td>For an application instance, you can define more than one</td>
<td>Table 10-1 on page 10-7</td>
</tr>
<tr>
<td></td>
<td>environment. For every environment defined on the deployment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>server, there must exist a corresponding Pivotal CRM system.</td>
<td></td>
</tr>
</tbody>
</table>
Some of the terms that are used in Pivotal CRM r5.x have undergone a change with Pivotal CRM 6.0. *Table E-3* on page E-3 lists changes in terminology.

**Table E-3 Product Name changes with Pivotal CRM 6.0**

<table>
<thead>
<tr>
<th>Pivotal r5.9</th>
<th>Pivotal CRM 6.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal Lifecycle Server</td>
<td>Pivotal Business Server</td>
</tr>
<tr>
<td>Pivotal CRM Reports</td>
<td>Pivotal Reports</td>
</tr>
<tr>
<td>Pivotal Windows Access</td>
<td>Not supported as an end user interface. Use Pivotal Toolkit to access a Customization System</td>
</tr>
<tr>
<td>Pivotal Active Access</td>
<td>Not supported. Replaced by Pivotal Client</td>
</tr>
<tr>
<td>Intellisync for Pivotal</td>
<td>Not supported in Pivotal CRM 6.0</td>
</tr>
<tr>
<td>Pivotal Outlook Synchronization Manager</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

In Pivotal CRM 6.0, the Pivotal Configuration Utility replaces the following 5.x tools:
- SMTP Configuration (configsmtp.exe)
- Active Notification Configuration (configactivenote.exe)
- E-mail Management Service Configuration (configems.exe)
- Scheduled Script Service Configuration (configscriptsvc.exe)

*Table E-4* on page E-3 details the tabs in the Pivotal Configuration Utility and the tools that they replace.

**Table E-4 Pivotal Configuration Utility tabs**

<table>
<thead>
<tr>
<th>Pivotal Configuration Utility Tabs</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail Settings</td>
<td>SMTP Configuration</td>
</tr>
<tr>
<td>Active Notifications</td>
<td>Active Notification Configuration</td>
</tr>
<tr>
<td>E-mail Management Service</td>
<td>Email Management Service Configuration</td>
</tr>
<tr>
<td>Scheduled Task Service</td>
<td>Scheduled Script Service Configuration</td>
</tr>
</tbody>
</table>

*Table E-5* on page E-3 lists the component and terminology changes with Pivotal CRM 6.0.13.

**Table E-5 Component and Terminology changes with Pivotal CRM 6.0**

<table>
<thead>
<tr>
<th>Pivotal r5.9</th>
<th>Pivotal CRM 6.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pivotal eRelationship Services (PRS) user</td>
<td>Pivotal CRM Services (PCS) user</td>
</tr>
<tr>
<td>Pivotal eRelationship Active Client (PRAC) user</td>
<td>Pivotal Business Server (PBS) user</td>
</tr>
<tr>
<td>RelationshipUsers Group</td>
<td>PivotalCRMUsers Group</td>
</tr>
<tr>
<td>RelationshipAdmin Group</td>
<td>PivotalCRMAdmin Group</td>
</tr>
</tbody>
</table>
### Table E-5  Component and Terminology changes with Pivotal CRM 6.0

<table>
<thead>
<tr>
<th>Pivotal r5.9</th>
<th>Pivotal CRM 6.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>RelationshipPowerUsers</td>
<td>PivotalCRMPowerUsers</td>
</tr>
<tr>
<td>Pivotal CRM security</td>
<td>Pivotal security</td>
</tr>
<tr>
<td>Pivotal eRelationship</td>
<td>Pivotal CRM</td>
</tr>
<tr>
<td>Pivotal Lifecycle Engine</td>
<td>Pivotal platform has been used in lieu of Lifecycle Engine</td>
</tr>
<tr>
<td>Pivotal eRelationship Enterprise Manager</td>
<td>Pivotal Administration Console</td>
</tr>
<tr>
<td>Pivotal Configuration Assistant</td>
<td>Replaced by Pivotal Configuration Utility</td>
</tr>
<tr>
<td>Lifecycle Engine Inproc AppServer</td>
<td>Pivotal Business Server Inproc</td>
</tr>
</tbody>
</table>
Overview

Use these checklists to verify if you have completed the required tasks for deploying Pivotal CRM.

Note: Follow the recommended order of tasks detailed in Chapter 2, Deployment Scenarios and Tasks.

The checklists listed here are for the following:
- Information Checklist
- SQL Server
- Oracle Server
- Deployment Server
- SharePoint Server
- Pivotal Business Server
- DSM Server
- ANM Server
- Pivotal Synchronization Service for Microsoft Exchange Server
- HTTP Message Server
- Administration Computer
- Client Computer
- Mobile Computers

Information Checklist

Use Table F-1 on page F-2 to capture information about each Pivotal CRM system.

