

Microsoft Dynamics CRM Installing Guide

4.5.0

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Overview

This guide is part of the Microsoft Dynamics CRM 4.0 Implementation Guide, which consists of the following three documents:

- **Planning Guide:** Use this to determine what you have to plan for Microsoft Dynamics CRM. It includes coverage in the following areas:
 - ▶ **Technical.** These topics focus on supported topologies, system requirements, and technical considerations to address before installation.
 - ▶ **Implementation Methodology.** Learn about the business management, system requirements, and project management aspects that are needed when you deploy a Microsoft Dynamics CRM system. In addition, there are several documents that you can use as tools to plan the implementation of Microsoft Dynamics CRM. These tools are available for download at **Microsoft Dynamics CRM Planning Tools** (<http://go.microsoft.com/fwlink/?LinkId=148432>).
- **Installing Guide:** Use this guide to learn about what you have to install Microsoft Dynamics CRM, such as step-by-step instructions for running Setup, command-line installation instructions, and guidance about how to remove Microsoft Dynamics CRM.
- **Operating and Maintaining Guide:** You can read this guide to learn how to back up, restore, and perform system recovery for Microsoft Dynamics CRM data. Also, this guide has troubleshooting steps for known issues.

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Microsoft Dynamics CRM editions and licensing

Microsoft Dynamics CRM offers several editions that cover implementations for small, to mid-level, to even very large organizations.

Editions

- **Microsoft Dynamics CRM 4.0 Workgroup.** This edition is limited to five, or fewer, users. It can be installed on Microsoft Windows Small Business Server 2003 R2 Premium Edition, any of the supported Windows Server 2003 editions, or Windows Server 2008. This version is limited to a single organization and a single computer that is running Microsoft Dynamics CRM Server.
- **Microsoft Dynamics CRM 4.0 Professional.** This edition has no user limit and is limited to a single organization. However, Microsoft Dynamics CRM 4.0 Professional can be installed on more than one computer in the same deployment.

- **Microsoft Dynamics CRM 4.0 Enterprise.** There is no user limit for this edition. Additional features include support for multiple organizations, multiple server instances, and role-based service installation. Role-based services let you increase performance by installing component services on different computers.

Licensing

A Microsoft Dynamics CRM 4.0 deployment operates by using a single license key. Unlike earlier versions, Microsoft Dynamics CRM 4.0 no longer requires additional license keys to be added when changes are made, such as adding a client access license (CAL). The single license key contains the Microsoft Dynamics CRM version, server license, and the CALs.

You can view and upgrade a license in Deployment Manager.

You can view and modify client access license types for each user in the Users area of the Settings area in the Microsoft Dynamics CRM Web client.

For more information about Microsoft Dynamics licensing, see *How to buy Microsoft Dynamics* (<http://go.microsoft.com/fwlink/?linkid=111388>).

What's new in Microsoft Dynamics CRM 4.0?

Microsoft Dynamics CRM 4.0 includes several new features that offer flexibility, scalability, and ease of use.

Multi-tenancy

Earlier versions of Microsoft Dynamics CRM Server were a single-organization solution. Microsoft Dynamics CRM 4.0 lets you host multiple organizations in a single deployment. This feature is a great benefit for hosted solutions or businesses that require a separation of data inside the organization. Microsoft Dynamics CRM 4.0 now implements two kinds of databases:

- A single configuration database that stores metadata and location information for all organizations
- One or more organization databases

Server role groups

Microsoft Dynamics CRM 4.0 Enterprise introduces two new server role groups. This increases flexibility and scalability. You can opt to have a computer dedicated to one server role group or to both.

The server role groups selected and installed during Setup are as follows:

- **Application Server Role Group.** This group provides the Microsoft Dynamics CRM 4.0 Web user interface and services.
- **Platform Server Role Group.** This group provides the asynchronous services, such as the Workflow and Bulk E-mail services.

Microsoft Dynamics CRM Connector for SQL Server Reporting Services

The Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services is a service that connects the Microsoft Dynamics CRM Server to the Microsoft SQL Report Server. The Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services eliminates the Kerberos double-hop authentication that was required for Microsoft Dynamics CRM 3.0 deployments when Microsoft SQL Server Reporting Services was installed on a separate computer.

The Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services is installed as a separate component.

Microsoft Dynamics CRM 4.0 Language Pack

A Microsoft Dynamics CRM 4.0 Language Pack lets users display the Microsoft Dynamics CRM 4.0 user interface in a different language than the base language. Also, users can display Help in a language that differs from both the base language and the language displayed in the Microsoft Dynamics CRM 4.0 user interface.

Multicurrency

Multiple currencies are now supported for transaction-based records.

Resource Center

The Resource Center is a place in the application where users, administrators, and implementers will find information to help them use and configure Microsoft Dynamics CRM 4.0. The Resource Center presents rich content and links to valuable information. Much of the content in the Resource Center is created by experts in the Microsoft Dynamics CRM community.

What's new in data management?

New data management features are tools to load data into most entities in Microsoft Dynamics CRM 4.0, and ways to make sure of data quality by detecting and merging duplicate records. These features can help you as follows:

- Comma separated values (CSV) formatted data derived from different sources can be migrated into Microsoft Dynamics CRM 4.0 by using the Data Migration Manager. This wizard is installed on a client computer.
- If the source data requires custom entity, attribute, or list-value creation, the Data Migration Manager can customize Microsoft Dynamics CRM 4.0 as part of the migration process.
- Data Migration Manager lets you reuse data mappings from previous migrations. You can then import similar data without the need to remap the data every time.
- Data Migration Manager preserves the relationship between records when you migrate data.
- A new import auto-mapping feature simplifies mapping source data. If the records use attribute display labels as column headings in a CSV file, the data is automatically mapped to the correct attribute.
- Data can be imported into most entities by using the new Imports area in the application. For each import, the user can view the status of each record in the import.
- Users can receive an e-mail notification when an import is complete.
- Duplicates can be detected automatically in various scenarios. For example:
 - ▶ When you import records.
 - ▶ When you create or update a record.
 - ▶ When Microsoft Dynamics CRM for Microsoft Office Outlook goes from offline to online, or because of a workflow action.
- System administrators can run recurring duplicate detection on selected entities as an asynchronous job.
- Users can run duplicate detection from any view on selected records, or all records, in the entity.
- System administrators can define the rules for duplicate detection for each entity.
- Access control to data management features is based on privileges for the new entities: data imports, import maps, and duplicate-detection rules, and on new global duplicate-detection settings, which control where duplicate detection is enabled.

What's new in customization?

Several of the new customization features include the following features:

- **Set Form Assistant options in form properties.** You can set options for how the Form Assistant displays for each entity.
- **Enable duplicate detection.** In each entity you can decide whether to enable duplicate detection.
- **Select Input Method Editor (IME) mode for each attribute.** IME mode can be set for attributes that accept text or numbers. IME is used for East Asian languages, such as Chinese, Japanese, and Korean, accommodating the thousands of possible characters in these languages to be entered by using a keyboard.
- **Download Web Services Description Language (WSDL) files.** Use links available in the Customization area to download WSDL files for programming.
- **Set Application Mode.** In System Settings, you can select whether Microsoft Dynamics CRM will run in application mode, which hides the address, tool, and menu bars on the browser.
- **Set ISV integration.** In System Settings, you can select whether custom buttons or menus appear.

What's new in workflow?

The new workflow features include the following options:

- In earlier versions of Microsoft Dynamics CRM, creating workflows was limited to users who were granted permission to access the server that was running Microsoft Dynamics CRM. Workflow creation is now available to all users of the Microsoft Dynamics CRM Web client. In addition, administrative users can now monitor individual workflow jobs in the new **System Jobs** area of the Web client.
- System jobs are processes that run in the background, such as workflow jobs and bulk import. When a system job is started, the person starting the job can select who should be notified by e-mail when the job is finished.
- The new Web-based workflow system is fully integrated into the Microsoft Dynamics CRM 4.0 Web client and replaces the server-based Workflow Manager tool. Based on Windows Workflow Foundation, the new Microsoft Dynamics CRM 4.0 workflow system also supports a broad range of activities created outside the Web client by using development tools such as Microsoft Visual Studio.

What's new in Microsoft Dynamics CRM 4.0 E-mail Router?

The Microsoft Dynamics CRM 4.0 E-mail Router includes the following new features:

- Support for multiple Microsoft Dynamics CRM Server computers.
- Separately maintained incoming and outgoing e-mail server configurations.
- Support for POP3 incoming e-mail servers.
- The E-mail Router can now be installed on a Windows Server that is not running Microsoft Exchange.

What's new in Microsoft Dynamics CRM for Outlook?

Microsoft Dynamics CRM for Microsoft Office Outlook includes the following new features:

- The E-mail Router is no longer required to send and receive Microsoft Dynamics CRM 4.0 e-mail messages.
- Setup and configuration are now separate programs.
- There is an updated look that uses the 2007 Microsoft Office system user interface components, such as the Ribbon, which replaces the traditional menu and toolbar.
- A Diagnostics Wizard can be used to troubleshoot issues with Microsoft Dynamics CRM for Outlook.

- The Mail Merge feature has been added to the Web application. You can now specify the details of the Microsoft Dynamics CRM activity created by Mail Merge.
- There are several technical changes to synchronization to reduce the time that is required to go offline.
- Activity tracking and synchronization improvements are included. Microsoft Office Outlook tasks can now be mapped to Microsoft Dynamics CRM letters, faxes, tasks, and telephone calls.

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Microsoft Dynamics CRM Server Installation Instructions

This chapter explains the procedures to install Microsoft Dynamics CRM Server. In addition, there is installation troubleshooting information and the procedures to uninstall Microsoft Dynamics CRM Server.

Important

This chapter assumes that you have completed all the necessary planning that is required for both the business management and technical aspects of a CRM system. Because of the importance of this planning, we recommend that you review the information in the Microsoft Dynamics CRM 4.0 Planning Guide before you install the Microsoft Dynamics CRM Server.

Microsoft Dynamics CRM has many software component requirements. For more information about these requirements, see "System Requirements and Required Components" in the Planning Guide.

For the most up-to-date information about Microsoft Dynamics CRM, see the **Microsoft Dynamics CRM 4.0 Server Readme** (<http://go.microsoft.com/fwlink/?linkid=78157>).

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Components installed during server setup

This section describes what is installed during Microsoft Dynamics CRM Server Setup.

Microsoft Dynamics CRM Server installed configuration components

When you install Microsoft Dynamics CRM Server, Setup creates the default folders listed in the following table.

Folder	Comments
<i>SystemDrive</i> :\Program Files\Microsoft CRM\	Microsoft Dynamics CRM Server program files
<i>SystemDrive</i> :\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data\	Microsoft SQL Server Setup creates this folder and installs the Microsoft Dynamics CRM configuration database and organization databases in it.
<i>SystemDrive</i> :\Program Files\Microsoft CRM\Reports	Contains a Microsoft Dynamics CRM subfolder that contains an .rdl file for each default report.
<i>SystemDrive</i> :\Program Files\Microsoft CRM SRS Data Connector	Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services
<i>SystemDrive</i> :\Program Files\Microsoft CRM\LangPacks	Location of Language Pack installations. Language Packs are downloaded and installed separately.
<i>SystemDrive</i> :\Program Files\Microsoft CRM\Trace	Stores trace file logs when tracing is enabled.
<i>SystemDrive</i> :\inetpub\wwwroot\MSCRMservices	Microsoft Dynamics CRM Web services
<i>SystemDrive</i> :\inetpub\wwwroot\CRMReports	Microsoft Dynamics CRM report services

The following Web components are added.

Component	Name	Description
Application Pool	CRMAppPool	Microsoft Dynamics CRM Server Setup creates a separate application pool for the Microsoft Dynamics CRM application.
Virtual Roots	Microsoft Dynamics CRM	Web site for Microsoft Dynamics CRM.

The following Active Directory groups are added. When the Active Directory domain is set to Native Mode, this group must be of the type Domain Local Security or Universal Security.

Group	Description
PrivReportingGroup	Privileged Microsoft Dynamics CRM user group for reporting functions. This group is created during Microsoft Dynamics CRM Server Setup and configured during Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup.

Group	Description
PrivUserGroup	Privileged Microsoft Dynamics CRM user group for special administrative functions; including CRMAppPool identity (domain user or NetworkService). The users who configure Microsoft Dynamics CRM Server must be added to this group.
SQLAccessGroup	All server processes/service accounts that require access to SQL Server; including CRMAppPool identity (domain user or NetworkService).
ReportingGroup	All Microsoft Dynamics CRM users are included in this group. This group is updated automatically as users are added and removed from Microsoft Dynamics CRM. By default, all Microsoft Dynamics CRM Reporting Services reports grant Browse permission to this group.
UserGroup	All Microsoft Dynamics CRM users are included in this group. This group is updated automatically as users are added and removed from Microsoft Dynamics CRM.

The following service is added.

Service	Description
Microsoft Dynamics CRM Asynchronous Processing Service	Services asynchronous processes such as bulk e-mail, workflow, and database deletion clean up.

Other software components installed during setup

If not already installed, the following components are installed during Microsoft Dynamics CRM Server Setup:

- SQL Server 2005 Reporting Services Report Viewer control
- Microsoft SQL Server Native Client
- Microsoft Application Error Reporting Tool
- Microsoft Visual C++ Runtime Library
- MSXML 6
- Microsoft .NET Framework 3.0, which includes the following components:
 - .NET Framework 2.0 (required by Microsoft Dynamics CRM Server)
 - Windows Workflow Foundation (required by Microsoft Dynamics CRM Server)
 - Windows Presentation Foundation
 - Windows Communication Foundation

Microsoft Dynamics CRM Server installation

This section covers the procedures to install Microsoft Dynamics CRM Server on a computer that does not already have Microsoft Dynamics CRM installed.

➤ **Follow these high-level steps to complete the Microsoft Dynamics CRM Server installation:**

1. Verify that you have completed the necessary planning and that you have the required hardware and software components installed and running. For more information about these topics, see the Microsoft Dynamics CRM 4.0 Planning Guide.

Note

Windows Server 2008 is supported for installing and running Microsoft Dynamics CRM 4.0. However, before you install this configuration, we recommend that you read **KB article 950100: Support for Microsoft Dynamics CRM 4.0 on Windows Server 2008-based computers** (<http://go.microsoft.com/fwlink/?linkid=114209>). This article includes a list of issues that may occur when you run Microsoft Dynamics CRM Server on Windows Server 2008.

2. Run Microsoft Dynamics CRM Server Setup.
3. Run Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services Setup. You must complete this step, even if you are upgrading an existing Microsoft Dynamics CRM 3.0 deployment.
4. If one or more Microsoft Dynamics CRM users will have their e-mail configured to use the E-mail Router or a forward mailbox, you must install E-mail Router to enable Microsoft Dynamics CRM e-mail message tracking.

Install Microsoft Dynamics CRM Server on a server without Microsoft Dynamics CRM installed

Important

For information about how to plan your Microsoft Dynamics CRM system, see the Microsoft Dynamics CRM 4.0 Planning Guide.

➤ **To install the Microsoft Dynamics CRM Server software, follow these steps:**

1. Meet all requirements specified under "System Requirements and Required Components" in the Planning Guide.
2. Log on to the domain as a user who has administrator-level privileges where Microsoft Dynamics CRM will be installed and who is a member of the Administrators group on the local computer. You cannot install the application as a member from a trusted domain.
3. See the **Microsoft Dynamics CRM 4.0 Server Readme** (<http://go.microsoft.com/fwlink/?linkid=78157>) to determine the location of the Microsoft Dynamics CRM installation files.
4. In the folder where the Microsoft Dynamics CRM files are located, move to the root folder, and then double-click **SetupServer.exe**.
5. On the **Welcome to Microsoft Dynamics CRM Setup** page, select whether you want to update Microsoft Dynamics CRM Server Setup. We recommend that, if updates are available, you let Setup download the latest version. To do this, click **Update installation files**, wait until the update process is complete, and then click **Next**.
6. **On the License Code Information** page, type your license number in the **License code** boxes, and then click **Next**.

Note

If you purchased Microsoft Dynamics CRM through a Microsoft Volume Licensing program, the license key is provided in the license.txt file, which is included in the Microsoft Dynamics CRM installation files.

7. On the **License Agreement** page, review the information and if you accept the license agreement click **I accept this license agreement**, and then click **I Accept**.
8. If Setup detects that components are missing, the **Install Required Components** page appears.
 - ▶ If you have already installed the required components, this page will not appear.

- ▶ If you have not installed the required components, you can install them now. Click **Install**. When the components are installed, the status column will change from **Missing** to **Installed**, and you can click **Next** to continue.

Note

These components are required before Microsoft Dynamics CRM can be installed. You can exit Setup and install the components manually, or select **Install**. The Next button on this page is disabled until Setup detects that these components are installed.

Installing these components may require you to restart the computer. If you are prompted to restart the computer, do so, and then start Setup again.

The installation of Microsoft .NET Framework 3.0 can take up to 10 minutes to install.

9. If you are installing Microsoft Dynamics CRM 4.0 Enterprise, the **Specify Server Roles** page appears. By default, **Full Server** is selected and will install all server roles on the computer. Alternatively, you can select a server role group or one or more individual server roles. Notice that all server roles must be deployed on the network for Microsoft Dynamics CRM to operate correctly. For more information about server roles, see "Planning Deployment" in the Microsoft Dynamics CRM 4.0 Planning Guide. Click **Next**.

Important

When you select a server role group or server role that is not **Full Server**, Microsoft Dynamics CRM Server Setup does not create an organization database during the installation. If the deployment does not have an organization database, you must use Deployment Manager to create a new organization. For information about how to create a new organization, see the Deployment Manager Help.

10. On the **Specify Deployment Options** page, if Setup detects an existing deployment, you can select whether you want to create a new deployment or connect to an existing deployment. In the **Enter or select the name of the computer that is running SQL Server** box, type or select the instance of SQL Server that will be used to store the Microsoft Dynamics CRM databases.

Important

One or more updates may have to be installed on the computer that is running SQL Server 2008 to work with Microsoft Dynamics CRM. If needed, these updates will be installed when you click **Update installation files** during Microsoft Dynamics CRM Server Setup and Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup. For more information about these updates, see the Microsoft Knowledge Base article **Support for Microsoft Dynamics CRM 4.0 together with Microsoft SQL Server 2008** (<http://go.microsoft.com/fwlink/?linkid=125888>).

When you select **Create a new deployment**, Setup creates a new organization database using the name that you specified and a configuration database by using the name MSCRM_CONFIG. An error message will appear if an MSCRM_CONFIG database already exists. You must delete this database to create a new MSCRM_CONFIG database.

When you select **Connect to an existing deployment**, Setup requires that a Configuration Database (MSCRM_CONFIG) already exist on the computer that is running SQL Server. An error message will appear if an MSCRM_CONFIG database does not already exist.

Microsoft Dynamics CRM 3.0 or earlier version databases are not supported.

11. On the **Specify the Organization Name** page, type the name of your organization in the **Display name** box. In the **Name** box that you can keep the name that Setup presents or you can type a unique name that must be limited to 30 characters. Spaces and extended characters are not allowed. In the **Database collation** list, select the database collation that the organization database will use to sort and compare data characters. Then, click **Browse**, select the ISO currency code that you will use as the base currency for the organization in the list, click **OK**, and then click **Next**.

Important

After Setup is complete, you cannot change the database collation or the base ISO currency code. However, you can change the base currency name and base currency symbol.

The Organization Name box is limited to the standard ASCII character set (A-Z, 0-9, and _). In addition, the name must be unique to the deployment and cannot begin with a number or an underscore (_) character.

12. On the **Help Us Improve the Customer Experience** page, select whether you want to participate in the Customer Experience Improvement Program, and then click **Next**.

Note

By default, the Customer Experience Improvement Program feature in Microsoft Dynamics CRM is turned on. If later you decide that you do not want to participate in the Customer Experience Improvement Program, you can turn off this feature in the Microsoft Dynamics CRM Web application. To do this, in the Navigation Pane, click Settings, under Settings, click Administration, in the Administration area click Privacy Preferences, in the Privacy Preferences dialog box clear the Yes, I am willing to participate anonymously in the Customer Experience Improvement Program check box, and then click **OK**.

13. On the **Select Installation Location** page, accept the default location or enter a different file installation location, and then click **Next**.
14. On the **Select the Web Site** page, select a Web site from the **Web site** list. By default, Setup will use the default Web site.

Important

We strongly recommend that you let Setup create a new Web site. If you select an existing Web site, Microsoft Dynamics CRM Server Setup can overwrite the existing Web site application or cause unexpected behavior in the associated Web site application.

We recommend that you select the **Create new Web site** option. Setup will create a new Web site for Microsoft Dynamics CRM Server. If you want to create a new Web site, select the following option:

Port Number. Type the TCP port number that Microsoft Dynamics CRM clients will use to connect to the Microsoft Dynamics CRM Server. The default port number is 5555.

15. Click **Next**.
16. On the **Specify Reporting Services Server** page, type the Report Server URL. Make sure that you use the Report Server URL, not the Report Manager URL. To verify that you are using the correct URL, in a browser, type the Report Server URL as the address. You should see a page titled `<server>/ReportServer - /:` with text that displays the version number: Microsoft SQL Server Reporting Services Version `<version number>`. Click **Next**.
17. On the **Select the Organizational Unit** page, click **Browse** to display your Active Directory structure. Select the location where you want the Microsoft Dynamics CRM organizational unit to be installed into, click **OK**, and then click **Next**. Microsoft Dynamics CRM security groups are created in this organizational unit.

Note

If Setup cannot find the organizational unit that you specified, see "Troubleshooting Installation and Upgrade" in this guide.

18. On the **Specify Security Account** page, select the security account for the Microsoft Dynamics CRM services and ASP.NET component, and then click **Next**.

Important

We strongly recommend that you select a low-privilege domain account that is dedicated to running these services and is not used for any other purpose. This domain account should only have local user-level permissions in the domain.

Note

If you select to run the ASP.NET service under a domain user account that is not a domain administrator or a local administrator, you must set a local security policy after you install Microsoft Dynamics CRM Server for the ASP.NET service to work correctly. Also, depending on the password policies that you have implemented for your organization, the password for the user may expire. For more information, see the Microsoft Knowledge Base article 329290, **How to use the ASP.NET utility to encrypt credentials and session state connection strings** (<http://go.microsoft.com/fwlink/?linkid=53266>).

19. On the **Specify E-mail Router Settings** page, in the **E-mail Router server name** box, type the name of the computer where the E-mail Router will be installed. This computer will be used to route Microsoft Dynamics CRM e-mail messages. If you will not install the E-mail Router you can leave this box blank. Then click **Next**.
20. The **System Requirements** page appears. This page is a summary of all system requirements for a successful Microsoft Dynamics CRM Server installation. Failed tests must be corrected before installation can continue. If a problem will take time to correct, cancel Setup at this point, fix the problem and restart Setup again. All errors must be resolved. If no errors, or only warnings, appear, you can continue with the installation. To do this, click **Next**.
21. Review the **Ready to Install the Application** page, and then click **Back** to correct any errors. When you are ready to continue, click **Install**.
22. When Setup completes successfully, the **Microsoft Dynamics CRM 4.0 Completed** page appears. We recommend that you let Setup restart the computer by leaving the **Restart the computer when the wizard closes** option checked. Click **Finish**.

Important

To complete the installation of Microsoft Dynamics CRM Server, you must install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services. For instructions about how to install the Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services, see the following section.

You cannot install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services before you install Microsoft Dynamics CRM Server.

By default, Setup turns on HTTP compression on the server that is running IIS where the Microsoft Dynamics CRM Server Web application is installed. If you use another method to compress HTTP communications, you may want to turn this feature off. To do this, start IIS Manager, right-click the Web Sites folder, click the Service tab, and then clear Compress application files and Compress static files.

Configure Microsoft Dynamics CRM for Internet-facing deployment

This section describes how to configure an Internet-facing deployment (IFD) of Microsoft Dynamics CRM.

For information about planning an IFD, and a descriptions of the methods you can use to configure a Microsoft Dynamics CRM IFD, see *Configure a Microsoft Dynamics CRM Internet-facing deployment in the Microsoft Dynamics CRM 4.0 Planning Guide*.

Configure during Microsoft Dynamics CRM Server installation or upgrade

When you use the command-line method to deploy a new installation of Microsoft Dynamics CRM or upgrade from Microsoft Dynamics CRM 3.0, you can configure an IFD by adding the `<ifdsettings>` element to a Microsoft Dynamics CRM Server Setup XML configuration file. The `<ifdsettings>` element must be defined under the `<CRMSetup><Server>` elements. When the `<ifdsettings>` enabled element is set to true (`<ifdsettings enabled="true">`), Microsoft Dynamics CRM Server Setup configures the deployment for access from the Internet. For more information about how to configure the Web site so that it can be accessed from the Internet, see "Use the Command Prompt to Install Microsoft Dynamics CRM" in this guide.

The configuration file should look similar to the following example:

```
<ifdsettings enabled="true">
<internalnetworkaddress>157.55.160.202-
255.255.255.255</internalnetworkaddress>
<rootdomainscheme>https</rootdomainscheme>
<sdkrootdomain>myDomain.com</sdkrootdomain>
<webapplicationrootdomain>myDomain.com</webapplicationrootdomain>
</ifdsettings>
```

- `<sdkrootdomain>domain.com</sdkrootdomain>` specifies the domain name that will be used for applications that use the methods described in the Microsoft Dynamics CRM SDK. The value that is set here will be prefixed by your unique organization name to form the URL. Therefore, do not include the server name in the value.
- `<webapplicationrootdomain>domain.com</webapplicationrootdomain>` specifies the domain name that will be used for the Microsoft Dynamics CRM Web application and Microsoft Dynamics CRM for Outlook. The value that is set here will be prefixed by your unique organization name to form the URL. Therefore, do not include the server name in the value.

Important

If you are not using the default port (80) for the Microsoft Dynamics CRM Web application, you must append the port number to the domain name value for the `<sdkrootdomain>` and `<webapplicationrootdomain>` elements. For example, enter `mysubdomain.mydomain.com:5555`.

Note

The Microsoft Dynamics CRM Server Setup XML configuration file makes the same changes to your system as the Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool. For information about the properties that are added or updated, see "IFD configuration properties" in this guide.