<table>
<thead>
<tr>
<th>Component</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Pivotal CRM system</td>
<td></td>
</tr>
<tr>
<td>SharePoint Portal Site URL</td>
<td></td>
</tr>
<tr>
<td>SharePoint Portal Page URL</td>
<td></td>
</tr>
<tr>
<td>Name of the Pivotal Business Server</td>
<td></td>
</tr>
<tr>
<td>URL of the CDC SmartClient Framework ClickOnce Web page</td>
<td></td>
</tr>
<tr>
<td>Name of Business Module database</td>
<td></td>
</tr>
<tr>
<td>Name of Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Business Module database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>Name of SQL Server</td>
<td></td>
</tr>
</tbody>
</table>
Table F-1 Information Checklist

<table>
<thead>
<tr>
<th>Component</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Note</strong>: Use these additional rows for the other Pivotal CRM systems in your deployment.</td>
<td></td>
</tr>
<tr>
<td>Name of Pivotal CRM System</td>
<td></td>
</tr>
<tr>
<td>SharePoint Portal Page URL</td>
<td></td>
</tr>
<tr>
<td>Name of the Pivotal Business Server</td>
<td></td>
</tr>
<tr>
<td>URL of the CDC SmartClient Framework ClickOnce Web page</td>
<td></td>
</tr>
<tr>
<td>Name of Business Module database</td>
<td></td>
</tr>
<tr>
<td>Name of Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Business Module database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>Name of Pivotal CRM System</td>
<td></td>
</tr>
<tr>
<td>SharePoint Portal Page URL</td>
<td></td>
</tr>
<tr>
<td>Name of the Pivotal Business Server</td>
<td></td>
</tr>
<tr>
<td>URL of the CDC SmartClient Framework ClickOnce Web page</td>
<td></td>
</tr>
<tr>
<td>Name of Business Module database</td>
<td></td>
</tr>
<tr>
<td>Name of Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Business Module database</td>
<td></td>
</tr>
<tr>
<td>ODBC Data Source Name for the Enterprise Data database</td>
<td></td>
</tr>
<tr>
<td>Courier account user on the Exchange Server</td>
<td></td>
</tr>
</tbody>
</table>

**SQL Server**

Use the checklist in *Table F-2* on page F-3 for the SQL Server.

Table F-2 Checklist for the SQL Server

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verify version and apply required service packs</td>
<td></td>
</tr>
<tr>
<td>Configure Microsoft Distributed Transaction Coordinator</td>
<td></td>
</tr>
<tr>
<td>Create PivotalCRMAdmin and PivotalCRMUser groups</td>
<td></td>
</tr>
<tr>
<td>Create PCS and PBS users</td>
<td></td>
</tr>
<tr>
<td>Create empty SQL Server databases</td>
<td></td>
</tr>
<tr>
<td>Grant SQL permissions</td>
<td></td>
</tr>
</tbody>
</table>

**Oracle Server**

Use the checklist in *Table F-3* on page F-4 for the Oracle server.
Deployment Server

Use the checklist in *Table F-4* on page F-4 for the deployment server.

**Table F-4 Checklist for the deployment server**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install .NET Framework 4</td>
<td></td>
</tr>
<tr>
<td>Set the ASP .NET v 4.0 Web Service Extension to Allowed in the Internet Information Services (IIS) Manager</td>
<td></td>
</tr>
<tr>
<td>Install CDC Software Smart Client Framework</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Client</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Integration 6.0 For Microsoft Outlook</td>
<td></td>
</tr>
<tr>
<td>Create additional environments</td>
<td></td>
</tr>
</tbody>
</table>

SharePoint Server

Use the checklist in *Table F-5* on page F-4 for the SharePoint server.

**Table F-5 Checklist for the SharePoint server**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install .NET Framework 3.5</td>
<td></td>
</tr>
<tr>
<td>Install and configure Windows SharePoint Services 3.0 or later</td>
<td></td>
</tr>
<tr>
<td>Use SharePoint Products and Technologies Configuration Wizard</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Portal Resources</td>
<td></td>
</tr>
<tr>
<td>Specify and set up Portal pages for Pivotal Client</td>
<td></td>
</tr>
</tbody>
</table>

Pivotal Business Server

Use the checklist in *Table F-6* on page F-5 for the Pivotal Business Server.
**Table F-6 Checklist for the Pivotal Business Server**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the PBS user to the local Administrators group</td>
<td></td>
</tr>
<tr>
<td>Log on as the PBS user, install Pivotal Business Server</td>
<td></td>
</tr>
<tr>
<td>Configure Pivotal Business Server:</td>
<td></td>
</tr>
<tr>
<td>• Specify a user account.</td>
<td></td>
</tr>
<tr>
<td>• Create ODBC connections.</td>
<td></td>
</tr>
<tr>
<td>• Define a target system.</td>
<td></td>
</tr>
<tr>
<td>• Configure the Microsoft Distributed Transaction Coordinator</td>
<td></td>
</tr>
<tr>
<td>• Configure Scheduled Tasks (required only if there are scheduled tasks to run.)</td>
<td></td>
</tr>
</tbody>
</table>

**DSM Server**

Use the checklist in *Table F-7* on page F-5 for the DSM Server in the master system environment.

**Table F-7 Checklist for the DSM Server in the master system environment**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the PCS user to the local Administrators group</td>
<td></td>
</tr>
<tr>
<td>Log on as the PCS user, install and configure DSM service.</td>
<td></td>
</tr>
<tr>
<td>Create and set up Production and Offline systems with ODBC connections.</td>
<td></td>
</tr>
<tr>
<td>Create mailbox for the PCS user.</td>
<td></td>
</tr>
</tbody>
</table>

Use the checklist in *Table F-8* on page F-5 lists the DSM Server in the satellite system environment.

**Table F-8 Checklist for the DSM Server in the satellite system environment**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the SatellitePCS user to the local Administrators group</td>
<td></td>
</tr>
<tr>
<td>Log on as the SatellitePCS user, install and configure DSM service.</td>
<td></td>
</tr>
<tr>
<td>Create and set up the satellite system. Specify the FilePath folder and set the ANM service.</td>
<td></td>
</tr>
<tr>
<td>Create mailbox for the SatellitePCS user.</td>
<td></td>
</tr>
<tr>
<td>Access the Webstore.</td>
<td></td>
</tr>
<tr>
<td>Start the satellite DSM service</td>
<td></td>
</tr>
</tbody>
</table>

**ANM Server**

Use the checklist in *Table F-9* on page F-6 for the ANM Server in the master system environment.
Checklists

Table F-9 Checklist for the ANM Server in the master system environment

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the PCS user to the local Administrators group.</td>
<td></td>
</tr>
<tr>
<td>Log on as the PCS user, install and configure the ANM service.</td>
<td></td>
</tr>
</tbody>
</table>

Use the checklist in *Table F-10* on page F-6 for the ANM Server in the satellite system environment.

Table F-10 Checklist for the ANM Server in the satellite system environment

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the SatellitePCS user to the local Administrators group.</td>
<td></td>
</tr>
<tr>
<td>Log on as the SatellitePCS user, install and configure the ANM service.</td>
<td></td>
</tr>
</tbody>
</table>

**Pivotal Synchronization Service for Microsoft Exchange Server**

Use the checklist in *Table F-11* on page F-6 for the Pivotal Synchronization Service for Microsoft Exchange Server.

Table F-11 Checklist for the Pivotal Synchronization Service for Microsoft Exchange Server

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install Pivotal Synchronization Service for Microsoft Exchange</td>
<td></td>
</tr>
<tr>
<td>Specify configuration settings for:</td>
<td></td>
</tr>
<tr>
<td>• Exchange Server</td>
<td></td>
</tr>
<tr>
<td>• Pivotal Synchronization Service for Microsoft Exchange</td>
<td></td>
</tr>
<tr>
<td>• Customization</td>
<td></td>
</tr>
<tr>
<td>• Pivotal Administration Console</td>
<td></td>
</tr>
</tbody>
</table>

**HTTP Message Server**

Use the checklist in *Table F-12* on page F-6 for the HTTP Message Server in the master system environment.

Table F-12 Checklist for the HTTP Message Server in the master system environment

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the PCS user to the local Administrators group.</td>
<td></td>
</tr>
<tr>
<td>Log on as the PCS user, install the HTTP Message Server.</td>
<td></td>
</tr>
</tbody>
</table>

Use the checklist in *Table F-13* on page F-7 for the HTTP Message Server in the satellite system environment.
Table F-13 Checklist for the HTTP Message Server in the satellite system environment

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the SatellitePCS user to the local Administrators group.</td>
<td></td>
</tr>
<tr>
<td>Log on as the SatellitePCS user, install the HTTP Message Server.</td>
<td></td>
</tr>
</tbody>
</table>

Administration Computer

Use the checklist in Table F-14 on page F-7 for the administration computer. In a synchronization environment, these tasks can be done on the DSM Server.