Configure an existing deployment using Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool

The Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool adds a node to the `web.config` file for IFD settings, creates deployment properties in the `MSCRM_config` database, and adds a registry key to the Microsoft Dynamics CRM Server that enables Internet-facing access. You can use the Internet Facing Deployment Configuration Tool after you have installed or upgraded to Microsoft Dynamics CRM 4.0. You can also use this tool any time you want to change the IFD configuration properties.

For information about configuration scenarios and instructions to help you successfully implement a Microsoft Dynamics CRM IFD, download the **Microsoft Dynamics CRM 4.0 Internet Facing Deployment Scenarios** (<http://go.microsoft.com/fwlink/?LinkId=149711>) document.

To download this tool and detailed instructions for using it, see **KB article: 948779: How to use the Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool** (<http://go.microsoft.com/fwlink/?LinkId=149712>).

IFD configuration properties

The following table shows the properties that are used to configure an IFD. The first column lists the deployment properties, the second column lists the fields used in the Internet Facing Deployment Configuration Tool to define the property, and the third column specifies the XML element that you can use if you configure the IFD during an initial installation by using the command-line options and an XML configuration file. The fourth column names the file where each IFD property is updated. The last column gives a brief description of each property.

Property	IFD Config Tool Field	Config File Element	Updated File	Description
Authentication Strategy	Authentication Strategy Select IFD+On Premise . The Internet Facing Deployment Configuration Tool updates the authentication strategy value to <i>ServiceProviderLicenseAgreement</i> in the web.config file.	Not applicable The install configuration does not have an element that you declare to update the authentication strategy. The Microsoft Dynamics CRM Server Setup process updates the authentication strategy for external Internet-facing access.	web.config	The Internet Facing Deployment Configuration Tool updates the <crm.authentication> element to enable forms authentication for users accessing externally Microsoft Dynamics CRM.
Anonymous Authentication	Anonymous When you select IFD+On Premise the Internet Facing Deployment Configuration Tool sets Anonymous to On .	Not applicable Microsoft Dynamics CRM Server Setup updates the anonymous authentication strategy when you configure IFD using an XML configuration file on the Web site.	web.config	Anonymous Authentication on the Microsoft Dynamics CRM Web site and Web pages enable users to access the site without the need to re-enter their credentials with each page requests. Use SSL to secure the Web site.
Key Encryption	Key Encryption When you select IFD+On Premise the Internet Facing Deployment Configuration Tool sets Anonymous to On .	<ifdsettings enabled="true"> Key encryptions is enabled when enabled="true" in the <ifdsettings> node.	web.config	Enables key encryption for the CRM authentication ticket generated when the Microsoft Dynamics CRM user logs into Microsoft Dynamics CRM.
Internal Network Address and Subnet Mask	IFD Internal Network Address and Subnet Mask	internalnetworkaddress	IfdInternalNetworkAddress registry key	Contains the IP Address and subnet masks of internal client computers accessing Microsoft Dynamics CRM.

Property	IFD Config Tool Field	Config File Element	Updated File	Description
Domain Scheme	IFD Domain Scheme	rootdomainscheme	mscrm_config database	Use https:// for the IFD access to Microsoft Dynamics CRM Web site. Use http:// for internal access to Microsoft Dynamics CRM.
Application Root Domain	IFD App Root Domain	webapplicationroot domain	mscrm_config database	Specifies the domain name for the Microsoft Dynamics CRM application accessed by users, Web site and its content.
SDK Root Domain	IFD SDK Root Domain	sdkrootdomain	mscrm_config database	Specifies the domain name for web services and the Microsoft Dynamics CRM SDK.
Active Directory Domain Scheme	AD Domain Scheme	Not applicable	mscrm_config database	Specifies the Active Directory domain name used for internal Microsoft Dynamics CRM users.
Active Directory SDK Root Domain	AD SDK Root Domain	Not applicable	mscrm_config database	Specifies the URL address for the Microsoft Dynamics CRM Web site for applications that use the methods that are described in the Microsoft Dynamics CRM SDK, for example, MSCRMServer:5555.

IFD configuration properties details

This section provides detailed information about the IFD configuration properties.

Internal Network Address

When you configure Microsoft Dynamics CRM for IFD using the Internet Facing Deployment Configuration Tool or using an XML configuration file, on initial Microsoft Dynamics CRM installations only, you are adding a new Windows registry key. The **lfdInternalNetworkAddress** registry key contains the IP addresses and subnet masks for internal computers using Microsoft Dynamics CRM. The registry key location is:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM
```

When a user submits a page request, the Microsoft Dynamics CRM Server compares the user's IP address and subnet mask with the values in the registry key to determine which authentication type to use, anonymous access authentication for Internet access or Integrated Windows authentication for internal users. For example, the IP addresses and subnet masks of your Microsoft Dynamics CRM users are as follows:

```
10.10.1.1-255.255.255.0, 157.55.164.93-255.255.255.0
```

If the subnet is 255.255.255.0 and the IP address is 10.10.1.1 or 157.55.164.93, any IP address that begins with 10.10.1 or 157.55.164 is considered internal.

When a user requests a Microsoft Dynamics CRM page and the user's IP address and subnet masks is 157.55.165.22-255.255.254.0 and the IP address and subnet mask is not found, Microsoft Dynamics CRM uses forms authentication to display a sign on page. Any IP addresses and subnet masks not in the **Internal Network Address** registry key cause the Microsoft Dynamics CRM Server to respond with the IFD sign on page to request the user's credentials.

If users are accessing Microsoft Dynamics CRM from multiple subnets, you must update the **lfdInternalNetworkAddress** registry value to reflect the different subnets. When you have more than one subnet, you can add multiple values to the **lfdInternalNetworkAddress** registry key. Separate the values by using a comma but do not add a space after the comma.

To configure Microsoft Dynamics CRM for IFD-only access, enter the IP address to the Microsoft Dynamics CRM Server and a subnet mask of 255.255.255.255. Then, only those page requests from the Microsoft Dynamics CRM Server are considered internal, and all other page requests prompt the sign on page.

IFD Root Domain Scheme

In the Internet Facing Deployment Configuration Tool **Root Domain Scheme** or **IFD Root Domain** field, enter https as the value of this MSCRM_config database property when you have SSL set for the Web site.

Important

We strongly recommend that you use SSL for Internet-facing deployment of Microsoft Dynamics CRM.

SDK Root Domain

In the Internet Facing Deployment Configuration Tool **SDK Root Domain** or **IFD SDK Domain** field, enter the domain name where the SDK Server role is installed. This is used for applications that use the methods from the Microsoft Dynamics CRM SDK as the value for this MSCRM_config database property. Add the domain name and the root domain (.com). For example, enter *mycompany.com* rather than *mycompany*. If you use a port that is not the default, you have to include the port number in the **SDK Root Domain**. For example, enter *mycompany.com:5555*.

Web application Root Domain

In the Web application **Root Domain**, or the `lfdWebApplicationRootDomain` if you are using the Internet Facing Deployment Configuration Tool, enter the domain name only for the Microsoft Dynamics CRM Web application as the value for this MSCRM_config database property. Add the domain name and the root domain (.com). For example, enter *mycompany.com* rather than *mycompany*. If you use a port that is not the default, you need to include the port number in the Web application **Root Domain**. For example, enter *mycompany.com:5555*.

Important

When you install server roles on multiple computers, you must use different domain name values for `lfdWebApplicationRootDomain` and `lfdSdkRootDomain`. For more information, see "Using server roles" in this guide.

Service Provider License Agreement

`ServiceProviderLicenseAgreement` replaces `OnPremise` as the authentication strategy in the `<crm.authentication>` node of the **Web.config** file.

IFD URL

You must define a URL for the Microsoft Dynamics CRM IFD by using the following format:

```
https://<organization name>.<domain name>
```

For information about changing the Microsoft Dynamics CRM port assignment, see **KB article 947423: How to update the Microsoft Dynamics CRM Web site port after you install Microsoft Dynamics CRM 4.0** (<http://go.microsoft.com/fwlink/?LinkId=149725>).

Use DNS host or alias record with IFD

Create a host or alias record for each organization that plans to access Microsoft Dynamics CRM externally from the Internet. If you use host headers to identify the Microsoft Dynamics CRM Web site, you should remove the host headers and set up a Domain Name Service (DNS) alias record. This is particularly important because SSL does not work with host headers. The DNS alias record ensures that the URL address for the external and internal organization resolves correctly. The alias record is a name for your Web application that is composed of a subdomain name to identify the organization, second-level domain name to identify your company, and root domain name such as .gov, .tv, or .com. For Microsoft Dynamics CRM IFD, your DNS alias record should resemble the following:

```
crm_organization_name.domain.com
```

The Internet Facing Deployment Configuration Tool includes a **Check DNS** option on the **Tools** menu to test DNS resolution. If you have not defined domain names in DNS, the Internet Facing Deployment Configuration Tool displays a message indicating that the domain name cannot be resolved. For specific instructions, see *Setup test DNS record* in **Microsoft Dynamics CRM 4.0 Internet Facing Deployment Scenarios** (<http://go.microsoft.com/fwlink/?LinkId=149711>).

Running reports

To enable complete reporting functionality for a Microsoft Dynamics CRM IFD, the deployment must be running the Microsoft Dynamics CRM Connector for SQL Server Reporting Services.

When a Microsoft Dynamics CRM user runs a report from Microsoft Dynamics CRM, Microsoft SQL Server Reporting Services Viewer requests the report and data from the remote Microsoft SQL Server Reporting Services computer. To access the report, the Microsoft Dynamics CRM user enters the Microsoft Dynamics CRM Server URL. Microsoft Dynamics CRM Connector for SQL Server Reporting Services runs as a Microsoft SQL Server Reporting Services data processing extension and handles the authentication in the delegated mode used for reports.

However, the Microsoft Dynamics CRM Connector for SQL Server Reporting Services does not work with the Microsoft SQL Server 2005 Workgroup Edition because it does not support custom data extensions used in the Microsoft Dynamics CRM Connector for SQL Server Reporting Services. To resolve this issue, upgrade Microsoft SQL Server 2005 Workgroup Edition to one of the following editions:

- SQL Server 2005 Standard Edition
- SQL Server 2005 Enterprise Edition
- Microsoft SQL Server 2008, Standard Edition
- Microsoft SQL Server 2008, Enterprise Edition

For specific SQL Server 2008 upgrade version information, see **SQL Server 2008 Books Online Version and Edition Upgrades** (<http://go.microsoft.com/fwlink/?LinkId=149730>).

Using dynamic worksheets or dynamic PivotTables

To export data to dynamic worksheets or dynamic PivotTables for Microsoft Dynamics CRM users connecting to an IFD, install and configure the Microsoft Dynamics CRM for Microsoft Office Outlook client on the computer of the Microsoft Dynamics CRM user trying to open the dynamic worksheet. When Microsoft Dynamics CRM is not in the same domain as the client computer, Microsoft Dynamics CRM for Microsoft Office Outlook client handles the Microsoft Dynamics CRM user login credentials for the Microsoft Dynamics CRM database used in the worksheet.

For information about securing data exported to Microsoft Office Excel, see **Dynamic Export to Excel feature – How to protect data over the wire** (<http://go.microsoft.com/fwlink/?LinkId=149732>).

Using server roles

In a Microsoft Dynamics CRM deployment, you can split the configuration into two separate server role groups or separate each individual server role across multiple computers. If you configure IFD for a Microsoft Dynamics CRM deployment using server role groups or separate server roles, you must obtain different SSL certificates if the Application server role and the SDK server role are on different computers. You cannot use the same certificate for both server roles. If you did not obtain different SSL certificates defined with root domain names specific to the Application server role and SDK server role, then the DNS server detects duplicate mappings and cannot resolve the domain names. To resolve this duplicate mapping issue, assign different values in the deployment properties for the IFD App Root Domain and IFD SDK Root Domain. The value that you enter in the Internet Facing Deployment Configuration Tool for the App Root Domain is the domain associated with the Application server role. The value that you enter in the Internet Facing Deployment Configuration Tool for the SDK Root Domain is the domain associated with the SDK server role.

For more information about server roles, see ***Making Sense of Server Roles*** (<http://go.microsoft.com/fwlink/?LinkId=149731>).

Configure IFD with an ISA server

After you configure a Microsoft Dynamics CRM IFD and you are using an Internet Security and Acceleration (ISA) server, any user attempts to log on from the Internet are challenged for a Windows log on instead of the Microsoft Dynamics CRM sign on page. This causes the user authentication to fail. You can resolve this issue by changing the configuration setting on the ISA server to **Requests appear to come from original client**. This setting causes the ISA server to interpret the request as coming from the original client IP. For this configuration setting to work, the web server must point to ISA Server's internal IP address as the **Default Gateway**.

For more information, see ***Publishing Microsoft Dynamics CRM 4.0 through ISA Server 2006*** (<http://go.microsoft.com/fwlink/?LinkId=140776>).

Configure IFD for a multi-forest with a perimeter network model

When you use a perimeter network to isolate Internet-facing resources from your internal corporate network, you have to open the ports to the local area network to successfully deploy Internet-facing Microsoft Dynamics CRM. For an example of a perimeter network model, see "Multi-forest with client Internet access" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

➤ To configure a perimeter network model, follow these steps:

1. Install and configure Microsoft Dynamics CRM.

On an initial installation, you can configure a Microsoft Dynamics CRM IFD by using the command-line installation options, or you can wait until after you have Microsoft Dynamics CRM running and tested before you configure it for IFD.

2. Enable the perimeter network solution.
3. Open the required ports to the LAN:
 - ▶ Microsoft SQL Server
 - ▶ Microsoft SQL Server Reporting Services
 - ▶ Microsoft Exchange Server 2003 or Microsoft Exchange Server 2007
 - ▶ Domain Controllers

For more information, see "Network ports for Microsoft Dynamics CRM" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

4. Test the Microsoft Dynamics CRM Server to make sure that it is working as expected.
5. Obtain and install a wildcard SSL certificate for your Microsoft Dynamics CRM deployment.

6. Run the Internet Facing Deployment Configuration Tool to configure the IFD. While you are using the IFD tool, verify that the DNS values resolve.

Upgrade from Microsoft Dynamics CRM 3.0

This section provides best practice guidelines and actual procedures to install Microsoft Dynamics CRM Server on a computer that already has Microsoft Dynamics CRM 3.0 installed.

For information about planning, business management, and what happens to Microsoft Dynamics CRM 3.0 during upgrade, see "Upgrading from Microsoft Dynamics CRM 3.0" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

Important

You cannot upgrade versions of Microsoft Dynamics CRM that are earlier than Microsoft Dynamics CRM 3.0 to Microsoft Dynamics CRM 4.0. For example, to upgrade Microsoft CRM 1.2, you must first upgrade that version to Microsoft Dynamics CRM 3.0, and then run Microsoft Dynamics CRM Server Setup.

If your existing Microsoft Dynamics CRM 3.0 deployment includes two or more organizations running on a single instance of SQL Server, or it shares a single SQL Reporting Services server, you must complete specific tasks before and after you run Setup. These tasks are described under "Upgrade multiple Microsoft Dynamics CRM 3.0 deployments that share an instance of SQL Server" in this guide.

Microsoft Dynamics CRM Server upgrade preparations

To prepare a Microsoft Dynamics CRM Server for the upgrade, follow the guidelines in this section.

Software prerequisites

We recommend that you install the following components on the Microsoft Dynamics CRM Server before you run the upgrade:

- SQL Reporting Services Viewer
- XML Core Services
- .NET Framework 3.0
- SQL Native Client
- Microsoft Application Error Reporting Tool

If these components are not present when you run the upgrade, Setup will install them. However, to reduce the upgrade processing time, consider installing these components in advance.

Reports

To prepare reports for the upgrade, back up any Microsoft Dynamics CRM 3.0 custom report .RDL files that you have created and delete all out-of-box reports that you are not actively using. Another copy of the out-of-box reports will be installed during the upgrade. For more information, see **FAQ: Why do I have two copies of every report after upgrade?** (<http://go.microsoft.com/fwlink/?LinkID=140352>)

Customizations

To prepare customizations for the upgrade, export any product customizations that you have implemented. The exported customizations are for reference only. They cannot be upgraded outside the Microsoft Dynamics CRM Server upgrade process.

Workflows

To prepare workflows for the upgrade, stop all workflows and delete the workflow log files. This can speed up the installation process. For instructions about how to remove the workflow log records, download the ***Optimizing the Performance of Microsoft Dynamics CRM 3.0*** (<http://go.microsoft.com/fwlink/?LinkId=146684>) white paper.

Note

If Setup detects unprocessed events during the upgrade, you will receive a "time-out expired" error message and will have to exit Setup while the pending events are processed. Otherwise, all unprocessed events will be lost.

For more information about how workflows are processed during an upgrade, see "What happens to workflows?" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

E-mail Router

If your upgraded Microsoft Dynamics CRM deployment will use the E-mail Router, follow these steps:

- Install the E-mail Router. For detailed information, see "Microsoft Dynamics CRM E-mail Router Installation Instructions" in the *Microsoft Dynamics CRM Installing Guide*. You must first uninstall the E-mail Router from the Microsoft Dynamics CRM 3.0 deployment before you upgrade and install the E-mail Router for Microsoft Dynamics CRM 4.0.
- In the E-mail Router Configuration Manager, do the following:
 - Configure the outgoing e-mail profile to use SMTP server.
 - If you plan to use a forward mailbox, specify the mailbox.
- If you have configured a forward mailbox, verify that you can access that mailbox with Outlook Web Access.

After you complete these tasks, stop the E-mail Router service. You will complete the E-mail Router configuration after you have completed the Microsoft Dynamics CRM Server upgrade.

For information about how to perform these tasks, see the E-mail Router Configuration Manager Help. Also see ***How to configure the On-premise and Online E-mail Router in different deployment scenarios*** (<http://go.microsoft.com/fwlink/?LinkID=140353>).

Database upgrade

If a Microsoft Dynamics CRM 3.0 deployment that you plan to upgrade uses a version of SQL Server that is not supported for Microsoft Dynamics CRM 4.0, follow these steps before you run the Microsoft Dynamics CRM Server upgrade:

1. Upgrade SQL Server to a supported version.
2. Upgrade your Reporting Services Web sites to a supported version.

Important

If you plan to upgrade from Microsoft SQL Server 2000 to Microsoft SQL Server 2008, you should first upgrade to SQL Server 2005, then upgrade the deployment to Microsoft Dynamics CRM 4.0, and then upgrade to Microsoft SQL Server 2008. If you migrate databases to Microsoft SQL Server 2008, one or more database updates may be required. If the updates are required, they will be installed when you run Microsoft Dynamics CRM 4.0 Setup and Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services Setup. For more information, see ***KB article 957053: Support for running Microsoft Dynamics CRM 4.0 together with Microsoft SQL Server 2008*** (<http://go.microsoft.com/fwlink/?LinkID=125888>).

Moving the database during an upgrade

In some cases, you may want to move your databases to a new Reporting Services server during the upgrade. If your upgrade strategy involves moving the Microsoft Dynamics CRM databases, we recommend that you perform the required tasks in the following order:

1. Move the Microsoft Dynamics CRM 3.0 databases to the new Reporting Services server.
2. Install Microsoft Dynamics CRM 3.0 to the databases that you moved in step 1.
3. Upgrade the deployment to Microsoft Dynamics CRM 4.0.

For detailed information about this process, see **KB article 917948: How to move Microsoft Dynamics CRM 3.0 SQL databases from one server to a different server that is in the same domain** (<http://go.microsoft.com/fwlink/?LinkId=146752>).

Run the upgrade

This section outlines the tasks that you must perform to run the actual upgrade on a Microsoft Dynamics CRM server. If you encounter problems during the upgrade, see the Troubleshooting Installation and Upgrade section of this document.

Important

We strongly recommend that you back up your existing Microsoft Dynamics CRM data, including all reports and customizations, before you run Setup to upgrade your system. In addition, we recommend the following backup strategy be implemented before you run Setup:

1. Configure the Microsoft Dynamics CRM 3.0 databases by using a simple recovery model.
2. Complete a full backup of the organization database and transaction log.

For more information about database backup and restore, see the *Reporting Services Help*.

➤ To run the upgrade, follow these steps:

1. Meet all requirements as specified under "System Requirements and Required Components" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.
2. If you upgraded from Microsoft CRM 1.2 to Microsoft Dynamics CRM 3.0, we recommend that you run the Microsoft Dynamics CRM 3.0 Default Values Wizard before you run Microsoft Dynamics CRM 4.0 Server Setup. See **Microsoft CRM 3.0 Default Values Wizard** (<http://go.microsoft.com/fwlink/?linkid=121959>) to download the wizard.
3. Log on to your domain as a user who has administrator-level privileges.
4. If you run SQL Server replication, disable replication.
5. Make sure that the Microsoft Dynamics CRM server that you are upgrading is connected to the Internet. If you do not have Internet access on that server, see **KB article 948917: How to obtain the setup updates for Microsoft Dynamics CRM 4.0** (<http://go.microsoft.com/fwlink/?LinkID=102967>).
6. See the Readme file to determine the location of the Microsoft Dynamics CRM installation files.
7. In the folder where the Microsoft Dynamics CRM files are located, move to the root folder, and then double-click **SetupServer.exe**.
8. On the **Welcome to Microsoft Dynamics CRM Setup** page, select whether you want to update Microsoft Dynamics CRM Server Setup. We recommend that, if updates are available, you let Setup download the latest version. To do this, click **Update installation files**, wait until the update process is complete, and then click **Next**.
9. Type your license number in the **License code** boxes, and then click **Next**.

Note

If you purchased Microsoft Dynamics CRM through a Microsoft Volume Licensing program, the license key is provided in the **license.txt** file, which is included in the Microsoft Dynamics CRM installation files.

10. On the **License Agreement** page, review the information and, if you accept the license agreement, click **I accept this license agreement**, and then click **I Accept**.
11. If Setup detects that components are missing, the **Install Required Components** page appears.

- ▶ If you have already installed the required components, this page will not appear.
- ▶ If you have not installed the required components listed, you can install them now. Click **Install**. When the components are installed, the status column will change from **Missing** to **Installed**, and you can click **Next** to continue.

Note

These components are required before Microsoft Dynamics CRM can be installed. You can exit Setup and install the components manually, or select **Install**. The **Next** button on this page is disabled until Setup detects that these components are installed.

Installing these components may require that you restart the computer. If you are prompted to restart the computer, do so, and then start Setup again.

The 32-bit installation of .NET Framework 3.0 can take up to 10 minutes to install.

12. Setup detects that a previously installed version of Microsoft Dynamics CRM is installed. If you have recently backed up the Microsoft Dynamics CRM 3.0 databases and are ready to continue with the upgrade, click **Next**.
13. On the **Specify the Organization Name** page, type the name of your organization in the **Display name** box. In the **Name** box you can keep the name that Setup presents or you can type a unique name that must be limited to 30 characters. Notice that spaces and extended characters are not allowed. In the **Database collation** list, select the database collation that the organization database will use to sort and compare data characters. Then, click **Browse**, select the ISO currency code that you will use as the base currency for the organization in the list, click **OK**, and then click **Next**.

Important

After Setup is complete, you cannot change the database collation or the base ISO currency code. However, you can change the base currency name and base currency symbol.

The Organization Name box is limited to the standard ASCII character set (A-Z, 0-9, and _). In addition, the name must be unique to the deployment and cannot begin with a number or underscore (_) character.

14. On the **Help Us Improve the Customer Experience** page, select whether you want to participate in the Customer Experience Improvement Program, and then click **Next**.

Note

By default, the Customer Experience Improvement Program feature in Microsoft Dynamics CRM is turned on. If you use a third party to install or configure the Microsoft Dynamics CRM software on the computer system and you want to participate in the Microsoft Customer Experience Improvement Program, you should instruct the third-party provider to accept the invitation to participate in the Customer Experience Improvement Program on your behalf. If you decide that you do not want to participate in the Customer Experience Improvement Program after the third-party provider accepts the invitation on your organization's behalf, you can turn off this feature in the Microsoft Dynamics CRM Web application. To do this, in the Navigation Pane, click **Settings** and then click **Administration**. In the Administration area click **Privacy Preferences** and then clear the **Yes, I am willing to participate anonymously in the Customer Experience Improvement Program** check box. Click **OK**.

15. On the **Specify Reporting Services Server** page, you can keep the existing Report Server URL or type a new URL for the Report Server. When typing a new URL, make sure that you use the Report Server URL, not the Report Manager URL. To verify that you are using the correct URL, in a browser, type the Report Server URL as the address. You should see a page titled <server>/ReportServer - /: with text that displays the version number: Microsoft SQL Server Reporting Services Version <version number>. Click **Next**.
16. On the **Specify Security Account** page, select the security account for the Microsoft Dynamics CRM services and ASP.NET component, and then click **Next**.

Important

We strongly recommend that you select a low-privilege domain account that is dedicated to running these services and is not used for any other purpose. This domain account should only have local user-level permissions in the domain.

Note

If you select to run the ASP.NET service under a domain user account that is not either a domain administrator or a local administrator, you must set a local security policy after you install Microsoft Dynamics CRM Server for the ASP.NET service to work correctly. Also, depending on the password policies you have implemented for your organization, the password for the user may expire. For more information, see the Microsoft Knowledge Base article 329290, **How to use the ASP.NET utility to encrypt credentials and session state connection strings** (<http://go.microsoft.com/fwlink/?linkid=53266>).

17. On the **Specify E-mail Router Settings** page, you can keep the existing E-mail Router server or type a new name for the computer on which the E-mail Router will be installed. This computer will be used to route Microsoft Dynamics CRM e-mail messages. If you will not install the E-mail Router you can leave this box blank. Then click **Next**.
18. The **System Requirements** page appears. This page is a summary of all system requirements for a successful Microsoft Dynamics CRM Server installation. Failed tests must be corrected before installation can continue. If a problem will take time to correct, cancel Setup at this point, fix the problem and restart Setup. All errors must be resolved. If no errors or only warnings appear, you can continue with the installation. To do this, click **Next**.
19. Review the **Ready to Install the Application** page, click **Back** to correct any errors. When you are ready to continue, click **Upgrade**.
20. When Setup has completed successfully, the **Microsoft Dynamics CRM 4.0 Completed** page appears. We recommend that you let Setup restart the computer by leaving the **Restart the computer when the wizard closes** option checked. Click **Finish**.

Important

You *cannot* install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services before you install Microsoft Dynamics CRM Server.

By default, Setup turns on HTTP compression on the server that is running IIS where the Microsoft Dynamics CRM Server Web application is installed. If you use another method to compress HTTP communications, you may want to turn this feature off. To do this, start IIS Manager, right-click the **Web Sites** folder, click **Properties**, click the **Service** tab, and then clear **Compress application files** and **Compress static files**.

After the upgrade

After Setup has upgraded the Microsoft Dynamics CRM Server, perform the following post-upgrade tasks.

Post-upgrade steps for servers

➤ **For each of your Microsoft Dynamics CRM Server deployments, follow these steps:**

1. Restart the Web server.
2. Complete the product registration.

Note

If you are installing a trial or prerelease version of the product, skip this step. Those versions are not registered.

3. If you have additional servers, upgrade or uninstall and reinstall Microsoft Dynamics CRM on those servers as described in the "Upgrading multiple servers" section of this guide.
4. If your deployment uses the E-mail Router, complete the configuration as explained in **How to configure the On-premise and Online E-mail Router in different deployment scenarios** (<http://go.microsoft.com/fwlink/?LinkID=140353>).

5. Install the Microsoft Dynamics CRM Connector for Microsoft SQL Server Reporting Services.
6. Install the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=146266>) package or server hotfixes.
7. If you have an Internet Facing Deployment, run the Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool.
8. In Microsoft SQL Server Reporting Services Report Manager, re-create any custom data sources under the 4.0 folder.
9. Verify that the system jobs and workflows are running. If they are not running, download and run the Internet Facing Deployment Configuration Tool to configure the settings correctly in the MSCRM_CONFIG database. For detailed information about this task, see **KB article 950416: System Jobs are in a waiting state and Outlook clients cannot connect after you set the CRM Web site to an assigned IP address** (<http://go.microsoft.com/fwlink/?LinkId=151329>).

Post-upgrade steps for clients

To be compatible with a Microsoft Dynamics CRM 4.0 server, Microsoft Dynamics CRM 3.0 clients must be upgraded.

➤ **To upgrade clients, follow these steps:**

1. If you use Microsoft Dynamics CRM for Outlook or Microsoft Dynamics CRM for Outlook with Offline Access, install it.
2. If you use AutoUpdate, run the configuration tool to publish client updates to clients.
3. Test the functionality from Outlook and from the Microsoft Dynamics CRM 4.0 Web client.

Note

If you are using Microsoft Dynamics CRM for Outlook, you must upgrade the clients immediately after the server upgrade so that they can access Microsoft Dynamics CRM functionality. If you use Microsoft Dynamics CRM for Outlook with Offline Access, users can remain offline until they are ready to upgrade to Microsoft Dynamics CRM 4.0.

For more information, see "Upgrade the Microsoft Dynamics CRM 3.0 client for Outlook" in this guide.

Upgrading multiple servers

If your environment has multiple Microsoft Dynamics CRM servers, either stand-alone or in a Network Load Balancing (NLB) cluster, we recommend that you perform the upgrade tasks in the following order.

➤ **For example, to upgrade a two-node NLB cluster, follow these steps:**

1. Shut down one of the Microsoft Dynamics CRM 3.0 servers (or stop the IIS service).
2. Upgrade the other server from Microsoft Dynamics CRM 3.0 to Microsoft Dynamics CRM 4.0.
3. Uninstall Microsoft Dynamics CRM 3.0 on the server that you shut down in step 1.
4. Perform a new installation of Microsoft Dynamics CRM 4.0 on the server where you uninstalled Microsoft Dynamics CRM 3.0. During the upgrade, select the option **Connect to Existing Deployment** to connect to the databases that were upgraded in step 2.

Performing the upgrade steps in this order enables you to roll back to Microsoft Dynamics CRM 3.0 if you encounter problems during the upgrade.

Note

For more information about how to configure Microsoft Dynamics CRM 4.0 in an NLB cluster, see "Install Microsoft Dynamics CRM Server on multiple computers" in this guide.

Upgrade multiple Microsoft Dynamics CRM 3.0 deployments that share an instance of SQL Server

If you have multiple Microsoft Dynamics CRM 3.0 deployments running on a single instance of SQL Server and you plan to upgrade all deployments to Microsoft Dynamics CRM 4.0, you have three options available to complete the upgrade. Notice that you cannot install multiple Microsoft Dynamics CRM 4.0 deployments by using a single instance of SQL Server. This is because only one configuration database (MSCRM_Config) can exist on an instance of SQL Server.

If you want to combine all Microsoft Dynamics CRM 3.0 deployments into a single deployment by using the Microsoft Dynamics CRM 4.0 multi-tenancy feature, you can use the Import Organization Wizard that is located in the Organization node in the Microsoft Dynamics CRM 4.0 Deployment Manager. Notice that only Microsoft Dynamics CRM 4.0 Enterprise supports multiple organizations in the deployment.

If you upgrade the Microsoft Dynamics CRM 3.0 deployment and the instance of SQL Server hosts multiple installations of the Microsoft Dynamics CRM 3.0 databases, you must select one of the following options to complete the upgrade.

First, you must upgrade one of the Microsoft Dynamics CRM 3.0 environments by running Microsoft Dynamics CRM 4.0 Setup. This will create the configuration database and merge the Microsoft Dynamics CRM 3.0 databases into a single organization database.

Next, you must upgrade the second Microsoft Dynamics CRM 3.0 environment. To do this, you must select one of the following options to complete the upgrade.

Option 1: Restore the Microsoft Dynamics CRM 3.0 databases to an instance of SQL Server

➤ **To implement this option, follow these steps:**

1. Back up and restore the Microsoft Dynamics CRM 3.0 databases to another instance of SQL Server on the same computer or to another computer that is running SQL Server. For more information about how to back up and restore Microsoft Dynamics CRM 3.0, see "Backing Up the Microsoft Dynamics CRM System" in the *Microsoft Dynamics CRM 4.0 Operating and Maintaining Guide*.
2. Start Microsoft Dynamics CRM 3.0 Deployment Manager and associate the databases. For more information about how to do this, see **KB Article 917948: How to move Microsoft Dynamics CRM 3.0 SQL databases from one server to a different server that is in the same domain** (<http://go.microsoft.com/fwlink/?linkid=104221>)
3. Run Microsoft Dynamics CRM Server Setup.

Option 2: Delete the existing configuration database

For this option, you will run Microsoft Dynamics CRM Server Setup again to create a new configuration database, and then import the organization from the previous upgrade.

➤ **To implement this option, follow these steps:**

1. Back up the newly upgraded Microsoft Dynamics CRM organization (OrgName_MSCRM) and configuration databases (MSCRM_Config) from the previous upgrade. For more information about how to back up these databases, see "Backing Up the Microsoft Dynamics CRM System" in the *Microsoft Dynamics CRM 4.0 Operating and Maintaining Guide*.

Note

You will not be required to restore the configuration database after you complete these steps because Microsoft Dynamics CRM Server Setup will create a new one. However, we recommend that you back up the configuration database from the previous upgrade in the event the next upgrade fails.

2. Delete the configuration database (MSCRM_Config) that was created during the previous upgrade. To do this, use Reporting Services.

3. Run Microsoft Dynamics CRM 4.0 Setup to upgrade the next Microsoft Dynamics CRM 3.0 environment. This will create a new configuration database.
4. Repeat steps 1 through 3 for each additional Microsoft Dynamics CRM 3.0 environment that you want to upgrade.
5. When you have upgraded the last Microsoft Dynamics CRM 3.0 environment, use the Microsoft Dynamics CRM 4.0 Deployment Manager to import each organization database that was created from the previous upgrades. For more information about how to import an organization, see the Microsoft Dynamics CRM 4.0 Deployment Manager Help.
6. On the previously upgraded servers, uninstall Microsoft Dynamics CRM 4.0. To do this, click **Start**, point to **Control Panel**, and then click **Add or Remove Programs**. In the programs list, click **Microsoft Dynamics CRM 4.0 Server**, and then follow the instructions that are on your screen.
7. Run Microsoft Dynamics CRM 4.0 Setup, select to connect to an existing deployment, and then specify the instance of SQL Server that maintains the configuration database. The instance of SQL Server to specify must be the one that was specified during the last Microsoft Dynamics CRM 3.0 environment that you upgraded. If you want to have multiple Microsoft Dynamics CRM Web servers in your deployment, you can complete this step to associate the Microsoft Dynamics CRM Web application with the correct deployment.

Option 3: Add all organizations to a single Microsoft Dynamics CRM 4.0 deployment

Note

This option requires Microsoft Dynamics CRM 4.0 Enterprise.

➤ To implement this option, follow these steps:

1. Back up the organization database (OrganizationName_MSCRM) that was created during the first upgrade and restore it to a new instance of SQL Server that will be used for the Microsoft Dynamics CRM 4.0 deployment. For more information about how to back up an organization database, see "Backing Up the Microsoft Dynamics CRM System" in the *Microsoft Dynamics CRM 4.0 Operating and Maintaining Guide*.
2. On the newly upgraded Microsoft Dynamics CRM Server, start Deployment Manager and import the organization. For more information about how to import an organization, see the *Microsoft Dynamics CRM 4.0 Deployment Manager Help*.
3. Delete the configuration database (MSCRM_Config) that was created during the first upgrade. To do this, use Reporting Services.
4. Run Microsoft Dynamics CRM 4.0 Setup to upgrade the next Microsoft Dynamics CRM 3.0 environment.
5. Repeat steps 1 through 4 for each Microsoft Dynamics CRM 3.0 environment that you want to upgrade.

Important

You can install and run only one instance of Microsoft Dynamics CRM Connector for SQL Server Reporting Services on a computer that has SQL Server 2005 Reporting Services or SQL Server 2008 Reporting Services installed.

Separate deployments of Microsoft Dynamics CRM cannot share one SQL Server Reporting Services server. However, a single Microsoft Dynamics CRM deployment that has multiple Organizations can use the same SQL Server Reporting Services server.

Install Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services

The Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services has the following requirements:

- You must complete Microsoft Dynamics CRM Server Setup before you run Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services Setup.

- You must run Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services Setup on a computer that has Microsoft SQL Server 2005 Reporting Services or Microsoft SQL Server 2008 Reporting Services installed.
- One or more updates may have to be installed on the computer that is running SQL Server 2008 to work with Microsoft Dynamics CRM. If needed, these updates will be installed when you click **Update installation files** during Microsoft Dynamics CRM Connector for Microsoft SQL Server Reporting Services Setup. For more information about these updates, see Microsoft Knowledge Base article **Support for Microsoft Dynamics CRM 4.0 that is compatible with Microsoft SQL Server 2008** (<http://go.microsoft.com/fwlink/?linkid=125888>).

Warning

Microsoft Dynamics CRM users who use the Report Viewer control that is included with Microsoft Visual Studio 2005 can view information from the reports that they have access to. By using this control, the user can view additional report and session data that is not displayed when running the report in Microsoft Dynamics CRM. To reduce the risk of exposing confidential data, we recommend that you configure the SQL Server Microsoft SQL Server Reporting Services Web site where the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services is installed to allow only secure sockets layer (SSL), also known as Secure HTTP, connections. For more information about how to configure SSL for IIS, see the Internet Information Services (IIS) Manager Help.

To reduce the risk of certain security vulnerabilities, we strongly recommend that you use different Active Directory accounts for the application pools used to run the Microsoft Dynamics CRM Server and SQL Server Reporting Services Web sites. For more information, see "Potential Security Risk When You Run Microsoft Dynamics CRM Server by Using the Same User Account as Microsoft Dynamics CRM Connector for SQL Server Reporting Services" in this guide.

- **To install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services, locate the Microsoft Dynamics CRM installation files, and follow these steps:**
1. In the /SrsDataConnector/ folder, double-click **SetupSrsDataConnector.exe**.
 2. On the **Welcome to Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup** page, select whether you want to update Microsoft Dynamics CRM Server Setup. We recommend that, if updates are available, you let Setup download the latest version. To do this, click **Update installation files**, wait until the update process is complete, and then click **Next**.
 3. On the **License Agreement** page, review the information and, if you accept the license agreement, click **I accept this license agreement**, and then click **I Accept**.
 4. If Setup detects that components are missing, the **Install Required Components** page appears.
 - ▶ If you have already installed the required components, this page will not appear.
 - ▶ If you have not installed the required components listed, you can install them now. Click **Install**. When the components are installed, the status column will change from **Missing** to **Installed**, and you can click **Next** to continue.

Notes

These components are required before Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services can be installed. You can exit Setup and install the components manually, or select **Install**. The **Next** button on this page is disabled until Setup detects that these components are installed.

Installing these components may require that you restart the computer. If you are prompted to restart the computer, do so, and then start Setup again.

The 32-bit installation of .NET Framework 3.0 can take up to 10 minutes to install.

5. On the **Specify Configuration Database Server** page, enter the name of the computer that is running SQL Server and contains the Microsoft Dynamics CRM configuration database that is named **MSCRM_CONFIG**, and then click **Next**.

6. The **System Requirements** page appears. This page is a summary of the requirements for a successful Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services installation. Failed tests must be corrected before installation can continue. If a problem will take time to correct, cancel Setup at this point, fix the problem and restart Setup. All errors must be resolved. If no errors or only warnings appear, you can continue with the installation. To do this, click **Next**.
7. Review the **Ready to Install the Application** page, and then click **Back** to correct any errors. When you are ready to continue, click **Install**.
8. When Setup completes successfully, the **Microsoft Dynamics CRM Connector for SQL Server Reporting Services Completed** page appears. Click **Finish**.

Potential security risk when you run Microsoft Dynamics CRM Server by using the same user account as Microsoft Dynamics CRM Connector for SQL Server Reporting Services

Depending on how you configure the accounts that will be used to run the Microsoft Dynamics CRM Connector for SQL Server Reporting Services and Microsoft Dynamics CRM Server services, certain security vulnerabilities can exist. These vulnerabilities include unintended elevated privilege or SQL injection attacks. These security vulnerabilities are especially problematic when the Microsoft Dynamics CRM Server is configured for Internet access. These vulnerabilities can exist when either of the following configurations exists:

- You install and run the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services on the same computer as Microsoft Dynamics CRM Server and configure both applications to use the Network Service account or the same Active Directory domain user account.
- You install and run the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services on a different computer than the Microsoft Dynamics CRM Server. However, you use the same Active Directory domain user account to run both the Microsoft Dynamics CRM Connector for SQL Server Reporting Services and Microsoft Dynamics CRM Server services.

Because of these potential risks, we strongly recommend that you specify and maintain different Active Directory user accounts to run the application pools that are used by Microsoft Dynamics CRM Server and the SQL Server Reporting Services where the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services is installed.

To help make data more secure, before you install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services, we recommend that you select one of the following Microsoft Dynamics CRM deployment options:

- Do not install Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services. Then, reports will run by using Integrated Windows authentication. However, because you have not installed the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services you must configure trust for delegation if the SQL Server Reporting Services computer does not have Microsoft Dynamics CRM Server or Microsoft SQL Server installed.
 - Install the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services on a different computer that is running SQL Server Reporting Services.
 - Configure the Reporting Services application pool identity on this computer to use a different account. To do this, use Internet Information Services (IIS) Manager and select a different account from the application-pool identity list on the application pool properties page.
- **After you complete Microsoft Dynamics CRM Server Setup, you can follow these steps to determine the account that is used for each application pool:**
1. On the computer where the Microsoft Dynamics CRM Server Web application is installed, click **Start**, point to **Administrative Tools**, and then click Internet Information Services (IIS) Manager.
 2. Expand **Application Pools**, right-click **CRMAppPool**, and then click **Properties**.

3. On the **CRMAppPool Properties** dialog box, click the **Identity** tab and note the name of the security account that is used for the application pool. This is the account that is used to run the application pool for the Microsoft Dynamics CRM Web application.
4. To determine the account that is used for SQL Server Reporting Services, follow the same steps as described earlier on the computer where the Microsoft Dynamics CRM Connector for SQL Server Reporting Services is installed, and then right-click the SQL Server Report Services application pool. By default, the SQL Server Report Services application pool is named **ReportServer**.

For more information about SQL injection attacks, see the MSDN article ***Building Secure ASP.NET Applications: Authentication, Authorization, and Secure Communication*** (<http://go.microsoft.com/fwlink/?linkid=104204>).

Register Microsoft Dynamics CRM

Full versions of Microsoft Dynamics CRM must be registered within 30 days of installing Microsoft Dynamics CRM Server. Trial and prerelease versions are not registered.

Warning

If you do not register Microsoft Dynamics CRM within 30 days of installing Microsoft Dynamics CRM, the product will become deactivated and users and administrators will no longer be able to access the application. To reactivate the application, complete the Microsoft Dynamics CRM registration process.

Completing registration alerts Microsoft to that your deployment of Microsoft Dynamics CRM is licensed and therefore eligible for benefits and support. Registration requires a working connection to the Internet. To register Microsoft Dynamics CRM, on the computer where Microsoft Dynamics CRM Server is installed, click **Start**, point to **All Programs**, point to Microsoft Dynamics CRM 4.0, and then click **Registration Wizard**. Then, follow the instructions on your screen.

Post-installation tasks

This section provides information about the tasks and configuration settings to be completed after you install Microsoft Dynamics CRM Server.

Configure Microsoft Dynamics CRM by using the Internet Facing Deployment Configuration Tool

The Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool enables you to configure an Internet-facing deployment (IFD) of Microsoft Dynamics CRM 4.0 after you have installed or upgraded to Microsoft Dynamics CRM 4.0. You can also use this tool any time you want to change the configuration of your IFD.

To download the Microsoft Dynamics CRM Internet-Facing Deployment Configuration Tool, and learn how it is used, see ***KB article 948779: How to use the Microsoft Dynamics CRM Internet Facing Deployment Configuration Tool*** (<http://go.microsoft.com/fwlink/?linkid=114765>).

For more information about how to configure a Microsoft Dynamics CRM IFD, see "Configure Microsoft Dynamics CRM for Internet-facing deployment" in this guide.

Manage organizations, servers, and licensing

You use Deployment Manager to create, enable, and disable organizations, enable and disable servers, and view and upgrade licenses for Microsoft Dynamics CRM Server. Deployment Manager is a Microsoft Management Console (MMC) snap-in that is installed on the computer where Microsoft Dynamics CRM Server is installed.

Important

To run Deployment Manager, you must have the Deployment Administrator role. During Microsoft Dynamics CRM Server Setup, the user running Setup is automatically added as a member of this role. The Deployment Administrator role is granted or removed in the Deployment Administrators node in Deployment Manager. This role cannot be managed in the Microsoft Dynamics CRM client applications.

For more information about this role, see the Deployment Manager Help.

When you add a Deployment Administrator role to a user, Deployment Manager does not add the required permissions on the instance of SQL Server where the Microsoft Dynamics CRM databases are stored. When the user tries to start Deployment Manager, the user might receive an "Unable to access the MSCRM_CONFIG database. SQL Server does not exist or access denied" error message. To resolve this issue, you must add the user to SQL log-ins by using Reporting Services.

Install sample data

Sample data is available and can be used to train users on Microsoft Dynamics CRM. You use Data Migration Manager to migrate the sample data into Microsoft Dynamics CRM.

You can download the sample data and a data map (a file that contains information about how data from a source system corresponds to data in Microsoft Dynamics CRM) for the sample data, and then use Data Migration Manager to migrate the sample data. Make sure that you note the name of the migration so that you can easily delete the sample data when you are finished using it.

For more information, visit **Microsoft Dynamics CRM Sample Data** (<http://go.microsoft.com/fwlink/?linkid=100866>).

Troubleshooting installation and upgrade

This section describes how to troubleshoot installation and known issues.

Log files

Setup creates log files that can be reviewed and used for troubleshooting. By default, the location of the log files, where *User* is the account of the user who ran Setup, is as follows:

`SystemDrive:\Documents and Settings\User\Application Data\Microsoft\MSCRM\Logs\`

Server installation issues

This section describes how to troubleshoot Microsoft Dynamics CRM Server installation issues.

Setup cannot find the selected organizational unit

A common reason that Setup cannot locate the organizational unit is because of name-resolution problems. To verify that the organizational unit that you specify can be resolved, run the Active Directory Users and Computers snap-in on the computer where you are running Microsoft Dynamics CRM Server Setup. To do this, click **Start**, click **Run**, type `dsa.msc`, and then click **OK**. In the Active Directory Users and Computers snap-in, expand the domain, and then verify that you can view the organizational unit where you want to install Microsoft Dynamics CRM. If you cannot connect to the domain or view the organizational unit using Active Directory Users and Computers, verify that DNS is configured and functioning correctly. After the problem is resolved, run Setup again.

Setup fails or client receives an unhandled exception when trying to connect after you install Microsoft Dynamics CRM Server

Setup may not complete successfully or any of the Microsoft Dynamics CRM 4.0 clients may receive an error message when trying to connect to the Microsoft Dynamics CRM Server that is similar to items in the following list:

Exception from HRESULT. 0x80048306.

Description. An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details. System.Runtime.InteropServices.COMException: Exception from HRESULT: 0x80048306.

Source Error. An unhandled exception was generated during the execution of the current web request. Information regarding the origin and location of the exception can be identified using the exception stack trace below.

This problem can occur if you run Microsoft Dynamics CRM Server Setup when the following conditions are true:

- One or more of the following Active Directory security groups was created in the organizational unit where you are installing Microsoft Dynamics CRM 4.0:
 - ▶ PrivUserGroup
 - ▶ SQLAccessGroup
 - ▶ PrivReportingGroup
- The previously-mentioned security groups do not have the correct group membership.
- You use the automanagegroupsoff=false attribute and value in the <Groups> entry for the Setup XML configuration file. To use a configuration file, you must install Microsoft Dynamics CRM Server at the command prompt.

To resolve this issue, you must manually add the correct membership to each of the required security groups in Active Directory, and then run Microsoft Dynamics CRM Server Setup again.

To manually add the objects to Active Directory, use Active Directory Users and Computers. You must add the following users and computers to each security group:

Security Group	Object Type	Description
PrivUserGroup	User	User who is running Microsoft Dynamics CRM Server Setup
PrivUserGroup	Computer	Computer where Microsoft Dynamics CRM Server is installed
PrivUserGroup	Computer	Computer where Microsoft Exchange Server is installed (if you are using the E-mail Router)
SQLAccessGroup	Computer	Computer where Microsoft Dynamics CRM Server is installed
PrivReportingGroup	Computer	Computer where the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services is installed

"One or more reports could not be upgraded" message received during upgrade

Because of changes in reporting functionality with Microsoft Dynamics CRM 4.0, some reports cannot be upgraded. Although Setup indicates that the upgrade was not successful, in most cases the rest of the Microsoft Dynamics CRM 4.0 application will function as expected. For a list of those reports including an explanation, see the server Setup log file. By default, the log file is located in *SystemDrive:\Documents and Settings\<User>\Application Data\Microsoft\MSCRM\Log\crm40svrsetup.log*. The reporting upgrade information is located near the end of the log file because report upgrade is one of the last stages of upgrade.

For more information about how reports are upgraded, see "Planning Deployment" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

"One or more workflows could not be upgraded" message received during upgrade

Because of changes in workflow and sales process functionality with Microsoft Dynamics CRM 4.0, some workflows cannot be upgraded. Although Setup indicates that the upgrade was not successful, in most cases the rest of the Microsoft Dynamics CRM 4.0 application will function as expected.

For a list of those workflows, including an explanation, see the server Setup log file. By default, the log file is located at:

SystemDrive:\Documents and Settings\<User>\Application Data\Microsoft\MSCRM\Log\crm40svrsetup.log

For more information about how workflows are upgraded, see "Planning Deployment" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

Sales processes are upgraded to workflows

In Microsoft Dynamics CRM 3.0, only sales processes could include stages, and they were only able to take action on the Opportunity entity. In other words, sales processes were a special kind of workflow. In Microsoft Dynamics CRM 4.0, all workflows support stages on all kinds of entities. Therefore, all Microsoft Dynamics CRM 3.0 sales processes are converted to standard workflows during the upgrade process. If the upgrade is successful, the underlying logic of the new workflow is unaffected, including stages and the primary entity (Opportunity).

Workflows that include references to objects that are invalid or do not exist cannot be upgraded

If a Microsoft Dynamics CRM 3.0 workflow references a record, entity, attachment, or other kind of object that is invalid or does not exist on the server that is being upgraded, upgrade of that workflow and all related workflow jobs will fail. The following list includes examples of referenced objects that can cause a workflow upgrade to fail:

- Missing attachments
- Missing or invalid custom entities, attributes, and relationships
- Missing or invalid custom workflow activities (.NET assemblies or .NET methods)
- Unsupported attributes (attributes that have been deprecated since the previous release)
- Inconsistencies between the workflow owners and the business units to which they belong

If any workflows or workflow jobs are not successfully upgraded because of a missing or invalid referenced object, open Workflow Manager, correct the problems described in the log file, and continue the upgrade process. Specifically, remove or replace references to invalid, missing, or unsupported objects and correct inconsistencies between owners and business units.

Server Setup fails with "The process cannot access the file because it is being used by another process. (Exception from HRESULT: 0x80070020)" error message

Microsoft Dynamics CRM Server Setup may fail with a "The process cannot access the file because it is being used by another process. (Exception from HRESULT: 0x80070020)" error message. This issue can occur when the following conditions are true:

- You install Microsoft Dynamics CRM Server and select to create a new Web site.
- The computer has Microsoft Internet Security and Acceleration (ISA) Server 2004 installed and the application is configured by using a policy to monitor the port that was specified during Setup to create a new Microsoft Dynamics CRM Web site.

To work around this problem, disable the Microsoft Internet Security and Acceleration policy, run Setup again, and then re-enable the policy. For more information about ISA Server policies, see the Microsoft Internet Security and Acceleration Server Help.

Users receive "The requested record was not found, or you do not have sufficient permissions to view it" error message when they try to sign in to Microsoft Dynamics CRM

Users may be unable to sign in to Microsoft Dynamics CRM because of a custom installation of Microsoft Dynamics CRM Server. Microsoft Dynamics CRM Server Setup does not create an organization during installation. You must have at least one organization available in the deployment for users to sign in to. To resolve this problem, create an organization by using the New Organization feature in Deployment Manager. For information about how to create a new organization, see the Deployment Manager Help.

Error message "The transaction log for database OrganizationName_MSCRM is full" occurs during Microsoft Dynamics CRM Server Setup

During Microsoft Dynamics CRM Server Setup, you may receive the error message "*OrganizationName_MSCRM* is full," where *OrganizationName* is the name of the organization. This issue may occur when there is insufficient disk space to store the organization database transaction log file. During Microsoft Dynamics CRM Server Setup, the organization database transaction log can increase significantly. To resolve this issue, make sure that there is sufficient disk space that you can use for the transaction log file. Also, you can perform steps to reduce the size of the transaction log and then run Setup again. For more information about transaction log file maintenance, see the *Reporting Services Help*.

Clients cannot connect to Microsoft Dynamics CRM Web application

Clients may be unable to connect to the Microsoft Dynamics CRM Web application. This issue can occur when the following conditions are true:

- The Microsoft Dynamics CRM Web application is configured for a TCP port that is not the default port (80), such as 5555.
- Microsoft Windows Firewall does not include an exception for the port.

To resolve this issue, add the port as an exception in the firewall configuration on the server where Microsoft Dynamics CRM is installed.

You receive the error message "Execution GUID cannot be found" when running a report on Windows Small Business Server 2008

You may receive this error message when you try to run a report by using Microsoft Dynamics CRM on Windows Small Business Server 2008. When this message is displayed, *GUID* is an alpha-numeric identifier in the error message that will change every time that you run a report. To work around this issue, you must install and run the Microsoft Dynamics CRM Connector for SQL Server Reporting Services.

Server upgrade issues

For common issues that may occur during Microsoft Dynamics CRM Server upgrade, see the following Microsoft Knowledge Base article.

How to resolve common problems that may occur when you upgrade from Microsoft Dynamics CRM 3.0 to Microsoft Dynamics CRM 4.0 (<http://go.microsoft.com/fwlink/?linkid=122246>)

Error message when you try to upgrade Microsoft Dynamics CRM 3.0 to Microsoft Dynamics CRM 4.0 : "Action Microsoft.Crm.Setup.Server.InstallDatabaseAction failed"

This problem occurs because the Microsoft SQL Server Replication is enabled. For more information, see **Microsoft Knowledge Base article 946590** (<http://go.microsoft.com/fwlink/?linkid=121999>).

Install Microsoft Dynamics CRM Server on multiple computers

You can install Microsoft Dynamics CRM Server on multiple computers to balance the processing load across several servers. Deploying Microsoft Dynamics CRM Server in this manner can increase performance and availability.

Important

Installing the Microsoft Dynamics CRM 4.0 Workgroup edition on multiple servers is not supported and is a violation of the license agreement.

This topic does not apply to implementations that involve Microsoft Windows Small Business Server 2003 (Windows SBS).

Multiple-server configuration overview

Before getting started with load balancing, installation and configuration planning is needed. For more information and guidelines, installation and configuration for a Microsoft Dynamics CRM system is described in the Microsoft Dynamics CRM 4.0 Planning Guide.

The base configuration typically uses separate computers that are running the required components of a Microsoft Dynamics CRM deployment that includes Microsoft SQL Server and an instance of Windows Server functioning as an Active Directory domain controller. A multiple-server configuration of Microsoft Dynamics CRM has multiple computers that are running Microsoft Dynamics CRM that access a single server that is running SQL Server.

This topic describes the steps to install Microsoft Dynamics CRM in a two-node network load-balancing configuration where all Microsoft Dynamics CRM Server roles are installed on a single computer. This kind of deployment is called a full-server installation. You can use similar steps to install a particular server group role, such as the Application server role group, or one or more specific server roles. When you install Microsoft Dynamics CRM, you have the following three choices for load balancing the Microsoft Dynamics CRM Web application, where both servers in the network load-balancing (NLB) cluster must have the following server-group roles or individual server roles installed.

- Full-server install (typical install).
- Application-server role group install (custom install).
- Server role install (command-line install by using an XML configuration file). You will have to install at least the following two roles on the load-balanced servers in the cluster.
 - AppServer (application server role). This Microsoft Dynamics CRM Server role is used to run the Web-application server that is used to connect users to Microsoft Dynamics CRM data.
 - SDKServer (Microsoft Dynamics CRM SDK server role). This Microsoft Dynamics CRM Server role is used to run applications that use the methods described in the Microsoft Dynamics CRM SDK.

Important

If you decide to install only the Application-server role group, you must install the Platform-server group role on another server in the Active Directory domain for Microsoft Dynamics CRM to function. Similarly, if you want to install only the required AppServer and SDKServer roles, you must install the remaining server roles on other servers in the Active Directory domain for Microsoft Dynamics CRM to function.

In this example, a two-node cluster will be set up by using two computers that are running Windows Server 2003 SP2. The server names are CRM01 and CRM02.

Step 1: Enable network load balancing

Enable NLB on the network and create a server cluster for servers CRM01 and CRM02. We recommend that you use the following port-rule settings when you enable the load-balanced cluster.

- **Port range.** Leave the default range, which is from 0 to 65535.
- **Protocols.** Both
- **Affinity.** Single

For information about procedures for loading and administering NLB on Windows Server 2003, see the Network Load Balancing Manager Help on the Windows Server 2003 computer. For more information about how to configure NLB in Windows Server 2003 see **How to Configure Network Load Balancing Parameters in Windows Server 2003** (<http://go.microsoft.com/fwlink/?linkid=120953>).

Step 2: Configure Active Directory

Configure Active Directory by creating an account to run the CRMAppPool service and use a Service Principal Name (SPN). This is required when you run Internet Information Services (IIS) 6.0 in a clustered or a network load-balanced environment. The SPN uniquely identifies an instance of a running service. Active Directory uses the SPN for mutual authentication of a service instance, which enables the service instance to correctly authenticate when a user attempts to access resources that are located on other domain-member computers. For more information, see the MSDN article **Service Principle Names** (<http://go.microsoft.com/fwlink/?linkid=120954>).

To create SPNs, you must install the following tools, which are part of the Windows support tools, located in the Support\Tools folder on the Windows Server 2003 CD:

- **adsiedit.msc.** This Microsoft Management Console (MMC) snap-in tool can be used to enter SPN values for a specific computer or user account. This tool requires adsiedit.dll.
- **search.vbs.** This script is used to determine whether the SPN value is used anywhere else.

➤ **To configure the SPN, follow these steps:**

1. Open Active Directory Users and Computers.
2. Create a user account to run the CRMAppPool application pool in IIS. To do this, we recommend that you use a name that describes what the account will be used for, such as *CRMService*.

Important

This user account must be member of the Domain Users group.

3. Close Active Directory Users and Computers.
4. Open Windows Explorer and then locate the Program Files\Support Tools folder.
5. Double-click **adsiedit.msc**.
6. Expand the domain, expand the node that begins with **DC=**, and then expand **CN=Users**.
7. Right-click the user account that you created in the previous step, such as *CRMService*, and then click **Properties**.
8. In the **Attributes** list, scroll down, select **servicePrincipalName**, and then click **Edit**.

9. In the **Value to add** box, type *HTTP/CRMNLBName.FQDN* and then click **Add**. Where, *CRMNLBName*, is the NLB cluster name and *FQDN* is the fully qualified domain name. For example, the *CRMNLBName.FQDN* name might be *CRMNLBCluster.contoso.com*.

Important

Note this NLB cluster name. You must use this name in the following step when you create the NLB cluster and when you update the configuration database.

10. In the **Value to add** box, type *HTTP/CRMNLBName* and then click **Add**.
11. Click **OK** two times.

Step 3: Install Microsoft Dynamics CRM servers

Each instance of Microsoft Dynamics CRM in a multi-server deployment must be installed one at a time. The following steps assume that a single instance of a full-server installation of Microsoft Dynamics CRM will be deployed on a computer that is named *CRM01*, and then a second instance will be installed on a computer named *CRM02*.

The following editions of Microsoft Dynamics CRM are supported for multiple-server installations.

- Microsoft Dynamics CRM 4.0 Professional
- Microsoft Dynamics CRM 4.0 Enterprise

Installing Microsoft Dynamics CRM 4.0 Workgroup on multiple servers is not supported and is a violation of the license agreement.

➤ **Install the first instance Microsoft Dynamics CRM on *CRM01*:**

1. Run Microsoft Dynamics CRM Setup on server *CRM01*. For step-by-step guidance, see the previous topics in this chapter.
2. On the Specify Deployment Options page, select the instance of SQL Server that will be used for the Microsoft Dynamics CRM databases. Then, select the **Create a new deployment** option. Click **Next** and continue Setup.
3. On the Specify Security Account page, select the domain user account (for example, *CRMService*) created previously.
4. Continue to run Setup until the installation is completed.

➤ **Install the second instance Microsoft Dynamics CRM on *CRM02*:**

1. Run Microsoft Dynamics CRM Setup on server *CRM02*.
2. On the Specify Deployment Options page, enter or select the name of the computer that is running SQL Server where the Microsoft Dynamics CRM databases are stored (from the installation of *CRM01*), and then click **Connect to an existing deployment**. Click **Next**.
3. On the Specify Security Account page, select the domain user account (for example, *CRMService*) created previously.
4. Continue to run Setup until the installation is completed.

Step 4: Update the configuration database to address the NLB cluster

You must manually update the configuration database by adding the fully qualified domain name (FQDN) cluster name. To do this, follow these steps.

Warning

Incorrectly modifying the configuration database can cause unexpected behavior in the Microsoft Dynamics CRM system, or cause it to stop working. We recommend that you back up the Microsoft Dynamics CRM system before you start these steps. For information about how to back up the Microsoft Dynamics CRM system, see the *Operating and Maintaining Guide* that is part of this document set.

Run the following update statements against the configuration (MSCRM_CONFIG) database:

- Update DeploymentProperties set NVarCharColumn = 'crmcluster.contoso.com' where ColumnName = 'ADWebApplicationRootDomain'
- Update DeploymentProperties set NVarCharColumn = 'crmcluster.contoso.com' where ColumnName = 'ADsdkRootDomain'

For an Internet-facing deployment of Microsoft Dynamics CRM, run the following update statements *in addition to* the statements specified above:

- Update DeploymentProperties set NVarCharColumn = 'crmcluster.contoso.com' where ColumnName = 'IFDWebApplicationRootDomain'
- Update DeploymentProperties set NVarCharColumn = 'crmcluster.contoso.com' where ColumnName = 'IFDsdkRootDomain'

Important

Depending on how you deployed the Microsoft Dynamics CRM Server role group or separate server role installation, and the configuration of each server in the NLB cluster, the ADWebApplicationRootDomain and ADsdkRootDomain values may be different. For example, if you installed the application-server role group on a server in an NLB cluster that is named *crmcluster1* in the contoso domain but installed the platform-server role group on a different server in a different NLB cluster such as *crmcluster2* in the same domain, the FQDN will be different for each of the ADWebApplicationRootDomain and ADSdkRootDomain values.

For a full server role deployment, replace *crmcluster.contoso.com* with the FQDN of the cluster. If you are using a TCP port other than 80 (non-secure HTTP) or 443 (secure HTTP or SSL), you must specify the port number by appending the FQDN name with :5555, where 5555 is the port number, such as *crmcluster.contoso.com:5555*.

Step 5: Verify and monitor the cluster installation

Verify that Microsoft Dynamics CRM client applications can connect to Microsoft Dynamics CRM by using the cluster name, such as CRMNLBCluster.

To monitor the cluster, you have the following options.

- **Network Load Balancing Manager.** Log entries are displayed in the bottom of Network Load Balancing Manager.
- **Event Viewer.** Entries are recorded in the System logs by using the WLBS source.
- **Wlbs.** Run the **wlbs.exe /query** or **wlbs.exe /display** command at the command prompt to view information about the state of the cluster.
- **Microsoft Operations Manager (MOM) Management Pack for NLB.** When your organization uses MOM to monitor and manage the servers in your organization, include the MOM Management Pack for NLB on the cluster hosts.
 - ▶ **Microsoft Server Network Load Balancing Management Pack for Operations Manager 2007** (<http://go.microsoft.com/fwlink/?linkid=120957>)
 - ▶ **Network Load Balancing Management Pack for MOM 2000** (<http://go.microsoft.com/fwlink/?linkid=120979>)

Install Microsoft Dynamics CRM Server to use a Microsoft SQL Server cluster environment

You can install Microsoft Dynamics CRM Server so that it can use a clustered Microsoft SQL Server environment that uses Microsoft Cluster Service (MSCS). An MSCS cluster that contains two or more nodes that are running SQL Server can reduce system downtime because, if one of the nodes in the cluster fails, there will be an automatic failover to another computer that is running SQL Server.

Important

- Failover clustering is not supported with Microsoft SQL Server 2005 Workgroup Edition.
- This topic does not apply to implementations that involve Windows Small Business Server 2003 (Windows SBS 2003).

Base configuration

This topic describes the options that are available to configure Microsoft Dynamics CRM to use a clustered SQL Server environment. The base configuration for a Microsoft Dynamics CRM Server system is described previously in this guide. The instructions in this topic expand on the base configuration by installing Microsoft Dynamics CRM Server so that it has a connection to a cluster of computers that are running SQL Server.

The configuration described here involves a single deployment of Microsoft Dynamics CRM Server accessing a cluster of two computers that are each running an instance of Microsoft SQL Server 2005.

The typical Microsoft Dynamics CRM deployment creates and uses the following Microsoft Dynamics CRM-specific databases on SQL Server:

- *OrganizationName_MSCRM*. This is the organization database where Microsoft Dynamics CRM data is stored, such as all records and activities.
- **MSCRM_CONFIG**. This database contains Microsoft Dynamics CRM metadata, such as configuration and location information that is specific to each organization.

Option 1: Install a new Microsoft Dynamics CRM Server deployment

Follow these steps to install Microsoft Dynamics CRM Server that will use a SQL Server cluster.

Step 1: Create the SQL Server cluster

Using the SQL Server documentation for the appropriate SQL Server edition, install and configure SQL Server and create a SQL Server cluster. The basic steps include the following:

- Collecting the information that you must have to create the virtual server. This can include a cluster disk resource, IP addresses, network names, and the nodes available for the cluster.
- Performing SQL Server Setup. After the necessary information is entered, the Setup program installs a new instance of SQL Server on the local disk of each node in the cluster and installs the system databases on the shared disk that is specified as part of the cluster configuration. The SQL Server program files are installed on each cluster node. During the cluster configuration, a virtual server is created.

Note

Although you can install Microsoft Dynamics CRM Server to a SQL Server cluster that is configured for either active-active or active-passive clustering, the cluster will function in an active-passive manner.

Step 2: Install Microsoft Dynamics CRM Server

➤ **Install Microsoft Dynamics CRM Server by using the procedures in the previous section and perform the following tasks during Setup:**

1. On the Select SQL Server page, enter the virtual server name that you specified when you created the SQL Server cluster. The virtual server name will not appear in the list, you must type it.
2. On the same page, select the **Create a new deployment** option, and then complete Microsoft Dynamics CRM Server Setup.

Option 2: Rehome or configure an existing Microsoft Dynamics CRM Server deployment that connects to a SQL Server cluster that stores only the organization database

- **To configure your existing Microsoft Dynamics CRM Server to use the SQL Server cluster that contains only the organization database, follow these steps:**
1. Follow the procedure in the previous section to create the SQL Server cluster.
 2. Back up the **MSCRM_CONFIG** and *OrganizationName_MSCRM* databases that are on the existing SQL Server.
 3. Restore the *OrganizationName_MSCRM* database to the SQL Server cluster. For more information about how to restore databases, see ***Backing Up and Restoring Databases in SQL Server*** (<http://go.microsoft.com/fwlink/?linkid=100249>).
 4. On the computer that is running the Microsoft Dynamics CRM Server Web application, start Deployment Manager. To do this, click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM**, and then click **Deployment Manager**.
 5. Expand the **Deployment Manager** node, and then click **Organizations**.
 6. Right-click the organization, and then click **Disable**.

Warning

When you disable an organization, users will no longer be able to access Microsoft Dynamics CRM for that organization.

Click **Yes** to disable the organization.

7. In the list of organizations, right-click the organization, and then click **Edit Organization**.
8. In the Edit Organization Wizard, in the **SQL Server** box, type the virtual SQL Server name for the SQL Server cluster that you created earlier, and then click **Next**.
9. On the System Requirements page, after a successful diagnostics check, click **Next**, and then click **Apply**.
10. Click **Finish**.
11. Enable the organization. To do this, right-click the organization, and then click **Enable**.
12. Reset the IIS services on the computer that is running IIS where the Microsoft Dynamics CRM Server Web application is installed. To do this, click **Start**, click **Run**, type *iisreset* in the **Open** box, and then click **OK**.

Option 3: Rehome or configure an existing Microsoft Dynamics CRM Server deployment that connects to a SQL Server cluster that stores both the configuration and organization databases

Configure your existing Microsoft Dynamics CRM Server to use the SQL Server cluster that contains both the configuration and organization databases.

- **To implement this option, follow these steps:**

1. Follow the procedure in the previous section to create the SQL Server cluster.

Important

Before you complete the following steps, make sure that users are not connected to, or accessing, the Microsoft Dynamics CRM system. You can do this by disabling the organization.

On the computer that is running the Microsoft Dynamics CRM Server Web application, start Deployment Manager. To do this, click **Start**, point to **All Programs**, point to Microsoft Dynamics CRM, and then click Deployment Manager.

1. Expand the Deployment Manager node, and then click **Organizations**.
2. Right-click the organization, and then click **Disable**.

Warning

When you disable an organization, users will no longer be able to access Microsoft Dynamics CRM for that organization.

3. Click **Yes** to disable the organization.
2. Back up the **MSCRM_CONFIG** and *OrganizationName_MSCRM* databases that are on the existing SQL Server.
3. Restore the **MSCRM_CONFIG** and *OrganizationName_MSCRM* databases to the SQL Server cluster shared disk. For more information about how to restore databases, see Backing Up and Restoring Databases in SQL Server.
4. On all nodes in the cluster, modify Microsoft Windows registry subkeys.

Warning

Serious problems might occur if you modify the registry incorrectly by using Registry Editor or by using another method. These problems might require you to reinstall the operating system and Microsoft Dynamics CRM. We cannot guarantee that these problems can be resolved. Modify the registry at your own risk.

Instead of completing this step to edit the registry, you can uninstall Microsoft Dynamics CRM Server, and then run Setup again to reinstall the application and select the virtual SQL Server name for the cluster. However, selecting this option requires you to remove Microsoft Dynamics CRM Server files and components. Therefore, we do not recommend this method for existing deployments.

Update the following registry subkeys on the computer that is running Microsoft Dynamics CRM Server:

- ▶ **configdb**
- ▶ **database**
- ▶ **metabase**

To do this, follow these steps:

- a. On the computer that is running the Microsoft Dynamics CRM Web application, click **Start**, click **Run**, type **regedit** in the Open box, and then click **OK**.
- b. Locate the following registry subkey:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM
- c. Right-click **configdb**, and then click **Modify**.
- d. In the Value data box, change the data source to the name of the new virtual SQL Server name, and then click **OK**. For example, the string value in the Value data box should resemble the following:
Data Source=NewSQLServer;Initial Catalog=MSCRM_CONFIG;Integrated Security=SSPI
- e. Follow steps 2-4 for the database subkey and for the metabase subkey.

Note

- If multiple Microsoft Dynamics CRM Server Roles are in your deployment, you must update the registry keys for all the server roles.
- If you use the Microsoft Dynamics CRM Connector for SQL Server Reporting Services and if you are not moving the Microsoft SQL Server Reporting Services server, you must update the configdb subkey on the computer on which the Microsoft Dynamics CRM Connector for SQL Server Reporting Services is installed.

5. Configure Microsoft Dynamics CRM Server to connect with the new instance of SQL Server where the configuration database is now located. To do this, follow these steps:
 - a. On the computer that is running the Microsoft Dynamics CRM Server Web application, start Deployment Manager. To do this, click **Start**, point to **All Programs**, point to Microsoft Dynamics CRM, and then click Deployment Manager.
 - b. Expand the Deployment Manager node, and then click **Organizations**.
 - c. Right-click the organization, and then click **Disable**.
Warning
When you disable an organization, users will no longer be able to access Microsoft Dynamics CRM for that organization.
Click **Yes** to disable the organization.
 - d. In the list of organizations, right-click the organization, and then click **Edit Organization**.
 - e. In the Edit Organization Wizard, in the SQL Server box, type the virtual SQL Server name for the SQL Server cluster that you created earlier, and then click **Next**.
 - f. On the System Requirements page, after a successful diagnostics check, click **Next**, and then click **Apply**.
 - g. Click **Finish**.
 - h. Enable the organization. To do this, right-click the organization, and then click **Enable**.
6. Reset the IIS services on the computer that is running IIS where the Microsoft Dynamics CRM Server Web application is installed. To do this, click **Start**, click **Run**, type `iisreset` in the Open box, and then click **OK**.

Configure an organization database for SQL Server 2005 database mirroring

Microsoft Dynamics CRM uses two databases, configuration and organization. The configuration database contains configuration information that is specific to the Microsoft Dynamics CRM system. The organization database is used to store all the organization-specific data and the customer relationship data for the organization. Some versions of Microsoft Dynamics CRM let you create and use multiple organizations. Therefore, some deployments may have multiple organization databases in the Microsoft Dynamics CRM system.

Important

Database mirroring, for high availability, with automatic failover is not recommended for applications such as Microsoft Dynamics CRM that use multiple databases. For more information about database mirroring, see the *Multi-Database Issues* topic in the Microsoft TechNet article **Database Mirroring in SQL Server 2005** (<http://go.microsoft.com/fwlink/?linkid=104711>).

To mirror a Microsoft Dynamics CRM organization database that can automatically fail over to another computer that is running Microsoft SQL Server, you configure the following three computers to establish the SQL Server database mirroring session:

- **Primary database computer.** This computer runs SQL Server where the Microsoft Dynamics CRM organization database is located. In this example, Microsoft Dynamics CRM is installed and running on the default instance of SQL Server. The computer name is `MSCRM_Primary`.
- **Mirrored database computer.** This computer, with a connection to `MSCRM_Primary`, is running SQL Server and it uses a different default instance. This computer must have a network connection to `MSCRM_Primary`. The computer name is `MSCRM_Mirror`.

- **Witness computer.** This computer runs SQL Server, or it can be a desktop system that is running SQL Server 2005 Express Edition. This computer must have a network connection to MSCRM_Primary and MSCRM_Mirror. The computer name is *MSCRM_Witness*.

Note

A computer that is running Microsoft SQL Server 2005 Workgroup Edition can be a Witness. However, it cannot be a Primary or Mirror computer in a database-mirroring session.

Configure a Microsoft Dynamics CRM organization for database mirroring

Note

The previously mentioned computers (MSCRM_Primary, MSCRM_Mirror, and MSCRM_Witness) must all have a network connection and must be running an edition of SQL Server that supports database mirroring.

➤ **To mirror the organization database, follow these steps:**

1. On the instance of SQL Server that stores the primary database (MSCRM_Primary), start Reporting Services.
2. Expand **Databases**, right-click *OrganizationName_MSCRM*, where *OrganizationName* is the name of your organization, and then click **Properties**. Verify that the Microsoft Dynamics CRM organization database recovery model is set to Full. This is required for a database that will be mirrored.
 - a. To verify the recovery model, on the Database Properties window under **Select a page**, click **Options**. The recovery model appears in the **Recovery model** list. Select **Full**.
 - b. Click **OK** to close the Database Properties window.
3. Make a full backup of the organization database. For more information about how to do this, see the Reporting Services Help.
4. Restore the full backup of the primary (MSCRM_Primary) to the mirror instance (MSCRM_Mirror) by using the RESTORE WITH NORECOVERY option, which is required for database mirroring. For more information about how to do this, see the Reporting Services Help.
5. Configure database mirroring. To do this, start Reporting Services, connect to the instance of SQL Server where the primary database (MSCRM_Primary) is located, and then follow these steps:
 - a. Expand **Databases**, right-click the Microsoft Dynamics CRM organization database that you want to mirror, point to **Tasks**, and then click **Mirror**.
 - b. Click **Configure Security**, and then, on the new window, click **Next**.
 - c. On the Include Witness Server window, select **Yes**, and then click **Next**.
 - d. On the Choose Servers to Configure window, select **Witness server instance**, and then click **Next**.
 - e. On the Principle Server Instance window, in the **Principal server instance** list, select the instance of SQL Server (MSCRM_Primary) where the Microsoft Dynamics CRM organization database is located. In addition, you can change the default settings for the listener port, encryption, and endpoint name. Click **Next**.
 - f. On the Mirror Server Instance window, in the **Mirror server instance** list, select the instance of SQL Server (MSCRM_Mirror) where you restored the Microsoft Dynamics CRM organization database in the previous step. You can change the default settings for the listener port, encryption, and endpoint name, if it is necessary. Click **Next**.
 - g. On the Witness Server Instance window, in the **Witness server instance** list, select the computer that you want to designate as the Witness (MSCRM_Witness). At this point, you can change the default settings for the listener port, encryption, and endpoint name. Click **Next**.

Note

If you are connecting to an instance of SQL Server that is running SQL Server 2005 Express Edition, verify that remote connections are supported. To do this, on the computer where SQL Server 2005 Express Edition is installed start SQL Server 2005 Surface Area Configuration and make sure that the remote-connections feature is enabled. If you receive an error message about a time-out, when you try to connect to the Witness server, click Options and extend the execution time-out period to a larger value, such as 45 seconds. By default, the value is 15 seconds.

- h. On the Service Accounts window, enter the Active Directory service account for each instance. We recommend that you specify the same service account for all three partners in the mirroring session. Click **Next**.
 - i. Click **Finish**. The wizard runs through a list of verification checks. Upon completion, click **Start Mirroring**.
6. Update the SQL Server connection string in the registry. To do this, follow these steps.

Warning

Serious problems might occur if you modify the registry incorrectly by using Registry Editor or by using another method. These problems might require you to reinstall the operating system and Microsoft Dynamics CRM. We cannot guarantee that these problems can be resolved. Modify the registry at your own risk.

- a. On the computer that is running Internet Information Services (IIS), where the Microsoft Dynamics CRM Web application is installed, start Registry Editor and locate the following registry subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM

- b. Right-click **configdb**, and then click **Modify**. Insert *Failover Partner=MSCRM_Mirror*; into the connection string, after the **DataSource** value. The complete connection string will appear similar to the following example, where *MSCRM_Primary* is the primary SQL Server\instance name and *MSCRM_Mirror* is the mirrored SQL Server\instance name:

```
Data Source=MSCRM_Primary\SQL1;Failover Partner=MSCRM_Mirror\SQL2;Initial Catalog=MSCRM_CONFIG;Integrated Security=SSPI
```

- c. Click **OK**, and then close Registry Editor.
7. Create the SQL logins for the Microsoft Dynamics CRM security groups on the Mirror server (*MSCRM_Mirror*). To do this, follow these steps.
- a. On the SQL Server (*MSCRM_Primary*) start Reporting Services, and connect to the Primary database.
 - b. Expand **Databases**, expand the *OrganizationName_MSCRM* database where *OrganizationName* is the name of your organization, expand **Security**, and then click **Users**.
 - c. Copy and paste the names, including the domain name and the GUIDs, (the GUIDs are located at the end of the name) for the following groups:
 - PrivReportingGroup
 - ReportingGroup
 - SQLAccessGroup

Tip

To do this, right-click the SQL user name, click **Properties**, in the **User name** box, right-click the whole value, and then click **Copy**. Then, in a text editor such as Notepad, paste the contents. Repeat these steps for each group until you have the contents for all three groups.

- d. In Reporting Services, connect to the SQL Server Mirror instance (*MSCRM_Mirror*).
- e. Expand **Databases**, expand **Security**, right-click **Logins**, and then click **New Login**.

- f. Switch to the text editor in which the SQL users were previously pasted, and copy the contents of one of the groups.
 - g. Switch to the Login –New form that was opened in step e. In the **Login name** box, paste the contents into the box, and then click **OK**. The SQL user contents should resemble the following example.
DomainName\SQLAccessGroup {859409f6-c4a5-4cb6-86f2-af264520ea10}
 - h. Repeat steps e-g to create SQL logins for the remaining groups.
8. Update the configuration database to specify the mirror. To do this, follow these steps.

Important

Back up the Microsoft Dynamics CRM configuration database (MSCRM_CONFIG) before you run these update statements.

- a. Run the following update statement against the configuration (MSCRM_CONFIG) database.