Table F-14 Checklist for the administration computer in the master system environment

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add the PCS user to the local Administrators group.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Toolkit.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal Administration Console.</td>
<td></td>
</tr>
<tr>
<td>Register the remote DSM.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal CMS.</td>
<td></td>
</tr>
<tr>
<td>Specify the File Path folder.</td>
<td></td>
</tr>
<tr>
<td>Use the Restore System command and restore the Business Module,</td>
<td></td>
</tr>
<tr>
<td>Enterprise Data .rdf and Portal page *.ppf files for the Production System.</td>
<td></td>
</tr>
<tr>
<td>Set up the Offline System.</td>
<td></td>
</tr>
<tr>
<td>Restore TK r6.0.13 - Customization Module.rdf</td>
<td></td>
</tr>
<tr>
<td>Specify the Pivotal Business Server computer name, and Portal Server details for the Production and Offline Systems.</td>
<td></td>
</tr>
<tr>
<td>Run the <strong>Apply Customization Changes</strong> command on the Customization System.</td>
<td></td>
</tr>
<tr>
<td>Open Toolkit to upgrade the Business Module.</td>
<td></td>
</tr>
<tr>
<td>For the <strong>Mobile</strong> connection type, grant the GLD table <strong>Read</strong> permissions in Toolkit, and ensure no filters are active on the GLD table.</td>
<td></td>
</tr>
<tr>
<td>Run the <strong>Apply Customization Changes</strong> command on the Offline System.</td>
<td></td>
</tr>
<tr>
<td>Run the <strong>Upgrade From Offline</strong> command.</td>
<td></td>
</tr>
<tr>
<td>Install licenses for Production and Offline Systems.</td>
<td></td>
</tr>
<tr>
<td>Add users to the Pivotal CRM system, grant security permissions to users.</td>
<td></td>
</tr>
<tr>
<td>Add the SatellitePCS user to the master system.</td>
<td></td>
</tr>
<tr>
<td>Register the HTTP Message Server. If you maintain an ANM server,</td>
<td></td>
</tr>
<tr>
<td>register the ANM server.</td>
<td></td>
</tr>
</tbody>
</table>
Use the checklist in Table F-15 on page F-8 for the administration computer in the satellite system environment. If you maintain separate satellite DSM and ANM servers, register the DSM and ANM servers on the administration computer of the satellite environment.

**Table F-15 Checklist for the administration computer in the satellite system environment**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify the SatellitePCS user properties.</td>
<td></td>
</tr>
<tr>
<td>Assign user licenses using Pivotal Administration Console.</td>
<td></td>
</tr>
<tr>
<td>Start synchronizing data on the master (parent) system.</td>
<td></td>
</tr>
</tbody>
</table>

Use the checklist in Table F-14 on page F-8 for the administration computer in the master system environment.

**Table F-14 Checklist for the administration computer in the master system environment**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify the SatellitePCS user properties.</td>
<td></td>
</tr>
<tr>
<td>Assign user licenses using Pivotal Administration Console.</td>
<td></td>
</tr>
<tr>
<td>Start synchronizing data on the master (parent) system.</td>
<td></td>
</tr>
</tbody>
</table>

**Client Computer**

Use the checklist in Table F-16 on page F-8 for client computers.

**Table F-16 Checklist for client computers**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Microsoft Outlook.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal CRM 6.0.10 Prerequisites or later.</td>
<td></td>
</tr>
<tr>
<td>Go to the CDC SmartClient Framework ClickOnce Web page.</td>
<td></td>
</tr>
<tr>
<td>Install CDC Software Manager and install Pivotal CRM.</td>
<td></td>
</tr>
</tbody>
</table>

**Mobile Computers**

Use the checklist in Table F-17 on page F-8 for mobile computers.

**Table F-17 Checklist for mobile computers**

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set the ASP .NET v 4.0 Web Service Extension to Allowed in the Internet Information Services (IIS) Manager.</td>
<td></td>
</tr>
<tr>
<td>Configure the Microsoft Distributed Transaction Coordinator.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal SyncStream mobile components.</td>
<td></td>
</tr>
<tr>
<td>Install the mobile component of Pivotal Business Server.</td>
<td></td>
</tr>
<tr>
<td>Close Microsoft Outlook.</td>
<td></td>
</tr>
</tbody>
</table>
Table F-17 Checklist for mobile computers

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install Pivotal Packaged Client.</td>
<td></td>
</tr>
<tr>
<td>Access the Webstore.</td>
<td></td>
</tr>
<tr>
<td>Download synchronization messages.</td>
<td></td>
</tr>
<tr>
<td>Restore data.</td>
<td></td>
</tr>
<tr>
<td>Install Pivotal CRM 6.0.10 Prerequisites or later.</td>
<td></td>
</tr>
</tbody>
</table>
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