```
Update Organization set ConnectionString = 'Provider=SQLOLEDB;Data Source=MSCRM_Primary\SQL1;Failover Partner=MSCRM_Mirror\SQL2;Initial Catalog=Organization_MSCRM;Integrated Security=SSPI' where DatabaseName = 'Organization_MSCRM'
```

- Replace *MSCRM_Primary\SQL1* with the name of the Primary instance of SQL Server. If you are using the default instance, do not designate the instance such as *\SQL1*.
- Replace *MSCRM_Mirror\SQL2* with the name of the Mirrored instance SQL Server. If you are using the default instance, do not designate the instance such as *\SQL2*.
- Replace *Organization_MSCRM* with the name of the organization database.

- b. Run the following update statement against the configuration (MSCRM_CONFIG) database.

```
Update Organization set MirroredSQLServerName = 'MSCRM_Mirror\SQL2' where DatabaseName = 'Organization_MSCRM'
```

- Replace *MSCRM_Mirror\SQL2* with the name of the Mirrored instance of SQL Server. If you are using the default instance, do not designate the instance such as *\SQL2*.
- Replace *Organization_MSCRM* with the name of the organization database.

9. After you make these changes, reset IIS on the computer that is running Microsoft Dynamics CRM. To do this, click **Start**, and then click **Run**. In the **Open** box, type *iisreset*, and then click **OK**.

Monitor and test for failover

The Mirrored databases can fail over either manually or automatically.

➤ **To monitor and test the failover, follow these steps:**

1. Start Reporting Services, right-click the primary database, point to **Tasks**, and then click **Mirror**.
2. On the Database Properties window, you can monitor the status of the synchronization between the Primary and Mirrored database. To test the fail-over feature manually, click **Failover**. When failover occurs, SQL Server will switch the mirroring session roles between the Primary database and the Mirrored database to make the mirror the primary and the primary the mirror.

For more information about how to implement database mirroring, see **Implementing Application Failover with Database Mirroring** (<http://go.microsoft.com/fwlink/?linkid=121229>).

----- **Send Feedback About This Chapter** -----

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Microsoft Dynamics CRM E-mail Router Installation Instructions

The Microsoft Dynamics CRM E-mail Router is a software component that provides an interface between the Microsoft Dynamics CRM system and Microsoft Exchange Server 2003, Microsoft Exchange Server 2007, SMTP, or a POP3-compliant e-mail server. When E-mail Router is installed, it transfers e-mail messages to the Microsoft Dynamics CRM system, and it sends outgoing e-mail messages.

The Microsoft Dynamics CRM system stores e-mail messages as activity records. These e-mail activity records are stored in the Microsoft Dynamics CRM database and include both the contents of the e-mail message, such as the text of the message and its subject line, and relevant associations with other Microsoft Dynamics CRM records. For example, when a salesperson replies to a customer about a case, the salesperson creates an e-mail activity record that includes the text of the message plus information associating the e-mail activity record with the correct case record.

Note

For more information about E-mail Router, including system requirements and information about how to plan your installation, see the Microsoft Dynamics CRM 4.0 Planning Guide.

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Overview

Microsoft Dynamics CRM provides the following e-mail processing features:

- Microsoft Dynamics CRM for Microsoft Office Outlook and Microsoft Dynamics CRM for Outlook with Offline Access can work stand-alone and do not require the E-mail Router to process incoming Microsoft Dynamics CRM e-mail messages.
- The E-mail Router routes both incoming and outgoing messages. (The Microsoft Dynamics CRM 3.0-Exchange E-mail Router processed only incoming e-mail messages.)
- The E-mail Router supports POP3 e-mail systems for incoming messages and SMTP e-mail systems for outgoing messages.
- Microsoft Dynamics CRM e-mail messages are sent asynchronously by using E-mail Router.

This section describes the e-mail system options and configurations.

Microsoft Dynamics CRM for Outlook

Microsoft Dynamics CRM for Outlook can also be used to perform the following tasks:

- Deliver received e-mail messages to Microsoft Dynamics CRM.

- Send e-mail messages generated from Microsoft Dynamics CRM.

Microsoft Dynamics CRM for Outlook no longer requires E-mail Router to process Microsoft Dynamics CRM e-mail messages. For more information about Microsoft Dynamics CRM for Outlook, see "Install Microsoft Dynamics CRM for Outlook" in this guide.

E-mail Router

The E-mail Router performs the following tasks:

- Routes incoming Microsoft Dynamics CRM e-mail messages.
- Sends e-mail messages generated from Microsoft Dynamics CRM.

The E-mail Router is required for users or queues that do not use Microsoft Dynamics CRM for Outlook. The E-mail Router can be installed on various versions of the Windows operating system. You can install E-mail Router on an Exchange Server, on a computer that is running Windows Server 2003 or Windows Server 2008, or a computer that is running Windows XP or Windows Vista. The computer that you install E-mail Router on must have a connection to the Exchange Server or POP3 e-mail server.

The E-mail Router contains the following components:

- E-mail Router service and program files.
- E-mail Router Configuration Manager. This is a tool that you use to configure E-mail Router.
- Rule Deployment Wizard. This wizard lets you deploy rules that are used to route e-mail messages to a forward mailbox. The Rule Deployment Wizard does not work with POP3/SMTP e-mail servers.

Install E-mail Router and Rule Deployment Wizard

The E-mail Router and Rule Deployment Wizard are installed by running Microsoft Dynamics CRM E-mail Router Setup. To install E-mail Router and Rule Deployment Wizard, follow the instructions in this section.

Important

Microsoft Dynamics CRM E-mail Router Setup will not upgrade a Microsoft Dynamics CRM 3.0 deployment that is using the Microsoft Dynamics CRM 3.0-Exchange E-mail Router. You must first uninstall the Microsoft Dynamics CRM 3.0-Exchange E-mail Router before you install the Microsoft Dynamics CRM 4.0 E-mail Router.

The Rule Deployment Wizard requires Microsoft Exchange Server Messaging API (MAPI) client runtime libraries. To install the MAPI client runtime libraries, see **Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1** (<http://go.microsoft.com/fwlink/?linkid=78805>).

If you did not specify an incoming e-mail server during Microsoft Dynamics CRM Server Setup, you must manually add the service account running the E-mail Router service to the PrivUserGroup security group. The PrivUserGroup is created during Microsoft Dynamics CRM Server Setup. For steps on how to add members to this group, see the "Troubleshooting" section later in this chapter.

- **To install and configure E-mail Router on a server named *EXBE01*, follow these steps:**
1. Meet all requirements specified under "System Requirements and Required Components" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.
 2. Log on to *EXBE01* as a Domain User with Local Administrator privileges.
 3. Insert the Microsoft Dynamics CRM Server CD into your CD drive, or if you are installing from the network, locate the installation files.
 4. In the **Exchange** folder, double-click **SetupExchange.exe**.
 5. On the **Welcome** page, select whether you want to update Microsoft Dynamics CRM Server Setup. We recommend that, if updates are available, you let Setup download the latest version. To do this, click **Update Installation Files**, wait until the update process is complete, and then click **Next**.

6. On the License Agreement page, click **I accept this license agreement**, and then click **I Accept**.
7. The Install Required Components page appears.

If you have already installed the required components, this page will not appear.

If you have not installed the required components that are listed, you can install them now. Click **Install**. When the components are installed, the status column will change from **Missing** to **Installed**, and you can click **Next** to continue.

Note

These components are required before E-mail Router can be installed. You can exit Setup and install the components manually, or select Install. The Next button on this page is disabled until Setup detects that these components are installed.

8. On the **Select Router Components** page, select either or both options:
 - ▶ **Microsoft Dynamics CRM E-mail Router Service**. This option installs the E-mail Router service and E-mail Router Configuration Manager.
 - ▶ **Rule Deployment Wizard**. This option installs the Rule Deployment Wizard that is used to deploy rules for forward mailbox users. Optionally, you can install this wizard on another computer that has access to the Exchange Servers in the organization.
9. On the **Select Install Location** page, either accept the **Default** file installation directory or **Browse** for a different location, and then click **Next**.
10. The **System Requirements** page appears. This page is a summary of all system requirements for a successful E-mail Router installation. Failed tests must be corrected before installation can continue. If there is a problem that will take time to correct, cancel Setup at this point, fix the problem, and restart Setup. When all tests are successful, click **Next**.
11. The **Ready to Install the Application** page appears. By default, the **Launch E-mail Router Configuration Manager after installation completes** check box is selected. If you do not want to configure E-mail Router at this point, clear the check box and then click **Install**.
12. After E-mail Router Setup has finished installing files, click **OK**.

Additional tasks

This section describes tasks that you must complete before users can send and receive e-mail messages that will be tracked in Microsoft Dynamics CRM.

Important

By default, Microsoft Dynamics CRM users are set with both the incoming e-mail server type and the outgoing e-mail server type of Microsoft Dynamics CRM for Outlook. For Web application users, you must change the incoming type to E-mail Router or Forward Mailbox, and the outgoing type to E-mail Router for each user.

Additional tasks required to use a forward mailbox

If you will use a forward mailbox to route e-mail messages, in Active Directory you must create the user and mailbox that will be used for the E-mail Router forward mailbox. For more information about the forward mailbox, see "Planning Deployment" in the Microsoft Dynamics CRM 4.0 Planning Guide.

Important

You must log on to the forward mailbox at least one time before E-mail Router can use it to process e-mail messages.

➤ To add a user and mailbox to Active Directory, follow these steps:

1. Log on to a domain controller or computer in the domain by using an account that is a member of the Domain Administrators group.

2. Click Start, point to All Programs, point to Administrative Tools, and then click Active Directory Users and Computers.
3. In the console tree expand the domain node, and then click the organizational unit (OU) where user accounts are located. (This may vary, depending on your forest and domain structure. The default location is the User OU.)
4. In the details pane, right-click the container where you want to add the user, point to **New**, and then click **User**.
5. In **First name** box, type the user's first name.
6. In the **Initials** box, type the user's initials.
7. In **Last name** box, type the user's last name.
8. Modify the full name as necessary.
9. In **User logon** name, type the name that the user will use to log on. From the drop-down list, click the UPN suffix that will be appended to the user logon name after the "at" sign (@). Click **Next**.
10. In the **Password** and **Confirm password** boxes, type the user's password, and then click **Next**.
11. Verify that the **Create an Exchange mailbox** check box is selected, and then click **Next**.
12. Click **Finish**.

Install E-mail Router on multiple computers

You can deploy and run the Microsoft Dynamics CRM E-mail Router on multiple computers in a Microsoft cluster to provide high availability and failover functionality. In Windows Server 2003 this kind of server cluster is known as server clustering and in Windows Server 2008 it is known as failover clustering. Both of these server clustering technologies are supported with the E-mail Router.

To implement the minimum configuration for a cluster with failover capabilities, you must have the following hardware and configuration:

- At least two nodes running Windows Server that support clustering.
- A common storage I/O technology between the nodes in the cluster, such as Parallel SCSI or Fibre Channel.
- The cluster configured in an active/passive manner.

To install and run the E-mail Router in a failover cluster environment, follow these steps in the order that they are listed.

Step 1: Establish the cluster

➤ **To install and configure the cluster, follow these steps:**

1. Install the minimum configuration of a two-node cluster with a shared disk.
2. Configure the cluster as active/passive. The E-mail Router does not support an active/active cluster deployment.

For more information about failover clusters in Windows Server 2008, see **Failover Clusters** (<http://go.microsoft.com/fwlink/?LinkId=147749>).

For more information about server clusters in Windows Server 2003, see **Designing and Deploying Server Clusters** (<http://go.microsoft.com/fwlink/?LinkId=147750>).

Step 2: Install the E-mail Router to the active primary node in the cluster

➤ **To install and configure the E-mail Router on the active primary node in the cluster, follow these steps:**

1. Run E-mail Router Setup on the active primary node in the cluster.

Important

You do not have to install the E-mail Router on a computer that is running Microsoft Exchange Server. Therefore, we recommend that you install the E-mail Router as the only application on Windows Server 2003 or Windows Server 2008 computers in the cluster or in an existing cluster that is operating with a light load.

Installing E-mail Router on nodes operating in an active/active cluster, such as an Exchange Server active/active cluster, is not supported. Notice that an active standby node running the E-mail Router is not necessary because the E-mail Router warm up sequence is short.

2. Configure the E-mail Router. Start the E-mail Router Configuration Manager on the first node and configure the E-mail Router. Verify that the E-mail Router is routing messages correctly to and from the Microsoft Dynamics CRM and e-mail systems.
3. Copy all E-mail Router application files to the common storage or shared hard disk. By default, the E-mail Router files are located at *Drive:\Program Files\Microsoft CRM Email*.

The following files must be located on the common storage or shared disk so that they can be moved to the secondary node in the event of a failover.

- ▶ Microsoft.Crm.Tools.EmailAgent.Configuration.bin
- ▶ Microsoft.Crm.Tools.EmailAgent.SystemState.xml
- ▶ Microsoft.Crm.Tools.EmailAgent.xml
- ▶ EncryptionKey.xml (if it exists)

Important

The E-mail Router files should be manually secured on the common storage or shared disk. We recommend that you only grant full control to the service account running the E-mail Router service (Microsoft CRM Email Router) and those administrators who may have to update configuration files manually.

4. Update the following Windows registry subkey so that the E-mail Router will use the shared disk to load the E-mail Router settings.

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\MSCRMEmail

To do this, Change the **ImagePath** value to point to the common storage or shared disk drive where the E-mail Router files were copied.

5. Restart the Microsoft CRM Email Router service.

Step 3: Install the E-mail Router to the passive node in the cluster

- **To install and configure the E-mail Router on the passive secondary node in the cluster, follow these steps:**

1. Run E-mail Router Setup on the second node in the cluster.

Important

Do not run E-mail Router Configuration Manager and *do not* copy the files to the common storage or shared hard disk as described in step 2: Install the E-mail Router to the active primary node in the cluster.

2. Update the Windows registry subkey as in the previously performed steps on the primary node. Repeat these steps for each additional node in the cluster.
3. Restart the Microsoft CRM Email Router service.

Step 4: Create the generic resource service for the cluster

➤ **To create a generic resource service for the cluster, follow these steps:**

1. On each node in the cluster, start the Services MMC snap-in. In the list of services right-click Microsoft CRM Email Router, click **Properties**, and then set **Startup Type** to **Manual**. Close the Services MMC snap-in.
2. Start Active Directory Users and Computers. Locate the PrivUserGroup {GUID} security group for the deployment. Add the computer accounts for each node in the cluster. Close Active Directory Users and Computers.
3. If you are using Windows Server 2003, start Cluster Administrator or, if you are using Windows Server 2008, start Failover Cluster Management, and create a generic resource service. Use the following parameters:
 - ▶ **Name:** Create a descriptive name for the generic resource service, such as MSCRM E-mail Router.
 - ▶ **Resource type:** Generic Service
 - ▶ **Group:** Cluster Group
 - ▶ **Possible owners:** Add all nodes in the cluster.
 - ▶ **Dependencies:** If you are using Exchange Server and you have installed the E-mail Router on the Exchange Server (not recommended), add Microsoft Exchange Information Store.
 - ▶ **Service Name:** Microsoft CRM Email Router
 - ▶ **Start Parameters:** Leave blank.
 - ▶ **Use Network Name for computer Name:** Leave unchecked.
 - ▶ Do not checkpoint any **Registry keys**.
4. Bring the resource online. If it is necessary, configure the resource properties such as the failover policies.
5. Close Cluster Administrator or Failover Cluster Management.

For more information about how to create a generic service resource, see **Checklist: Installing a Generic Service resource** (<http://go.microsoft.com/fwlink/?LinkId=147751>).

Step 5: Verify and monitor the cluster

During a failover of node 1 (the primary node), node 2 (the secondary node) will become the primary node and the common storage or shared disk resources described in Step 2 will move from node 1 to node 2. To test for failover, start Cluster Administrator or Failover Cluster Management and force a failover.

Known issues

In situations where two E-mail Routers are monitoring the same mailbox, such as in an Active/Active cluster configuration, you may receive occasional e-mail message duplicates. To work around this issue, set the secondary node that is running the E-mail Router to poll the mailbox less frequently than the primary node. By default, the E-mail Router polls every 60 seconds and by setting the secondary E-mail Router node to a less frequent polling interval, such as 360 seconds, it will greatly reduce the occurrence of e-mail message duplicates.

E-mail Router Configuration Manager

The E-mail Router Configuration Manager is a separate tool that you use to configure the E-mail Router. The E-mail Router Configuration Manager is installed with the E-mail Router and can be run after the E-mail Router Setup is completed.

All E-mail Router settings configured by using the E-mail Router Configuration Manager are saved in the Microsoft.Crm.tools.EmailAgent.xml file that is located in the folder where E-mail Router is installed.

The E-mail Router has several options. Before you run the E-mail Router Configuration Manager, you should determine how you want to deploy these options.

- **Incoming Configuration.** The E-mail Router supports Exchange Server 2003, Exchange Server 2007, or POP3 e-mail systems for incoming e-mail messages.
- **Outgoing Configuration.** Microsoft Dynamics CRM supports only SMTP e-mail systems for outgoing e-mail messages.
- **Mailbox Monitoring Type.** The following two mailbox types can be configured:
 - **Forward Mailbox.** If you select Forward Mailbox when you run the E-mail Router Configuration Manager, a single mailbox will be used by E-mail Router to process e-mail messages. Then, for each Microsoft Dynamics CRM user or queue that will receive e-mail messages, a rule must be created for the user, or queue, by running the Rule Deployment Wizard.
 - **Individual Mailboxes.** If your e-mail system does not allow rules, where an e-mail message can be forwarded as an attachment, you must select **Individual Mailbox Monitoring**. Notice that, if you are using Exchange Server, we recommend that you use Forward Mailbox Monitoring.

For more information about E-mail Router options, see "Planning Deployment" in the *Microsoft Dynamics CRM 4.0 Planning Guide*.

To start the E-mail Router Configuration Manager, click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM E-mail Router**, and then click **E-mail Router Configuration Manager**.

Configuration profiles

You must configure at least one incoming e-mail profile and one outgoing e-mail profile to enable the E-mail Router to route e-mail to and from of your Microsoft Dynamics CRM organization. Depending on the complexity of your organization's e-mail system, you may have to create multiple incoming and outgoing configuration profiles. For example, if your organization requires incoming E-mail Router services for multiple e-mail servers, you will have to create one incoming configuration profile for each e-mail server.

Important

A single instance of E-mail Router with a variety of e-mail profiles is not a certified configuration. For example, do not configure the same instance of E-mail Router to retrieve e-mail messages from an on-premise Exchange Server and Microsoft Exchange Online. To avoid performance problems, use separate instances of E-mail Router.

Authentication types

You must specify the kind of authentication the E-mail Router will use for each incoming and outgoing e-mail profile.

For Exchange Server, incoming profiles support Windows Authentication only. For POP3-compliant servers, incoming profiles support NTLM (NT LAN Manager) and Clear Text authentication.

Tip

You can configure the E-mail Router to use POP3 protocol with Exchange Server. However, the Exchange Server POP3 service is disabled by default. For information about how to enable POP3, refer to the Exchange Server documentation.

Important

Clear Text authentication transmits unencrypted user names and passwords. If you use Clear Text authentication, we recommend that you do this only with Secure Sockets Layer (SSL). The Use SSL option should be selected and the Network Port field (on the Advanced tab) must be set to a value appropriate for your environment. Verify your POP3 server requirements with your e-mail administrator.

Outgoing (SMTP) profiles support Windows Authentication, Clear Text, and Anonymous authentication types.

Note

Anonymous SMTP is only valid for internal, non-Internet-facing SMTP servers. Many SMTP servers do not support Anonymous authentication. To ensure uninterrupted e-mail flow from the E-mail Router, verify your SMTP server requirements with your e-mail administrator.

Access credentials

Depending on how you set the other configuration profile options, the following options are available for specifying the user name and password that the E-mail Router will use to access each mailbox the profile serves.

Important

If you use access credentials that are valid for the e-mail server but not for a particular mailbox, a "401 access denied" error will be generated when you test access.

Incoming profiles support the following access credentials:

- **Local system account.** This option requires a machine trust between the computer where the E-mail Router is running and the computer where the Exchange Server is running. The E-mail Router must be included in the PrivUserGroup security group. For incoming profiles, this option is available only for Exchange Server (not for other POP3 compliant e-mail servers).
- **User specified.** This option requires that each user enter their user name and password in the Set Personal Options dialog box (available in the Workplace section of the Microsoft Dynamics CRM Web client). This enables the E-mail Router to monitor mailboxes by using each user's access credentials. When users change their domain password, for example, when it expires, they must update their password in Microsoft Dynamics CRM so that the E-mail Router can continue to monitor their mailbox. This option is available only in the On-Premise version of the product.
- **Other specified.** This option enables the administrator to configure the E-mail Router to connect to user mailboxes as a specified user. The specified user must have full access to all the mailboxes that the incoming profile will serve.

Outgoing profiles support the following access credentials:

- **Local system account.** This option requires a machine trust between the computer where the E-mail Router is running and the computer where the Exchange Server is running. The E-mail Router must be included in the PrivUserGroup. For more information, see the Microsoft Dynamics CRM Installing Guide. For outgoing profiles, this is the only option available if you select the Anonymous authentication type.
- **Other specified.** This option enables the administrator to configure the E-mail Router to send e-mail messages on each user's behalf by using the access credentials of a specified user account that has full access to all the mailboxes that the outgoing profile will serve.

Deployments

For the E-mail Router to use a configuration profile, you must link the profile to a Microsoft Dynamics CRM deployment.

Microsoft Dynamics CRM Server

The value in this field must specify the Microsoft Dynamics CRM Discovery service, followed by the case-sensitive organization name. For example, if the Discovery service is running on the local computer and the Microsoft Dynamics CRM organization is MyOrg, you would enter `http://discovery/MyOrg`.

Important

If you selected the Use SSL option, you must specify https transport protocol instead of http. In that case, the value in this field would be `https://discovery/MyOrg`.

If you are linking to a Microsoft Dynamics CRM Server that does not have the Discovery server role installed, the value in this field must specify the URL for a Microsoft Dynamics CRM Server that has the Discovery server role installed. By default the Discovery role is installed with the Platform role. For example, if MYOTHERSERVER is running the Discovery Service, you would enter a value of `http://MYOTHERSERVER/MyOrg`. For information about server roles, see *Server Roles* and *Install Microsoft Dynamics CRM Server Roles* in the Microsoft Dynamics CRM Installing Guide section of the Microsoft Dynamics CRM Implementation Guide.

Access credentials

You must specify the access credentials that the E-mail Router will use to log on to the Microsoft Dynamics CRM Server.

To use the Local System Account (available only if you select **My Company** as the deployment type), either the E-mail Router must be installed on the same computer as the Microsoft Dynamics CRM Server, or the computer where the E-mail Router is installed must be a member of the Active Directory PrivUserGroup group.

Tip

The computer will already be added to the PrivUserGroup if you specified the E-mail Router computer during Microsoft Dynamics CRM Server Setup.

Configuring E-mail Routing for Multiple Configurations and Deployments

You can add or edit an E-mail Router configuration, which contains a single incoming and outgoing method that routes e-mail to the e-mail server. In the configuration, you must specify the following components:

- A name for display and reference.
- If the configuration is incoming or outgoing.
- The e-mail transport type, such as Exchange or POP3 for incoming, and SMTP for outgoing.

In addition, you can add or edit E-mail Router deployments. An E-mail Router deployment contains a URL to a Microsoft Dynamics CRM Server computer, one incoming configuration, and one outgoing configuration. In an E-mail Router deployment object, you specify the following components:

- A name for display and reference (required).
- A URL to the Microsoft Dynamics CRM Server computer (required).
- A default incoming configuration (optional).
- A default outgoing configuration (optional).

To set a new or existing configuration or to do the same for a new or existing deployment, click **Advanced Configuration** on the first screen of the E-mail Router Configuration Manager, and then follow the instructions that are on the screen.

For more information about this tool, see the E-mail Router Configuration Manager Help.

Rule Deployment Wizard

An important part of routing e-mail messages to your Microsoft Dynamics CRM system is the placement of an Exchange Server inbox rule in the inbox of each Microsoft Dynamics CRM user or queue. This rule sends a copy of each message that is received by a Microsoft Dynamics CRM user to the Microsoft Dynamics CRM system mailbox. From the Microsoft Dynamics CRM system mailbox, the E-mail Router retrieves the messages and creates an e-mail activity in Microsoft Dynamics CRM.

To deploy these Microsoft Dynamics CRM user inbox rules, you can use the Rule Deployment Wizard, which can be run at any time to add or change the inbox rules for your Microsoft Dynamics CRM users.

Important

The Rule Deployment Wizard can only deploy rules to Exchange Server mailboxes. You cannot deploy rules by using the Rule Deployment Wizard with POP3 e-mail servers.

If you elected to install this wizard as part of the E-mail Router installation, you can access this wizard by doing the following:

On the computer where you have installed the Rule Deployment Wizard, click **Start**, point to **All Programs**, point to Microsoft Dynamics CRM E-mail Router, and then click Rule Deployment Wizard.

The Rule Deployment Wizard does not have to be run on a computer with an instance of Exchange Server. To run the Rule Deployment Wizard, you must:

- Be logged on as a Microsoft Dynamics CRM user with a security role. (The user can be in restricted access mode).
- Be a local administrator on the computer where the wizard is running.
- Have Exchange administrative permissions.

To deploy rules to the mailbox of a Microsoft Dynamics CRM user, the person running the Rule Deployment Wizard must have Exchange administrative permissions for the mailbox. Use the Exchange System Manager and the Exchange delegation wizard to designate Exchange Administrators. Or, make sure that the person running the Rule Deployment Wizard has full permissions on the Exchange mailbox store or storage group, where the users' mailboxes are located.

Create the rule manually

For POP3 e-mail servers that support e-mail system rules where an e-mail message can be forwarded as an attachment, you can create the rule manually.

➤ **To create the rule manually in Microsoft Office Outlook, follow these steps:**

1. On the **Tools** menu, click **Rules and Alerts**.
2. On the **E-mail Rules** tab click **New Rule**.
3. Select the **Start from a blank rule** option, make sure **Check messages when they arrive** is selected, and then click **Next**.
4. Select **where my name is in the To box**, and then click **Next**.
5. Select **forward it to people or distribution list as an attachment**, and then in the Step2: Edit the rule description (click and underlined value) area, click **people or distribution list**.
6. Select the name of your E-mail Router forward mailbox, and then click **OK**.
7. Click **Next** two times.
8. Make sure that the **Turn on this rule** option is selected, and then click **Finish**.
9. Make sure that the rule is at the top of the list and then click **Apply**.

Troubleshooting E-mail Router issues

This section provides guidelines for troubleshooting issues that you might encounter as you deploy and configure the E-mail Router.

E-mail Router installation issues

This section provides troubleshooting guidelines and reference information about how to resolve issues that can occur during E-mail Router installation.

Important

The Microsoft Dynamics CRM 4.0 E-mail Router does not support upgrades. You must first uninstall the Microsoft Dynamics CRM 3.0 E-mail Router and then install the Microsoft Dynamics CRM 4.0 E-mail Router.

Make sure that you keep your Microsoft Dynamics CRM deployment current by installing the latest updates and hotfixes. For detailed information, see KB article **949256: Microsoft Dynamics CRM 4.0 updates and hotfixes** <http://go.microsoft.com/fwlink/?LinkId=140385>.

➤ **To troubleshoot an E-mail Router installation, follow these steps:**

1. Verify that your operating environment meets all hardware and software requirements. For detailed requirements, see the latest version of the Planning Guide that is included in the **Microsoft Dynamics CRM 4.0 Implementation Guide** <http://go.microsoft.com/fwlink/?LinkId=104413>.
2. For more information about installation limitations and known issues, see **Microsoft Dynamics CRM 4.0 E-mail Router Readme (On-Premise and Microsoft Dynamics CRM 4.0 Service Provider Editions)** <http://go.microsoft.com/fwlink/?LinkId=104412>.
3. Make sure that you follow the E-mail Router installation instructions in the Installing Guide that is included in the **Microsoft Dynamics CRM 4.0 Implementation Guide** <http://go.microsoft.com/fwlink/?LinkId=104413>.
4. Refer to the following sections for information about how to resolve commonly encountered installation issues.

Issue installing E-mail Router together with Exchange Server 2007

Symptom: When you try to install the E-mail Router on a server that is running Microsoft Exchange Server 2007, you receive the following error message:

The Microsoft Exchange MAPI subsystem is not installed on this system.

Resolution: For information about how to resolve this issue, see KB article **951401** <http://go.microsoft.com/fwlink/?LinkId=140389>.

Unable to retrieve user and queue information after upgrade

Symptom: After you upgrade from Microsoft Dynamics CRM 3.0 to Microsoft Dynamics CRM 4.0, you receive the following error when you click Load Data in the E-mail Router Configuration Manager:

The E-mail Router Configuration Manager was unable to retrieve user and queue information from the Microsoft Dynamics CRM server.

Resolution: For information about how to resolve this issue, see KB article **950248** <http://go.microsoft.com/fwlink/?LinkId=140392>.

Error when you try to start the E-mail Router Service

Symptom: When you try to start the E-mail Router Configuration Manager Service, an Error event with the following line is logged in the Application log:

The E-mail Router service could not run the service main background thread.

Resolution: For information about how to resolve this issue, see KB article **954522** <http://go.microsoft.com/fwlink/?LinkId=140419>.

Logging

If a problem occurs during E-mail Router Setup, review the log file for information. By default, the E-mail Router Setup log is named crm40exchangesetup.log and is located in the c:\Documents and Settings\

Incoming e-mail configuration issues

This section provides troubleshooting guidelines and reference information about how to resolve some commonly encountered issues that can occur during E-mail Router incoming profile configuration.

➤ **To troubleshoot an E-mail Router incoming profile configuration, follow these steps:**

1. Make sure that you follow the incoming profile configuration procedures in the E-mail Router Configuration Manager Help.
2. For more information about how to configure an incoming profile, see the E-mail Router configuration information in the latest version of the Installing Guide that is included in the **Microsoft Dynamics CRM 4.0 Implementation Guide** <http://go.microsoft.com/fwlink/?LinkID=104413>.
3. Refer to the following sections for information about how to resolve some commonly encountered incoming profile issues.

Login timeout error

Symptom: When you click **Test Access** in the E-mail Router Configuration Manager, you receive the following HTTP error message:

Incoming Status: Failure - The remote server returned an error: (440) Login Timeout

This is typically caused by trying to use Forms Based Authentication instead of Windows Authentication (the only supported authentication method).

Resolution: Change the authentication mode to Windows Authentication on the mailbox server. For more information, see KB article **954047** <http://go.microsoft.com/fwlink/?LinkId=140398>.

Note

Make sure that you point the incoming profile to the Exchange Server that has the mailbox server where the ExAdmin and Exchange virtual directories are located.

Unauthorized access to the mailbox

Symptom: When you click **Test Access** in the E-mail Router Configuration Manager, you receive the following HTTP error message:

Incoming Status: Failure - The remote Microsoft Exchange e-mail server returned the error "(401) Unauthorized". Verify that you have permission to connect to the mailbox.

Resolution: Verify the following:

1. Before you click **Test Access**, make sure that the user has logged on to the mailbox so that the mailbox is activated.
2. Make sure that you can receive e-mail messages in the mailbox.
3. In the **Location** section of the **E-mail Router Configuration Profile** dialog box, verify that the correct URL of the Exchange Server is entered. For example:

- ▶ <http://myexchangeserve>
- ▶ <http://www.myexchangeserver.local>

Important

Do not enter any additional characters at the end of the URL string, such as **/OWA** or **/Exchange** or even a **/** character. If you are using SSL, be sure to use **https** in the URL instead of **http**.

4. Verify the settings in the **Access Credentials** section of the E-mail Router Configuration Manager incoming profile dialog box:
 - ▶ Make sure that the specified user has full access rights to the mailboxes that this incoming profile will serve. To test this, log on to the computer that is running the E-mail Router by using the specified access credentials, or in Internet Explorer, try to access the Outlook Web Access URL of the user that you are testing (for example, <http://exchangeserver/Exchange/crmuser>).

For instructions about how to grant this access in Exchange Server 2003, see TechNet article **How to Give a User Full Access to Another User's Mailbox** <http://go.microsoft.com/fwlink/?LinkId=142981>.

For instructions about granting this access in Exchange Server 2007, see TechNet article **Add-MailboxPermission** <http://go.microsoft.com/fwlink/?LinkId=142983>.

- ▶ If you have selected the **User Specified** option in the **Access Credentials** drop-down list, make sure that the users whose mailboxes this profile will serve have set their user name and password in the **Set Personal Options** dialog box (available in the **Workplace** section of the Web application). This enables the E-mail Router to access mailboxes by using each user's access credentials.

The **User Specified** option is intended for use in scenarios where the E-mail Router is configured to monitor user mailboxes, instead of a forward mailbox. This option is available only in the On-Premise version of the product.

Mailbox not found (access test fails)

Symptom: When you click Test Access in the E-mail Router Configuration Manager, you receive the following HTTP error message:

Incoming Status: Failure - The remote Microsoft Exchange e-mail server returned an error "(404) Not Found". The user or queue does not have a mailbox. Create a mailbox and try again.

Resolution: Depending on which version of Exchange Server you are using, perform one of the following procedures.

➤ **For Exchange Server 2007, follow these steps:**

1. Connect to the Exchange Server where the mailbox is located.
2. In IIS Console Management, follow these steps to verify that the virtual directory that you are using to connect to the mailbox (Exadmin or Exchange) is present:
 - a. Expand the default Web site in **INETMGR**.
 - b. Verify that the **EXADMIN** folder is present. If it is not, you will have to create it. For detailed information, see KB Article **947802** <http://go.microsoft.com/fwlink/?LinkId=142998>.
3. Another possible cause of this error is the Microsoft Dynamics CRM user e-mail address information. In the Web application, verify that the user's e-mail address is set correctly.

➤ **For Exchange Server 2003, follow these steps:**

1. In the Web application, verify that the e-mail address logon information is the same as the user's domain logon:

▶ **Example of correct configuration:**

DomainName: *DOMAINUser1*

E-mailAddress: user1@domain.com

▶ **Example of incorrect configuration:**

DomainName: *DOMAINUser2*

E-mailAddress: CRM.User@domain.com

2. Make sure that the Microsoft Dynamics CRM user properties are set to use the correct e-mail address.
3. Run the E-mail Router Configuration Manager to configure an incoming profile and then publish the profile.
4. Stop the E-mail Router Configuration Manager service.
5. Open the **Microsoft.Tools.Crm.EmailAgent.Xml** file in a text editor such as Notepad.
6. At the top of the file, set ConfigUpdatePeriod = 0.
7. Modify each user's incoming profile as follows:

```
<EmailUser>DOMAIN\User2</EmailUser>
```

```
<EmailPassword>{2A48C4DB-F2BFZ3g==@MkoEoFd1wvV8bY8UijX7VA==}</EmailPassword>
```

<EmailAddress>CRM.User@domain.com</EmailAddress>

Change *only* CRM.User to User2, as follows:

<EmailAddress>User2@domain.com<EmailAddress>

8. Save the **Microsoft.Tools.Crm.EmailAgent.Xml** file.
9. Restart the E-mail Router Configuration Manager service.

Important

Clicking **Test Access** in E-mail Router Configuration Manager will not result in a successful test. This is because test access will get the information from the Microsoft Dynamics CRM server directly and not from the **Microsoft.Tools.Crm.EmailAgent.Xml** file. To verify that the E-mail Router is functioning correctly, you can monitor the trace and errors and send test e-mail messages.

Mailbox not found (access test succeeds)

Symptom: When you click **Test Access** in the E-mail Router Configuration Manager, the test succeeds. However, you receive HTTP 404 errors in the application event log when the E-mail Router processes e-mail messages. Check the IIS logs for the following error:

Request Filtering: Denied because URL doubled escaping 404.11

Resolution: Run the following command on the Exchange Web site to allow double escaping:

```
%windir%\system32\inetsrv\appcmd set config "Default Web Site" -  
section:system.webServer/security/requestfiltering -  
allowDoubleEscaping:true
```

For more information, see:

- **IIS 7.0: Configure Request Filters in IIS 7.0** <http://go.microsoft.com/fwlink/?LinkId=136512>
- **How to Use Request Filtering** <http://go.microsoft.com/fwlink/?LinkId=85751>

The E-mail Router service configuration parameter "EmailUser" is missing

Symptom: When you use the E-mail Router, you may experience one or more of the following issues:

- An error event is logged in the Application log (Event Source: MSCRMEmail) with a description that states "EmailUser" is missing.
- When you use the Test Access functionality in the E-mail Router Configuration Manager, you receive an error message that states "Emailuser" is missing.

This issue occurs because Microsoft Dynamics CRM is not configured to use your credentials to send and receive e-mail messages.

Resolution: For information about how to resolve this issue, see KB article **947094** <http://go.microsoft.com/fwlink/?LinkId=140396>.

SSL/TLS error from E-mail Router Configuration Manager test access

Symptom: You run the E-mail Router to configure access to a mailbox. When you try to test access to the mailbox, you receive the following error message:

"Incoming Status: Failure - The underlying connection was closed: Could not establish trust relationship for the SSL/TLS secure channel. The remote certificate is invalid according to the validation procedure."

This issue occurs if you use self-signed certificates. The E-mail Router does not support self-signed certificates.

Resolution: For information about how to resolve this issue, see KB article **954584** <http://go.microsoft.com/fwlink/?LinkId=140403>.

POP3 issues

Error connecting the E-mail Router a POP3 mailbox

Symptom: When you click Test Access in the E-mail Router Configuration Manager to test a profile that uses a POP3 mailbox, you receive the following error:

Incoming Status: Failure – An error occurred while executing POP3 command "Command removed for security reasons". The server response was: "-ERR authorization first".

This error occurs because POP3 does not use NTLM authentication. Instead, POP3 uses clear text.

Resolution: For information about how to resolve this issue, see KB article [954046](http://go.microsoft.com/fwlink/?LinkId=140405) <http://go.microsoft.com/fwlink/?LinkId=140405>.

Issues with using a POP3 e-mail account

Symptom: After you configure the E-mail Router to use a POP3 e-mail account, you may experience one or more of the following symptoms:

- After you read e-mail messages from the POP3 mailbox, the E-mail Router does not process these messages.
- When you try to open the POP3 mailbox by using an e-mail reader, or when the E-mail Router connects to the POP3 mailbox, you receive one of the following error messages:
 - The application cannot connect or open the mailbox.
 - The mailbox is in use.

Resolution: For information about how to resolve this issue, see KB article [947059](http://go.microsoft.com/fwlink/?LinkId=140406) <http://go.microsoft.com/fwlink/?LinkId=140406>.

Outgoing e-mail configuration issues

This section provides troubleshooting guidelines and reference information about how to resolve commonly encountered issues that can occur during E-mail Router outgoing profile configuration.

- **To troubleshoot an E-mail Router outgoing profile configuration, follow these steps:**
 1. Make sure that you follow the incoming profile configuration procedures in the E-mail Router Configuration Manager Help.
 2. For more information about how to configure an incoming profile, see the E-mail Router configuration information in the latest version of the Installing Guide that is included in the *Microsoft Dynamics CRM 4.0 Implementation Guide* <http://go.microsoft.com/fwlink/?LinkId=104413>.
 3. Refer to the following sections for information about how to resolve commonly encountered outgoing profile issues.

Test Access error

If there is a problem with your outgoing e-mail configuration, you may receive the following error message when you click **Test Access** on the E-mail Router Configuration Manager:

"Outgoing status: Failure - An error occurred while checking the connection to e-mail server EXSERVERNAME. The requested address is not valid in its context"

- **If you receive this message, follow these steps to troubleshoot the problem:**
 1. Run a telnet command to verify that connectivity is functioning between the computer that is running CRM Router and the Exchange Server. For example, start the TELNET utility and enter the following command:


```
TELNET EXSERVERNAME PORT
```
 2. Make sure that you have no antivirus services running on the Exchange Server computer that prevent connection by using port 25.

3. For information about how to configure the SMTP server to allow relay messages from Microsoft Dynamics CRM, see KB article **915827** <http://go.microsoft.com/fwlink/?LinkId=140399>.

E-mail error when message sent from the Web application

Symptom: When a user sends an e-mail message by using the Web application, the user might receive one of the following messages:

This message has not yet been submitted for delivery. 1 attempts have been made so far.

The message delivery failed. It must be resubmitted for any further processing.

Resolution: For information about how to resolve this issue, see KB article **915827** <http://go.microsoft.com/fwlink/?LinkId=140399>.

Load Data error

When you click **Load Data** in the E-mail Router Configuration Manager, you receive the following error:

The E-mail Router Configuration Manager was unable to retrieve user and queue information from the Microsoft Dynamics CRM server. This may indicate that the Microsoft Dynamics CRM server is busy. Verify that URL 'http://*OrganizationName*' is correct. Additionally, this problem can occur if the specified access credentials are insufficient. To try again, click **Load Data**. (The request failed with HTTP status 404: Not Found.)

To resolve this problem, follow these steps:

1. Make sure that the user account that is running the E-mail Router Configuration Manager service is a member of the Active Directory PrivUserGroup security group.
2. The account that is specified in the **Access Credentials** field on the **General** tab of the E-mail Router Configuration Manager must be a Microsoft Dynamics CRM administrative user. If the access credentials are set to **Local System Account**, the computer account must be a member of the Active Directory PrivUserGroup security group.
3. Make sure that the URL is spelled correctly. The organization name in the URL field is case-sensitive and must be spelled exactly as it appears in the Microsoft Dynamics CRM server. To view the organization name as it appears in the Microsoft Dynamics CRM server, start the Web application. The organization name appears in the upper-right corner of the application window.
4. The DeploymentProperties table may have incorrect values if you have modified the port or hostheaders on your Web site. To update the DeploymentProperties table see, KB article **950248** <http://go.microsoft.com/fwlink/?LinkId=140392>.

Test Access feature

The E-mail Router Configuration Manager can test access for Microsoft Dynamics CRM users, queues, and forward mailboxes. By using the **Test Access** feature, you can troubleshoot issues that can prevent E-mail Router from functioning correctly. For more information about the Test Access feature, see the E-mail Router Configuration Manager Help.

Users do not receive Microsoft Dynamics CRM e-mail messages

This issue can occur because the service account that the E-mail Router is running under is not added to PrivUserGroup.

➤ **To resolve this issue, on a computer that is a domain controller in the domain where you installed Microsoft Dynamics CRM Server, follow these steps:**

1. Click **Start**, point to **Administrative Tools**, and then click **Active Directory Users and Computers**.
2. Expand the organizational unit (OU) that you selected during Microsoft Dynamics CRM Server Setup. By default, this is the Domain Controllers OU.
3. Right-click **PrivUserGroup**, and then click **Properties**.

4. On the **Members** tab, click **Add**, and then select the computer where the E-mail Router service is installed and running.
5. Click **OK** two times.

Information resources

For more information about how to troubleshoot E-mail Router deployment and configuration problems, refer to the following resources:

- Detailed planning, installation, and configuration instructions:
 - ▶ **Microsoft Dynamics CRM 4.0 Implementation Guide**
<http://go.microsoft.com/fwlink/?LinkID=104413>
 - ▶ **How to configure the On-premise and Online E-mail Router in different deployment scenarios**
<http://go.microsoft.com/fwlink/?LinkID=140353>
- Most current supplemental information about E-mail Router:
 - ▶ **Microsoft Dynamics CRM 4.0 E-mail Router Readme (On-Premise and Microsoft Dynamics CRM 4.0 Service Provider Editions)**
<http://www.microsoft.com/downloads/details.aspx?familyid=C54B428B-3565-4037-B4F3-C553F3288C45>
 - ▶ **Microsoft Dynamics CRM Online E-mail Router Release Notes**
<http://www.microsoft.com/downloads/details.aspx?FamilyId=261A17F6-72C9-45A3-B19A-75AE844B9DD0>
- General E-mail Router configuration troubleshooting information:
 - ▶ **Troubleshooting the Microsoft Dynamics CRM E-mail Router**
<http://go.microsoft.com/fwlink/?LinkId=140414>
 - ▶ **Troubleshooting E-Mail Issues in Microsoft Dynamics CRM 4.0**
<http://go.microsoft.com/fwlink/?LinkId=140431>
 - ▶ **Microsoft Dynamics CRM 4.0 E-Mail Connector Logger Tool**
<http://go.microsoft.com/fwlink/?LinkId=140430>
- Instructional videos:
 - ▶ **The Microsoft Dynamics CRM 4.0 E-mail Router with POP3**
<http://go.microsoft.com/fwlink/?LinkId=140367>
 - ▶ **The Microsoft Dynamics CRM 4.0 E-mail Router with Microsoft Exchange Server**
<http://go.microsoft.com/fwlink/?LinkId=140368>
 - ▶ **Using a Forward Mailbox with Microsoft Dynamics CRM 4.0**
<http://go.microsoft.com/fwlink/?LinkId=140369>

----- **Send Feedback About This Chapter** -----

We appreciate hearing from you. To send your feedback, click the following link and type your comments in the message body.

Note

The subject-line information is used to route your feedback. If you remove or modify the subject line, we may be unable to process your feedback.

Send Feedback (<http://go.microsoft.com/fwlink/?LinkId=167974>)

Microsoft Dynamics CRM for Outlook Installation Instructions

Microsoft Dynamics CRM for Microsoft Office Outlook enables access to the same data through Outlook as the Microsoft Dynamics CRM Web client. Microsoft Dynamics CRM for Outlook is targeted at Microsoft Dynamics CRM users who need access to CRM data while they are using the familiar Outlook application.

Note

For information about how to plan Microsoft Dynamics CRM for Outlook deployments, see the *Microsoft Dynamics CRM 4.0 Planning Guide*.

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Overview

Microsoft Dynamics CRM for Outlook has two client types:

- **Microsoft Dynamics CRM for Outlook.** Install this on workstations that have a permanent connection to a local area network (LAN) or the Internet, but are not used for travel. If a computer is being shared by several users (that is, each user has a separate log on account and is a valid Microsoft Dynamics CRM user), Microsoft Dynamics CRM for Outlook must be configured by running Microsoft Dynamics CRM for Outlook Setup for each user.
- **Microsoft Dynamics CRM for Outlook with Offline Access.** Install this on computers for users who travel or who are not always connected to the LAN. With Microsoft Dynamics CRM for Outlook with Offline Access, users who require offline support while they work in the field have access to a local copy of their customer data. Microsoft Dynamics CRM for Outlook with Offline Access can only be configured for one user per computer.

Installing on a computer that does not have Microsoft Dynamics CRM for Outlook installed

At the start of the Microsoft Dynamics CRM for Outlook installation, you will be given the choice of which client to install. Microsoft Dynamics CRM for Outlook resides in Outlook for its main application interface, and is available from the Outlook shortcut bars and folder navigation in the main window of Outlook. Installing Microsoft Dynamics CRM for Outlook creates a toolbar in Outlook and a folder in the user's mailbox folder structure.

Important

Do not install Microsoft Dynamics CRM for Outlook with Offline Access and Microsoft Dynamics CRM for Outlook on the same computer.

➤ **You must complete the following steps before you can run Microsoft Dynamics CRM for Outlook:**

1. **Install Microsoft Dynamics CRM for Outlook.** To complete this step, run **SetupClient.exe** in the **Client** folder on the installation media.
2. **Configure Microsoft Dynamics CRM for Outlook.** To complete this, run the Configuration Wizard.

Note

The Configuration Wizard starts automatically the first time you run Outlook after you install Microsoft Dynamics CRM for Outlook.

3. **Configure user e-mail settings.** To complete this step, you configure the incoming and outgoing options on the User form in the Microsoft Dynamics CRM Web application. By default, Microsoft Dynamics CRM for Outlook is selected for both incoming and outgoing e-mail messages. In addition, you should verify the tracking options. By default, only e-mail messages in response to a Microsoft Dynamics CRM generated e-mail message are tracked. For more information about these settings, see the Microsoft Dynamics CRM Help.

Step 1: Install Microsoft Dynamics CRM for Outlook

Use this procedure to install Microsoft Dynamics CRM for Outlook.

Notes

Running Microsoft Dynamics CRM for Outlook on a computer that is running Exchange Server is not supported.

The information in this section applies to Microsoft Dynamics CRM 4.0 with Update Rollup 7, or a later update. Some of this information is different for earlier versions of the product. For details about available updates, see the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) documentation.

➤ **To install Microsoft Dynamics CRM for Outlook, follow these steps:**

1. Meet the Microsoft Dynamics CRM for Outlook requirements specified in "System Requirements and Required Components" in the Microsoft Dynamics CRM 4.0 Planning Guide
2. Make sure that all Microsoft Office security updates are installed. To verify, visit **Microsoft Update** (<http://go.microsoft.com/fwlink/?LinkId=165705>).
3. Log on to the computer as a user who has Local Administrator privileges.
4. Double-click **SetupClient.exe**, which is located with the installation files in the following folder:
Drive:\Client
5. On the initial Setup page, select whether you want to update the installation files. We recommend that if updates are available, you let the setup program download the latest version. To do this, click **Update installation files**, wait until the update process is complete, and then click **Next**.
6. Click either **Install Microsoft Dynamics CRM for Outlook (Recommended)** or **Install Microsoft Dynamics CRM for Outlook with Offline Access (Advanced)**.
7. On the **License Agreement** page, review the information. If you accept the license agreement, select I accept this license agreement, and then click **I Accept**.

The program features are installed and a progress indicator is displayed.

8. On the **Microsoft Dynamics CRM for Outlook Setup Completion** page, click **Close**.

Step 2: Configure Microsoft Dynamics CRM for Outlook

After Microsoft Dynamics CRM for Outlook is installed, it must be configured. When you restart Outlook after you have installed Microsoft Dynamics CRM for Outlook, the Configuration Wizard starts automatically.

Notes

If you do not want to configure Microsoft Dynamics CRM for Outlook immediately after you install it, you can click **Cancel** on the Configuration Wizard **Welcome** page. A **Configure Microsoft Dynamics CRM for Outlook** button will then appear on the Outlook toolbar and will remain there until you configure Microsoft Dynamics CRM for Outlook.

To run the Configuration Wizard manually after Microsoft Dynamics CRM for Outlook is configured, click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM**, and then click **Configuration Wizard**.

The **Help Us Improve the Customer Experience** page has been removed from the Configuration Wizard. By default, the Customer Experience Improvement Program feature is turned off. To enable participation in this program, in Microsoft Dynamics CRM for Outlook go to the **CRM Options**, select the **Privacy** tab, and for **Participate in Customer Experience Improvement Program**, select the "Yes I am willing to participate anonymously in the Customer Experience Improvement Program" check box.

The information in this section applies to Microsoft Dynamics CRM 4.0 with Update Rollup 7, or a later update. Some of this information is different for earlier versions of the product. For details about available updates, see the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) documentation.

➤ To configure Microsoft Dynamics CRM for Outlook, follow these steps:

1. On the **Welcome** page, click **Next**.
2. On the **Select where you want to sign in to Microsoft Dynamics CRM** page, select one of the following options and then click **Next**.
 - ▶ **My company**. Select this option if you will connect to a Microsoft Dynamics CRM Server at your company by using the Internet.
 - ▶ **An online service provider**. Select this option if you will connect to Microsoft Dynamics CRM only through the Internet.

Important

Microsoft Dynamics CRM for Outlook users who will only access Microsoft Dynamics CRM remotely over the Internet, without using a VPN connection, should select the **An online service provider** option. Selecting this option enables Microsoft Dynamics CRM for Outlook to be configured remotely without being logged in to a domain, provided that the Microsoft Dynamics CRM Server is configured for Internet-facing deployment (IFD).

3. On the **Specify the Web addresses to use to connect to the Microsoft Dynamics CRM Server** page, in the **Intranet address** box type the URL for Microsoft Dynamics CRM, such as `http://crmserver`. If you connect to a company or partner-hosted site that uses an Internet-facing deployment, clear **Use the same Web address when the system connects over the Internet** and type the URL in the **External Web address** box. You must do this if you use a different URL, such as `http://server.contoso.com`, to connect to your Microsoft Dynamics CRM Server through the Internet. Click **Next**.

Important

If you have server roles installed on separate computers, you must specify the Web address of the computer where the Discovery Service role is installed.

4. On the **Configuration Complete** page, click **Finish**. If you encounter a problem during this procedure, click **View the log file** to review information about the configuration.

Step 3: Configure user e-mail settings

The E-mail Router is not required to send and receive Microsoft Dynamics CRM e-mail messages. Instead of using the E-mail Router, you can use Microsoft Dynamics CRM for Outlook to perform the following tasks:

- Deliver received e-mail messages to Microsoft Dynamics CRM.
- Send e-mail messages that are generated from Microsoft Dynamics CRM.

User and queue e-mail configuration

The e-mail messaging incoming and outgoing settings can be different for each user or queue. These incoming and outgoing options are configured on the User form. To open a user form, in the navigation pane, click **Settings**. Under **Settings**, click **Administration**. In the **Administration** area, click **Users** and then double-click the user that you want.

Note

By default, Microsoft Dynamics CRM sets both the incoming e-mail server type and the outgoing e-mail server type to Microsoft Dynamics CRM for Outlook. For more information about these types, see the following sections.

Incoming e-mail messaging options

The incoming e-mail configurations that can be used when a user or a queue receives Microsoft Dynamics CRM e-mail messages are as follows:

- **None.** Use this option for users or queues that do not use Microsoft Dynamics CRM to send e-mail messages.
- **Microsoft Dynamics CRM for Outlook.** This option requires that Outlook be installed on the user's computer. This option does not require the E-mail Router component. However, to process Microsoft Dynamics CRM e-mail messages, Outlook must be running.
- **Forward Mailbox.** To use this option, you must install the E-mail Router. This option requires a "sink" mailbox, which must be created by the administrator. The E-mail Router processes e-mail messages that are forwarded to this mailbox. Although this option does not require users to run Outlook, it does require that a server-side rule be deployed for the user. If you are using Exchange Server to process incoming e-mail messages, you can deploy the rule by using the Rule Deployment Wizard.
- **E-mail Router.** This option delivers Microsoft Dynamics CRM e-mail messages directly to Microsoft Dynamics CRM, without the need of a forward mailbox. The e-mail system that is used to process messages can be Microsoft Exchange Server 2003, Exchange Server 2007, or a POP3-compliant server.

Outgoing e-mail messaging options

The possible outgoing e-mail configurations that can be used when users, or queues, send Microsoft Dynamics CRM e-mail messages are as follows:

None. Use this option for users or queues that do not use Microsoft Dynamics CRM to send e-mail messages.

Microsoft Dynamics CRM for Outlook. This option requires that Outlook be installed on the user's computer. This option does not require the E-mail Router component.

E-mail Router. This option sends Microsoft Dynamics CRM e-mail messages by using the E-mail Router component. The e-mail system must be SMTP compliant. The E-mail Router can be installed on an SMTP server, or on a different computer that has a connection to an SMTP server.

Upgrade Microsoft Dynamics CRM 3.0 client for Outlook to Microsoft Dynamics CRM 4.0 for Outlook

The upgrade to Microsoft Dynamics CRM 4.0 for Outlook enables you to take advantage of new features. For example, Microsoft Dynamics CRM for Outlook no longer requires a VPN solution to connect to Microsoft Dynamics CRM from an external resource.

Important

You can upgrade Microsoft Dynamics CRM 3.0 client for Outlook (regardless of which update rollups have been applied) directly to the latest version of Microsoft Dynamics CRM 4.0 for Outlook by performing the procedures in this section.

Do *not* use these procedures to update a computer that currently has an earlier version of Microsoft Dynamics CRM 4.0 for Outlook installed. To update Microsoft Dynamics CRM 4.0 for Outlook, see "Update Microsoft Dynamics CRM 4.0 for Outlook" in this guide.

The information in this section applies to Microsoft Dynamics CRM 4.0 with Update Rollup 7, or a later update. Some of this information is different for earlier versions of the product. For details about available updates, see the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) documentation.

Microsoft Dynamics CRM for Outlook has the following client types:

- **Microsoft Dynamics CRM for Outlook.** Install this version if you do not have to access Microsoft Dynamics CRM data offline.
- **Microsoft Dynamics CRM for Outlook with Offline Access.** Install this version if you must access Microsoft Dynamics CRM data offline. This requires additional resources on your local computer and automatically downloads Microsoft SQL Server 2005 Express Edition to support an offline version of your Microsoft Dynamics CRM database records.

When you run **SetupClient.exe**, the Environment Diagnostics Wizard reviews your computer to determine if you are performing an upgrade. During upgrade, the Setup wizard selects the client type that matches the installed client of Microsoft Dynamics CRM 3.0 client for Outlook. Setup does not give you the option to install a different client type. If you were installing Microsoft Dynamics CRM for Outlook for the first time on the computer, the Setup wizard displays a page that allows you to select either client type. When you upgrade Microsoft Dynamics CRM for Outlook, the following client type upgrade options are available:

- Upgrade the Microsoft Dynamics CRM 3.0 client for Outlook desktop client to Microsoft Dynamics CRM for Outlook.
- Upgrade the Microsoft Dynamics CRM 3.0 client for Outlook laptop client to Microsoft Dynamics CRM for Outlook with Offline Access.

Important

To upgrade, the base language of Microsoft Dynamics CRM 4.0 for Outlook must match the base language of Microsoft Dynamics CRM 3.0 client for Outlook.

Step 1: Install Microsoft Dynamics CRM 4.0 for Outlook

Follow this procedure to install Microsoft Dynamics CRM 4.0 for Outlook on a computer that has Microsoft Dynamics CRM 3.0 client for Outlook installed.

- **To upgrade Microsoft Dynamics CRM 3.0 client for Outlook to Microsoft Dynamics CRM 4.0 for Outlook, follow these steps:**
 1. Meet the Microsoft Dynamics CRM for Outlook requirements specified in "System Requirements and Required Components" in the Microsoft Dynamics CRM 4.0 Planning Guide
 2. Log on to the computer as a user who has Local Administrator privileges.
 3. Make sure that all Microsoft Office security updates are installed. To verify, visit **Microsoft Update** (<http://go.microsoft.com/fwlink/?LinkId=165705>).

4. Double-click **SetupClient.exe**, which is located with the installation files in the following folder:
Drive:\Client
5. On the initial Setup page, select whether you want to update the installation files. We recommend that if updates are available, you let the setup program download the latest version. To do this, click **Update installation files**, wait until the update process is complete, and then click **Next**.
6. On the **License Agreement** page, review the information and, if you accept the license agreement, select **I accept this license agreement**, and then click **I Accept**.
The program features are installed and a progress indicator is displayed.
7. On the **Microsoft Dynamics CRM for Outlook Setup Completion** page, click **Close**.

Step 2: Configure Microsoft Dynamics CRM for Outlook

After Microsoft Dynamics CRM for Outlook is installed, it must be configured. When you restart Outlook after you have installed Microsoft Dynamics CRM for Outlook, the Configuration Wizard starts automatically.

Notes

If you do not want to configure Microsoft Dynamics CRM for Outlook immediately after you install it, you can click **Cancel** on the Configuration Wizard **Welcome** page. A **Configure Microsoft Dynamics CRM for Outlook** button will then appear on the Outlook toolbar and will remain there until you configure Microsoft Dynamics CRM for Outlook.

To run the Configuration Wizard manually after Microsoft Dynamics CRM for Outlook is configured, click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM**, and then click **Configuration Wizard**.

The **Help Us Improve the Customer Experience** page has been removed from the Configuration Wizard. By default, the Customer Experience Improvement Program feature is turned off. To enable participation in this program, in Microsoft Dynamics CRM for Outlook go to the **CRM Options**, select the **Privacy** tab, and for **Participate in Customer Experience Improvement Program**, select the **Yes I am willing to participate anonymously in the Customer Experience Improvement Program** check box.

The information in this section applies to Microsoft Dynamics CRM 4.0 with Update Rollup 7, or a later update. Some of this information is different for earlier versions of the product. For details about available updates, see the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) documentation.

➤ To configure Microsoft Dynamics CRM for Outlook, follow these steps:

1. On the **Welcome** page, click **Next**.
2. On the **Select where you want to sign in to Microsoft Dynamics CRM** page, select one of the following options and then click **Next**.
 - ▶ **My company**. Select this option if you will connect to a Microsoft Dynamics CRM Server at your company by using the Internet.
 - ▶ **An online service provider**. Select this option if you will connect to Microsoft Dynamics CRM only through the Internet.

Important

Microsoft Dynamics CRM for Outlook users who will only access Microsoft Dynamics CRM remotely over the Internet, without using a VPN connection, should select the **An online service provider** option. Selecting this option enables Microsoft Dynamics CRM for Outlook to be configured remotely without being logged in to a domain, provided that the Microsoft Dynamics CRM Server is configured for Internet-facing deployment (IFD).

- On the **Specify the Web addresses to use to connect to the Microsoft Dynamics CRM Server** page, in the **Intranet address** box type the URL for Microsoft Dynamics CRM, such as `http://crmserver`. If you connect to a company or partner-hosted site that uses an Internet-facing deployment, clear **Use the same Web address when the system connects over the Internet** and type the URL in the **External Web address** box. You must do this if you use a different URL, such as `http://server.contoso.com`, to connect to your Microsoft Dynamics CRM Server through the Internet. Click **Next**.

Important

If you have server roles installed on separate computers, you must specify the Web address of the computer where the Discovery Service role is installed.

- On the **Configuration Complete** page, click **Finish**. If you encounter a problem during this procedure, click **View the log file** to review information about the configuration.

Update Microsoft Dynamics CRM 4.0 for Outlook

To update Microsoft Dynamics CRM for Outlook on a computer that has an earlier version of Microsoft Dynamics CRM 4.0 for Outlook installed, download the update rollup and follow the instructions for the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) package.

Important

Do *not* use this procedure on a computer that currently has Microsoft Dynamics CRM 3.0 client for Outlook installed. Instead, follow the steps in "Upgrade Microsoft Dynamics CRM 3.0 client for Outlook to Microsoft Dynamics CRM 4.0 for Outlook" in this guide.

Note

By default, users can install update packages regardless of whether they have administrative privileges on the computer where the update is being installed. To disable this permission, you can set the following registry key to a value of 1:

```
HKEY_LOCAL_MACHINE\Software\Policies\Microsoft\Windows\Installer\DisableLUAPatching
DWORD 1
```

For more information, see **DisableLUAPatching** (<http://go.microsoft.com/fwlink/?LinkId=163849>).

Troubleshooting installation and upgrade

This section describes how to troubleshoot installation and upgrade issues.

Log files

When you install and configure Microsoft Dynamics CRM for Outlook, log files are created that can be used for troubleshooting.

By default, the location of the Setup log files, where *User* is the account of the user who ran Setup, is as follows:

- Windows XP: `SystemDrive:\Documents and Settings\User\Application Data\Microsoft\MSCRM\Logs\`
- Windows Vista: `SystemDrive:\Users\User\AppData\Roaming\Microsoft\MSCRM\Logs\`

By default, the location of the configuration log files, where *User* is the account of the user who ran Configuration Wizard, is as follows:

- Windows XP: `SystemDrive:\Documents and Settings\User\Local Settings\Application Data\Microsoft\MSCRM\Logs\`
- Windows Vista: `SystemDrive:\Users\User\AppData\Local\Microsoft\MSCRM\Logs`

Disable the CRM for Outlook button on the Web application

By default, if a user does not have Microsoft Dynamics CRM for Outlook installed and configured, the Microsoft Dynamics CRM Web application has a **CRM for Outlook** button in the upper-right corner of the window. This button provides a link for users to download Microsoft Dynamics CRM for Outlook. If you do not want users to have this capability, you can remove the button by creating the following registry key on the Microsoft Dynamics CRM Server:

```
HKEY_LOCAL_MACHINE\Software\Microsoft\MSCRM
    DisableOutlookSetupLink REG_DWORD 1 (enabled)
```

Default e-mail handler

For the Microsoft Dynamics CRM Configuration Wizard to work correctly, the following registry key must be set to Microsoft Outlook:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Clients\Mail\ (Default)
```

If this registry key is set to a value other than Microsoft Outlook, you will receive an error message similar to the following:

"There is no Extended MAPI installed as the default Mail client."

Installation troubleshooting

If you encounter problems with installation, see the following articles for troubleshooting help:

- **Error message when you try to install, upgrade or configure a Microsoft Dynamics CRM client computer** (<http://go.microsoft.com/fwlink/?linkid=125899>).
- **E-mail messages are not sent from Outlook Web Access, from Outlook Mobile Access, or from Outlook Rules after you open the Microsoft CRM 4.0 for Outlook** (<http://go.microsoft.com/fwlink/?linkid=124796>).
- **The Microsoft Dynamics CRM menu still exists on the Outlook menu bar after you uninstall the Microsoft Dynamics CRM 3.0 client for Outlook** (<http://go.microsoft.com/fwlink/?linkid=125901>).

Deploy Microsoft Dynamics CRM for Outlook with Systems Management Server 2003

Systems Management Server 2003 or its successor, Microsoft System Center Configuration Manager 2007, can be the most flexible means to deploy software on a network. With these applications, you have more administrative control over the targeting of users or systems, the elevation of user rights for installation, specifying when an installation can occur, and much more. This section focuses on how administrators can use SMS 2003 to deploy Microsoft Dynamics CRM for Microsoft Office Outlook to users and computers across their networks.

Note

The information in this section applies to Microsoft Dynamics CRM 4.0 with Update Rollup 7, or a later update. Some of this information is different for earlier versions of the product. For details about available updates, see the latest **Update Rollup** (<http://go.microsoft.com/fwlink/?LinkId=166230>) documentation.

Capabilities and limitations

Before you deploy Microsoft Dynamics CRM for Outlook by using SMS 2003, note the following capabilities and limitations:

- You can deploy both the Microsoft Dynamics CRM for Outlook (desktop client) and Microsoft Dynamics CRM for Outlook with Offline Access (laptop client) by configuring an unattended and silent SMS deployment.

- We recommend that you use SMS 2003 with SP3 or System Center Configuration Manager 2007.
- You must use the **ClientSetup.exe** program to deploy the application. You cannot use the Microsoft Installer (MSI) file.
- You must install and configure the SMS 2003 server to enable applications to be pushed to the client systems. For example, you must configure the Background Intelligence Transfer Service (BITS), and configure the SMS 2003 server for application advertisement and distribution in Active Directory. For more information about how to configure a SMS 2003 server to distribute applications, see the SMS 2003 documentation.

Best practices when distributing the application

This topic describes one method that you can use to deploy Microsoft Dynamics CRM for Outlook by using SMS that can work in most situations. For more information about SMS, see the Microsoft TechNet Web site **Systems Management Server 2003 Technical Library** (<http://go.microsoft.com/fwlink/?linkid=119887>)

Tips for Microsoft Dynamics CRM for Outlook with Offline Access installations:

- Before you can run Microsoft Dynamics CRM for Outlook, you must first install the application, and then you must configure it for each user. Although you can install the application by using SMS, you cannot configure it by using SMS, without creating a script first. Therefore, to reduce the possibility of mis-configuration, make sure that you pre-populate each option in the Setup XML configuration file. Then, communicate to users that they have to click only **Next** in the Setup wizard to complete the installation. Instruct the users not to change any of the options, because they are preselected.
- Alternatively, you can write a script that runs Setup and uses the XML configuration file to configure Microsoft Dynamics CRM for Outlook silently. This script can be distributed by SMS.
- For more information about how to run Setup, at the command prompt, and how to use the Setup XML configuration file, see "Install Microsoft Dynamics CRM for Outlook" in the Use the Command Prompt to Install Microsoft Dynamics CRM chapter of this guide.
- Create a configuration file to silently configure Microsoft Dynamics CRM for Outlook after the installation is complete. Alternatively, the Configuration Wizard starts automatically when the user restart Outlook for the first time after the installation is complete.

Create and distribute the application

To deploy Microsoft Dynamics CRM for Outlook by using SMS, follow the steps in this procedure.

These steps assume that SMS 2003 with SP3 is already installed, configured, and running in your organization. In addition, it assumes that the SMS 2003 client agents are installed where you want to deploy Microsoft Dynamics CRM for Outlook. For more information about how to configure SMS 2003, see the SMS 2003 documentation.

➤ To create and distribute the application, follow these steps:

1. Copy all Microsoft Dynamics CRM for Outlook installation files and folders, from both of the following source folders, to a single network shared folder that can be accessed from the SMS 2003 server:
 - ▶ **Client.** This folder contains all Microsoft Dynamics CRM for Outlook Setup files and folders.
 - ▶ **Redist\i386.** In this folder you will find all the redistributable prerequisite components that are installed during Microsoft Dynamics CRM for Outlook Setup, such as MSXML, SQL Server 2005 Express Edition, and the Microsoft Visual C++ Redistributable package. Including Redist\i386 is optional, but we recommend it as a best practice. If you do not include this folder, the redistributable prerequisite components will be downloaded during installation.
2. Create a collection. An SMS collection contains a set of resources for software distribution. In this case, these would be the client computers on which you want to install Microsoft Dynamics CRM for Outlook. To create the collection, follow these steps:
 - a. On the SMS 2003 server, logged on as administrator, start **SMS Administrator Console**.
 - b. Expand **Site Database**, right-click **Collections**, point to **New**, and then click **Collection**.

- c. On the **Collection Properties** dialog box, type the collection name, such as Microsoft Dynamics CRM for Outlook.
- d. Click the **Membership Rules** tab, click **New**, and then use the following information to complete the Create Direct Membership Rule Wizard.
 1. On the Create Direct Membership Rule Wizard **Welcome** page, click **Next**.
 2. On the **Search for Resources** page, in the **Resource** class list, select **System Resource**, in the **Attribute name** list select **Name**, and then in the **Value** box type the percent symbol (%). This returns the resources.
 3. Click **Next**.
 4. On the **Collection Limiting** page, click **Next**.
 5. On the **Select Resources** page, select the computers on which you want to install Microsoft Dynamics CRM for Outlook.
 6. Click **Finish**, and then, in the **Collection Properties** dialog box, click **OK**.
3. To distribute Microsoft Dynamics CRM for Outlook, follow these steps:
 - a. On the SMS 2003 server, logged on as administrator, start **SMS Administrator Console**.
 - b. Expand **Site Database**, expand **Collections**, and then right-click the collection that you created previously.
 - c. Point to **All Tasks**, and then click **Distribute Software**.
 - d. On the **Distribute Software to Collection Wizard** welcome page, click **Next**.
 - e. On the **Package** page, click the **Create a new package and program** option, and then click **Next**.
 - f. On the **Package Identification** page, type a name for the package. You can enter information in the other fields to describe the version, publisher, and language. Click **Next**.
 - g. On the **Sources Files** page, click **Create a compressed version of the source**, and then click **Next**.
 - h. On the **Source File Compression** page, click **Local drive on site server**, and then type the location or click **Browse** to enter the folder where the Microsoft Dynamics CRM for Outlook installation files are located.

Important

The source directory that you specify must contain the **SetupClient.exe** file.

- i. On the **Distribution Points** page, select the SMS server, and then click **Next**.
- j. On the **Program Identification** page, enter the program name and the command line that will be used to run Microsoft Dynamics CRM for Outlook Setup.

Use the following list when you are determining program-name and command-line information.

Important

The command line is needed only if you are *not* using an XML configuration file to automate Microsoft Dynamics CRM for Outlook client configuration. For information about using a configuration file to automate client configuration, see Command examples

- **Name.** Type a name that describes the application or intent of this package distribution.
- **Command line.** If needed, enter the command that will be used to run the Setup program. For example, the following command installs Microsoft Dynamics CRM for Outlook (desktop only) to the folder c:\program files\Microsoft Dynamics CRM with no user action required during the installation.

SetupClient.exe /Q /L "c:\clientinstalllog.txt" /targetdir "c:\program files\Microsoft Dynamics CRM" INSTALLLEVEL=3

Note the following parameters:

/targetdir. Where the client must be installed.

INSTALLLEVEL. Which client will be installed: 2 specifies Microsoft Dynamics CRM for Outlook (desktop client that must be online), 3 is for Microsoft Dynamics CRM for Outlook with Offline Access (laptop client).

/L. Specifies where the log will be located. We recommend that as a best practice you specify a convenient location on the client computer and inform users where they can find the log file.

/Q. Specifies a silent installation.

- k. On the **Program Properties** page, select the following options:
 - In the **Program can run list**, select **Only when a user is logged on**.
 - Select **Run with administrative rights**.
 - In the **After running list**, select **No action required**.
 - l. On the **Advertise a Program** page, select **Yes**, and then click **Next**.
 - m. On the **Select a Program to Advertise** page, you can add a comment in the **Comment** box, but do not make any other changes. Click **Next**.
 - n. On the **Advertisement Name** page, do not make any changes. Click **Next**.
 - o. On the **Advertise to Subcollections** page, do not make any changes. Click **Next**.
 - p. On the **Advertisement Schedule** page, make sure that the advertisement never expires. Click **Next**.
 - q. On the **Assign Program** page, click **Yes**, select the date that you want to assign the program in the **Assign after** list, and then click **Next**.
 - r. On the **Completing the Distribute Software to Collection Wizard** page, click **Finish**.
4. Configure BITS on the advertisement, which will run the program from the distribution point. If the client disconnects from the network, the Setup program will fail. For most deployments, you will want to use BITS to download the package to the client computer before the SMS server attempts to run the advertised program. If the client disconnects, the SMS server will resume from the point where the disconnection occurred. The advertised program will not appear in the client cache (C:\WINDOWS\System32\CCM\Cache) without the use of BITS. Upon completing the previous steps, perform the following steps to ensure BITS will be used to download the program.
 - a. On the SMS 2003 server, logged on as administrator, start **SMS Administrator Console**.
 - b. Expand **Site Database**, click **Advertisements**, right-click the advertisement that you created in the previous step, and then click **Properties**.
 - c. Click the **Advanced Client** tab, and then click **Download program from distribution point**. Click **OK**.
 - d. Right-click the Microsoft Dynamics CRM for Outlook advertisement, point to **All Tasks**, and then click **Re-run Advertisement**.
 - e. Click **Yes** to confirm the action.
 5. Verify the distribution status. After the package is built and advertised, SMS will upload the Setup files to the client computers that you specified previously.
 - ▶ For 32-bit computers, the files will be uploaded to the client to a folder in c:\WINDOWS\System32\CCM\Cache.
 - ▶ For 64-bit computers, the files will be uploaded to the client to a folder in c:\WINDOWS\SysWOW64\CCM\Cache.

You can verify the status for the distribution and execution of the package on the SMS server by following these steps:

- a. On the SMS 2003 server, logged on as administrator, start **SMS Administrator Console**.
- b. Expand **Site Database**, expand **System Status**, and expand **Advertisement Status**.
- c. Right-click the previously created advertisement, point to **Show Messages**, and then click **All**.

- d. The advertisement status messages appear in the **SMS Status Message Viewer** window. To update the list, on the **View** menu, click **Refresh**.

The installation will occur on the clients that you specified in the Distribute Software to Collection Wizard. During the installation, the client computer will display a notification-area icon announcing that a new package is available. If this is not a silent install, users must double-click the icon, select the Microsoft Dynamics CRM for Outlook package, and then click **Run**. If an error message appears that explains that the package is not yet available, wait a few more minutes, and then try to run the installation again. This behavior occurs because of a known issue where SMS 2003 displays the package to the SMS client before all the files have finished uploading.

Management Information Format file

The client installer creates a Management Information Format (MIF) file named **crmclient.mif** for use with SMS deployments, and places it in the **%systemroot%** directory (for example, C:\Windows). For information about how to use MIF files, see the SMS documentation.

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Data Migration Manager Installation Instructions

Typically, the Data Migration Manager is used when you first implement Microsoft Dynamics CRM to bring all data from your legacy databases and systems into Microsoft Dynamics CRM.

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Overview

There are many reasons to use the Data Migration Manager:

- The data includes related records from multiple record types.
- Records have to be assigned to different Microsoft Dynamics CRM users.

You must download, install, and configure the Data Migration Manager to run it. The Data Migration Manager can only be run by a user with the System Administrator security role.

➤ **You must complete the following steps before you can migrate data into Microsoft Dynamics CRM:**

1. Install Data Migration Manager. To complete this step, run the SetupDMClient.exe file in the DMWizard folder found on the installation media.
2. Configure Data Migration Manager. To complete this step, run the Data Migration Manager for the first time.
3. Prepare, map, and then migrate the data. To complete this step, you must complete the following tasks:
 - a. Prepare the source data for migration.
 - b. Map the source data to the Microsoft Dynamics CRM data.
 - c. Migrate the data.

For more information about how to map and migrate data, see the Data Migration Manager Help.

Install Data Migration Manager

This Data Migration Manager must be installed on a computer that has a network connection to the Microsoft Dynamics CRM Server.

Important

You cannot run the Data Migration Manager on the same computer when Microsoft Dynamics CRM for Microsoft Office Outlook is running. You must close Microsoft Dynamics CRM for Outlook before you run the Data Migration Manager.

Data Migration Manager installation procedure

➤ **To install Data Migration Manager, follow these steps:**

1. Log on to the computer as a user who has Local Administrator privileges.
2. Double-click **SetupDMClient.exe**, which is located with the installation files in the following folder:
Drive:\DMWizard
3. On the **License Agreement** page, review the information and, if you accept the license agreement, select **I accept this license agreement**, and then click **I Accept**.
4. On the **Specify Database Server** page, select **Use SQL Server** if you want to store data-migration information on an existing Microsoft SQL Server database server or select **Use SQL Server Express** to store data migration information on the local computer.

Important

The instance of SQL Server must be in the same domain as the computer that is running Data Migration Manager.

5. If Setup detects that components are missing, the **Install Required Components** page appears. If you have already installed the required components listed, this page will not appear. If you have not installed the required components listed, you can install them now. Click **Install**. When the components are installed, the status column changes from **Missing** to **Installed**, and you can click **Next** to continue.

Note

These components are required before the Data Migration Manager can be installed. You can exit Setup and install the components manually, or select Install. The **Next** button on this page is disabled until Setup detects that these components are installed.

Microsoft .NET Framework 3.0 and SQL Server Express Edition can take as long as 10 minutes each to install.

6. On the **Select Installation Location** page, select the file installation location. By default, Setup will install the application in the *Drive:\Program Files\Microsoft Dynamics CRM Data Migration Manager* folder. Click **Next**.
7. The **System Requirements** page appears. This page is a summary of all system requirements for a successful Data Migration Manager installation. Failed tests must be corrected before installation can continue to the next step. If there is a problem that will take time to correct, cancel Setup at this point, fix the problem, and restart Setup. If an error or warning occurs, you can click **Help** for more information and steps to resolve the issue. When all tests are successful and you are ready to install, click **Install**.
8. On the **Data Migration Manager Setup** page, click **Close**.

Configure Data Migration Manager

After you have run Data Migration Manager Setup, you must run the Data Migration Configuration Wizard to complete the installation.

➤ **To configure Data Migration Manager, follow these steps:**

1. Click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM**, and then click **Microsoft Dynamics CRM Data Migration Manager**.
2. On the first screen, click **Sign In**. This step may take several minutes to complete because the Data Migration Manager installs the temporary migration database, and then reads user and customization data from the Microsoft Dynamics CRM Server.
3. The Data Migration Manager Configuration Welcome page appears. Click **Next**.

4. On the **Connect to Microsoft Dynamics CRM** page, select one of the following options, and then click **Next**.
 - ▶ **At my company or a partner-hosted site.** Select this option if you will connect to a Microsoft Dynamics CRM Server at your company or at a partner-hosted site.
 - ▶ **An online service provider.** Select this option if you will connect to Microsoft Dynamics CRM through a Service Provider Access License (SPLA).
5. On the next **Connect to Microsoft Dynamics CRM** page, in the address box, type the URL for the Microsoft Dynamics CRM Server, and then click **Next**.
6. On the **Specify Security Account** page, type your password. The user who is configuring the application will be used to run Data Migration Manager services. This user must be a member of the Administrators group on the local computer. Click **Next**.
7. On the **Specify SQL Server** page, indicate whether you want to install Microsoft SQL Server Express on the local computer, or connect to Microsoft SQL Server (if you are installing Data Migration Manager on a computer that is running SQL Server). Click **Next**.

Important

We recommend that you *not* install Data Migration Manager on a computer that is running SQL Server for other business-critical applications.

8. On the **Help Us Improve the Customer Experience** page, select whether you want to participate in the Customer Experience Improvement Program, and then click **Next**.

Note

With your participation in this program, we can improve the quality of Microsoft Dynamics CRM by collecting information about how you use the application. No personally identifiable information will be collected or transmitted to Microsoft. By default, the Customer Experience Improvement Program feature in Microsoft Dynamics CRM is turned on.

9. The **System Requirements** page appears. This page is a summary of all system requirements for a successful Data Migration Manager installation. Failed tests must be corrected before configuration can continue. If a problem will take time to correct, cancel Data Migration Manager Setup at this point, fix the problem, and then restart the Data Migration Manager Setup. All errors must be resolved. If no errors occur, or only warnings appear, you can continue with the configuration. To do this, click **Next**.
10. On the **Configuration Complete** page, click **Finish**. If there was a problem during the installation, click **View the log file** to review the log file for information about the configuration.

Logging

By default, data migration logging is turned off. When data migration logging is turned on, the log files are put in the C:\Program Files\Microsoft Dynamics CRM Data Migration Manager\DMClient\Trace folder.

Logging functionality is maintained in the following registry entries in the **HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Data Migration Wizard** subkey.

- "TraceEnabled"=dword:00000001 (00000001 turns logging on, 00000000 turns logging off)
- "TraceDirectory"= <Local directory path where log files are created, such as c:\crm_logs\>
- "TraceCategories"="*:Verbose"
- "TraceCallStack"=dword:00000001
- "TraceSchedule"="Daily"
- "TraceRefresh"=dword:00000001

Start Data Migration Manager

To run the Data Migration Manager, click **Start**, point to **All Programs**, point to **Microsoft Dynamics CRM**, and then click **Microsoft Dynamics CRM Data Migration Manager**. For more information about how to use the Data Migration Manager, see the Data Migration Manager Help.

Important

Running the Data Migration Manager remotely, such as in a Terminal Services environment or from a remote desktop-client connection is not supported. The Data Migration Manager uses the Cassini client-side Web server, which does not support authentication. An elevated privilege exploit can occur when you try to access a Cassini session remotely.

Troubleshooting Data Migration Manager Setup

This section describes known issues that can occur during Data Migration Manager Setup. For information about issues that occur during Data Migration Manager Setup, view the log file that is located at *Drive:\Documents and Settings\<user name>\Application Data\Microsoft\MSCRM\Logs\DataMigrationWiz_Setup.log*.

Uninstall Data Migration Manager when Setup does not complete successfully

To retry Setup after an unsuccessful or incomplete Data Migration Manager installation, you must first uninstall the application, and then run Setup again. To uninstall the Data Migration Manager, open **Add or Remove Programs** in Control Panel, click **Data Migration Manager**, click **Change/Remove**, and then follow the instructions that are on the screen.

Data Migration Manager authentication failures

When you run Data Migration Configuration Wizard or the Data Migration Manager after it is installed and configured, and you cannot authenticate with the Microsoft Dynamics CRM Server, perform this procedure.

➤ To work around this problem, follow these steps:

1. Start the Microsoft Dynamics CRM Web application. To do this, start Microsoft Internet Explorer, type the URL of the Microsoft Dynamics CRM Server, and then press **ENTER**.
2. When the logon prompt appears, enter your user name and password, click **Remember my password**, and then click **OK**.
3. Run the Data Migration Configuration Wizard again.

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Language Pack Installation Instructions

The Microsoft Dynamics CRM 4.0 Language Pack lets users switch the language of the user interface or Help that is displayed in the application. For example, your multinational organization might have standardized on an English user interface to simplify internal training and troubleshooting. But if you prefer to read Help in your native language of German, you can specify that Microsoft Dynamics CRM display Help in German.

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Overview

During installation, files that enable users to change the language of the user interface and Help are copied to the destination hard disk. Localized templates and wizards are also added to the needed Microsoft Dynamics CRM applications.

After installation, Microsoft Dynamics CRM Language Pack capabilities and corresponding options are available from Microsoft Dynamics CRM client applications. Users do not start Microsoft Dynamics CRM Language Pack as a separate application.

Note

The Microsoft Dynamics CRM Language Pack is a separate download or media disk and has its own installer. The Microsoft Dynamics CRM Language Pack only changes the Microsoft Dynamics CRM user interface and Help. If you already have the Microsoft Office 2003 or 2007 Microsoft Office system Language Pack, you still must install the Microsoft Dynamics CRM Language Pack for users to change the language displayed in Microsoft Dynamics CRM.

➤ You must complete the following tasks to use Microsoft Dynamics CRM Language Packs:

1. Install one or more Language Packs in the deployment.
2. Enable one or more Language Packs to make them available to Microsoft Dynamics CRM users.
3. Users can then set the user interface and Help language displays that they want.

Deploy a Language Pack

Follow the procedures in this section to install the Microsoft Dynamics CRM Language Pack.

Step1: Install the Language Pack in the deployment

➤ To install the Language Pack in the deployment, follow these steps:

1. Log on to the computer, where Microsoft Dynamics CRM Server is installed, as a user who has Local Administrator privileges.
2. Double-click **MUISetup.msi**, where the Language Pack files are located.

3. On the **License Agreement** page, review the information and if you accept the license agreement click **I accept this license agreement**, and then click **Install**.

Setup copies the Language Pack files. By default, the Language Pack files are copied to *Drive:\Program Files\Microsoft CRM\LangPacks\<LangID>*, where *LangID* is the language identifier, such as 1033 for English (US) or 1043 for Dutch.

4. On the completion page, click **View log file** if you want to review the Setup log file. In addition, you can click **View Read Me** to view the Read Me file, which contains up-to-date information about Microsoft Dynamics CRM 4.0 Language Packs. Click **Finish** to complete the installation.

Step 2: Enable the Language Pack in your organization

Before users can start using a Language Pack to display a language, the Language Pack must be enabled for the organization.

- **To enable the Language Pack in your organization, follow these steps:**

1. Start the Microsoft Dynamics CRM Web application.
2. In the **Navigation Pane**, click **Settings**. Under **Settings** click **Administration**, and then click **Languages**.
3. Select the check box for each language that you want to enable, and clear any check boxes that you want to disable.
4. Click **Apply**.

Note

It may take several minutes for Microsoft Dynamics CRM to enable the languages that you selected and disable the languages that you cleared.

5. When you have finished enabling and disabling languages, click **Close** to close the **Language Settings** dialog box.

Step 3: Install the Language Pack for Microsoft Dynamics CRM for Outlook

If you have users who are running Microsoft Dynamics CRM for Microsoft Office Outlook, you must install the same Microsoft Dynamics CRM Language Packs enabled in the previous step on the computer where Microsoft Dynamics CRM for Outlook is installed.

Note

You do not have to perform this procedure for users who will only run the Web application.

- **To install the Language Pack for Microsoft Dynamics CRM for Outlook, follow these steps:**

1. Log on to the computer, where Microsoft Dynamics CRM for Outlook is installed, as a user who has Local Administrator privileges.
2. Double-click **MUISetup.msi**, where the Language Pack files are located.
3. On the **License Agreement** page, review the information and if you accept the license agreement click **I accept this license agreement**, and then click **Install**.

Setup copies the Language Pack files. By default, the Language Pack files are copied to *Drive:\Program Files\Microsoft CRM\LangPacks\<LangID>*, where *LangID* is the language identifier, such as 1033 for U.S. English or 1043 for Dutch.

4. On the completion page, click **View log file** if you want to review the Setup log file. When you are ready, click **Finish** to complete the installation.

Step 4: Select the language to display the user interface and help

Users can select the language to display in both the Microsoft Dynamics CRM Web and Microsoft Dynamics CRM for Outlook applications.

➤ **To select the language to display, follow these steps:**

1. Under **Workplace**, click the **Personalize Workplace** link.
2. Click the **Languages** tab.
3. In the **User Interface Language** list, select the language in which you want Microsoft Dynamics CRM to be displayed.
4. In the **Help Language** list, select the language in which you want Microsoft Dynamics CRM Help to be displayed.
5. Click **OK** to save your changes and close the dialog box.

Note

The user language settings only apply to Microsoft Dynamics CRM for Outlook features, such as the user interface display of the **CRM** menu, and do not affect other areas of Microsoft Office Outlook. To be able to display all the Outlook user interface or Help in multiple languages, you must install one or more Office Language Packs. For more information about Office Language Packs, see the Outlook Help.

Language Pack installation issues

This section describes how to troubleshoot Language Pack installation issues.

You receive a "Setup could not install Language Pack Name" error message

During a Language Pack installation, Setup may display an error message that states that the Language Pack cannot be installed. This problem can occur when the Microsoft Dynamics CRM Server or Microsoft Dynamics CRM for Outlook applications are not installed on the computer before you run **MUISetup.msi** to install a Language Pack. To resolve this problem, you must perform the following procedures:

- If you are installing the Language Pack for the Microsoft Dynamics CRM deployment, you must install the Language Pack on the computer where Microsoft Dynamics CRM Server is installed.
- If you are installing the Language Pack for Microsoft Dynamics CRM for Outlook, you must install the Language Pack on the computer where Microsoft Dynamics CRM for Outlook is installed.

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Use the Command Prompt to Install Microsoft Dynamics CRM

You can install Microsoft Dynamics CRM, Microsoft Dynamics CRM Connector for Microsoft SQL Server Reporting Services, Microsoft Dynamics CRM for Microsoft Office Outlook, and the Microsoft Dynamics CRM E-mail Router from their respective installation disks or file download location by using the command prompt. The required setup information is provided to the Setup program both as command-line parameters and as an XML configuration file that the Setup program references.

One advantage of using the command prompt to install Microsoft Dynamics CRM is that you do not have to attend the installation. Attended installation requires you to make decisions and provide information so that installation can run successfully. Unattended installation, by using the command prompt, requires you to provide the installation information as command-line parameters and an XML configuration file. No other action is required until the Setup program is finished. Errors and installation progress can be logged to a file that you can view and analyze later.

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General procedures

The procedures for accessing the Setup program on the individual installation disk or file download location are basically the same. The prerequisites for each of the Microsoft Dynamics CRM system components as discussed in previous sections also apply.

➤ **To access the Setup program, follow these steps:**

1. Log on to the computer as a member of the **Domain Users** Active Directory group and **Administrators group on the local computer**. In addition, the user running Setup must have administrative-level permissions on the computer that has Microsoft SQL Server installed, and permissions to create or modify Active Directory groups in the domain where Microsoft Dynamics CRM Server is installed.
2. If you are installing from an installation disk, insert the Microsoft Dynamics CRM Server or the Microsoft Dynamics CRM for Microsoft Office Outlook installation disk into the CD/DVD drive. The **Autorun** screen appears. Close the **Autorun** screen.
3. Open the **Command Prompt** window.

4. At the command prompt, change to the CD/DVD drive or change to the location where the Microsoft Dynamics CRM installation files are located:
 - ▶ SetupServer.exe for Microsoft Dynamics CRM Server is located in the root of the Microsoft Dynamics CRM Server installation disk or file download location.
 - ▶ SetupSrsDataConnector.exe for the Microsoft Dynamics CRM Connector for SQL Server Reporting Services is located in the \SrsDataConnector folder on the Microsoft Dynamics CRM Server installation disk or file download location.
 - ▶ Setupclient.exe for Microsoft Dynamics CRM for Outlook is located in the root of the Microsoft Dynamics CRM for Outlook installation disk or file download location.
 - ▶ SetupExchange.exe for Microsoft Dynamics CRM E-mail Router is located in the \Exchange folder on the Microsoft Dynamics CRM Server installation disk or file download location.

Install Microsoft Dynamics CRM Server

The following command will install Microsoft Dynamics CRM Server:

```
SetupServer.exe [/Q] [/InstallAlways] [/L [drive:][[path] logfile.log]] [/config [drive:] [[path] configfilename.xml]]
```

SetupServer.exe for Microsoft Dynamics CRM Server is located in the root of the Microsoft Dynamics CRM Server installation disk or download-files location.

Parameters

None

Used without parameters, Setup will install with all display screens.

/Q

Quiet mode installation. This parameter requires a configuration file in XML format. The /config parameter contains the name of the XML configuration file. No dialog boxes or error messages will appear on the display screen. To capture error message information, include the log file parameter (/L).

/InstallAlways

This parameter forces Setup to ignore the installation state and operate in install mode. When you use this parameter, Setup will try to install on a server where Microsoft Dynamics CRM is already installed.

/QR

Requires a configuration file in XML format specified by the /config parameter. Displays installation progress bars and all error messages.

/L [drive:] [[path] logfile.log]

Creates a log file of installation activity. You can specify the file name of the log file and where to put it, but the path cannot be a relative path, such as ..\..\crmlog.txt. If you do not specify a name or location, a log file will be created in the *Drive:\Documents and Settings\UserName\Application Data\Microsoft\MSCRM\Logs* folder, where *UserName* is the account name of the user running Setup. The following options are available:

/LV

Log verbose.

/L*

Log all information except verbose.

/L*V

Log all information including verbose.

/config [drive:] [[path] configfilename.xml]

The `/config` parameter uses the specified XML configuration file to provide Setup with the additional information to complete installation successfully. An example XML configuration file is discussed in the following section.

Server XML configuration file

The `/config [drive:] [[path] configfilename.xml]` command-line parameter provides Microsoft Dynamics CRM Server Setup with required information. The information supplied by the XML configuration file is the same required by each installation screen.

Important

The XML elements must be in English (US). An XML configuration file that has localized XML elements will not work correctly. For example, if you have a German version of Microsoft Dynamics CRM Server, the XML file elements must still be English (US).

By default, Setup will use the UTF-8 encoding for the Setup XML configuration file. Setup cannot load an XML configuration file when there are extended characters in the file. You will receive an error message from Setup that the XML file is invalid. If the XML configuration file contains extended characters, you can work around this issue by saving the XML configuration file by using **Unicode** encoding. To do this, open the XML configuration file in Notepad, click **Save As**, in the **Encoding** list select **Unicode**, and then click **Save**.

An explanation of each XML element and a sample XML file follows:

```
<CRMSetup> </CRMSetup>
```

The configuration file must be a valid XML file that uses `<CRMSetup>` as the root element.

```
<Server> </Server>
```

Specifies a Microsoft Dynamics CRM Server installation. All the Microsoft Dynamics CRM Server entries that follow must be inside the Server tags.

```
<InstallType>Uninstall/Repair</InstallType>
```

Specifies the type of installation that Setup will perform. The following options are available:

Uninstall. Uninstalls Microsoft Dynamics CRM Server.

Repair. Starts Setup in repair mode.

```
<Patch update="true"/"false">\\ServerName\ShareName\Patch_Location</Patch>
```

By default, this element does not specify a location, which configures Setup to search for available updates on a CRM Updates Internet site controlled by Microsoft. If you want Setup to install updates from another location, such as a share on your network, add the filepath to the .msp file in the element, as shown in the example.

update. Specifies whether Setup will look for, download, and apply updates for Microsoft Dynamics CRM Server Setup. We recommend that you let Setup download the latest version by selecting true. By default, this value is set to false. If the value is set to false, Setup will ignore this step and continue with the installation.

For more information about how to obtain Setup updates, see *How to obtain the setup updates for Microsoft Dynamics CRM 4.0* (<http://go.microsoft.com/fwlink/?linkid=102967>).

```
<muoptin optin="true"/"false"/>
```

Specifies whether to use Microsoft Update as the mechanism for applying updates to the Setup program. If you do not have a software update service such as Windows Server Update Services (WSUS), we recommend that you specify true, which will let Setup use Microsoft Update.

```
<SqlServer>SQLServername</SqlServer>
```

Specifies the name of the instance of Microsoft SQL Server that will manage the Microsoft Dynamics CRM Server database files. If SQL Server is running on the computer where you are installing Microsoft Dynamics CRM Server you can specify "." or "localhost".

<Database create="true"/"false" update="true"/"false"/>

create

Values for this parameter are either true or false. True causes Setup to create a new Microsoft Dynamics CRM database. False causes Setup to connect to an existing Microsoft Dynamics CRM database as indicated by the Active Directory organizational name (see the following **<Organization>** element).

update

Values for this parameter are either true or false. When you select true, Setup will write the appropriate server deployment information to the configuration database (MSCRM_CONFIG). Select false only when you are using a pre existing configuration database and you do not want Setup to update the server deployment information. When you select false, the appropriate server deployment information for the computer where Microsoft Dynamics CRM 4.0 Server is being installed must already exist in the configuration database for Setup to complete successfully. The default value is true.

<Organization>Organization friendly or long name</Organization>

Specifies the long name of your organization. The name can be up to 250 characters long and extended characters are supported.

<OrganizationUniqueName>OrganizationName</OrganizationUniqueName>

Specifies the name of your organization. There is a 30 character limit. Notice that extended characters or spaces are not allowed. If you leave this element blank Setup will generate a short name based on the OrganizationFriendlyName value.

<OU> OU=value,DC=value,DC=value,DC=value,DC=value</OU>

The **<OU>** element specifies the Active Directory organizational unit (OU) and domain (DC) values that this Microsoft Dynamics CRM Server computer is to be associated with. For example, **<OU> OU=CRM, DC=MySubDomain, DC=MyDomain, DC=com</OU>**.

<LicenseKey>KeyValue</LicenseKey>

Specifies the license key for this deployment. The configuration file can contain only one Microsoft Dynamics CRM license key. For example:

<licenseKey>XXXXX-XXXXX-XXXXX-XXXXX-XXXXX</licenseKey>

Note

If you purchase Microsoft Dynamics CRM through a Microsoft Volume Licensing program, the license key is provided in the license.txt file. The license.txt file is included in the Microsoft Dynamics CRM installation files.

<WebsiteUrl Create="true"/"false" port="TCPportnumber"/>/LM/W3SVC/1</WebsiteUrl>

Specifies the path for the Web site to be created on the Microsoft Dynamics CRM Server.

Use **Create="true"** to create a new Microsoft Dynamics CRM Web site and leave the value between the element tags blank. Specify **Create="false"** to use an existing Web site and then you must enter the Web site node in the element tags, such as **/LM/W3SVC/1**, which is the default Web site.

Use **port="TCPportnumber"**, where *TCPportnumber* is a valid and available TCP port number, to specify the port for connecting to the Microsoft Dynamics CRM Server application. If left blank, the port number that will be used is 5555.

<InstallDir>c:\program files\Microsoft CRM</InstallDir>

Specifies the folder in which Microsoft Dynamics CRM Server files will be copied.

<basecurrency isocurrencycode="CurrencyCode" currencyname="CurrencyName" currencysymbol="CurrencySymbol"/>

Specifies the ISO three-letter currency-code, display name, and symbol to use for the base currency. For example, if you want to have to use U.S. dollars as the base currency, use `isocurrencycode="USD"`. You must use a valid ISO currency description for the `isocurrencycode` attribute. You must also specify the currency-name and currency-symbol display names for the ISO base currency. For example, if the ISO currency code is USD, the currency name should be "US Dollar" and the currency symbol should be "\$". However, you can use any string that you want for those attributes.

Important

After Setup is complete, you cannot change the base ISO currency code. However, you can change the base-currency name and base-currency symbol.

A list of supported ISO currency codes are available in the *System Requirements* chapter of the Microsoft Dynamics CRM 4.0 Implementation Guide.

`<OrganizationCollation>CollationName</OrganizationCollation>`

Specifies the SQL Server database collation name to use for the organization database. For example, Latin1_General_CI_AI, which is the default collation for English (US) language deployments. For more information about database collation, see the following Microsoft MSDN Web site:

SQL Server Collation Fundamentals (<http://go.microsoft.com/fwlink/?linkid=98715>)

```
<CrmServiceAccount type="DomainUser">
  <ServiceAccountLogin>login</ServiceAccountLogin>
  <ServiceAccountPassword>password</ServiceAccountPassword>
</CrmServiceAccount>
```

Specifies the Microsoft Dynamics CRM service account type. Accepted values include NetworkService, which uses the Network Service system account, or DomainUser, which will use the specified domain user. By default, Setup will use the Network Service account. If DomainUser is specified, `<ServiceAccountLogin>` and `<ServiceAccountPassword>` are required. If this option is not used, Setup will use Network Service.

Caution

Maintaining the configuration file that has `<ServiceAccountLogin>` and `<ServiceAccountPassword>` values specified is a security risk because you are storing a password in plain text. Delete these elements as soon as the configuration file is used to install Microsoft Dynamics CRM Server.

`<SQM optin=" true / false"/>`

Specifies whether you will participate in the Customer Experience Improvement Program. If you specify true, you will participate in the program.

Note

By default, the Customer Experience Improvement Program feature in Microsoft Dynamics CRM is turned on. Later, if you decide that you do not want to participate in the Customer Experience Improvement Program, you can turn off this feature in the Microsoft Dynamics CRM Web application. To do this, in the Navigation Pane, click **Settings**, under **Settings**, click **Administration**, in the **Administration** area click **Privacy Preferences**, in the **Privacy Preferences** dialog box clear the **Yes, I am willing to participate anonymously in the Customer Experience Improvement Program** check box, and then click **OK**.

`<Reporting UseSSL="true"/"false" URL="http://srserver1/ReportServer"/>`

UseSSL. If the SQL Server Reporting Services Web site uses SSL, designate true, otherwise, enter false.

URL. Specifies the URL of the Report Server.

`<Groups autogroupmanagementoff="true/false">`

```
<PrivUserGroup>CN=value ,OU=value ,DC=value ,DC=value ,DC=value</PrivUserGroup>
<SQLAccessGroup>CN=value ,OU=value ,DC=value ,DC=value ,DC=value</SQLAccessGroup>
<UserGroup>CN=value ,OU=value ,DC=value ,DC=value ,DC=value</UserGroup>
```

```
<ReportingGroup>CN=value,OU=value,DC=value,DC=value,DC=value</ReportingGroup>
<PrivReportingGroup>CN=value,OU=value,DC=value,DC=value,DC=value</PrivReportingGroup>
</Groups>
```

When used, Setup will use the existing groups in Active Directory instead of creating them during installation. If **<automanagegroupsoff>** is true, Setup will not add or remove any members to those groups.

```
<Reboot>>true/false</Reboot>
```

If this option is not specified, the default is false. This means that the server will not restart at the end of Setup. Also, this option applies only to a final install restart, and not previous restarts that may be required for other components.

```
<Email>
```

```
<IncomingExchangeServer name=" ServerName"/>
```

Specifies the Microsoft Exchange Server computer or POP3 that will be used by the E-mail Router to route incoming e-mail messages.

```
</Email>
```

Specifies the e-mail server that will be used for e-mail routing.

```
<InstallDir>C:\Program Files\Microsoft Dynamics CRM</InstallDir>
```

```
<configdb>
```

This is the parent for the following encryption key elements:

Warning

By default, encryption keys are not stored in the configuration database in an encrypted format. We strongly recommend that you specify encryption when you run Setup by using the following entries. For more information, see "Key Management in Microsoft Dynamics CRM" in the Microsoft Dynamics CRM 4.0 Planning Guide.

```
<encryptionkeys certificate="CrmEncryptionCertificate" generate="true"/"False"
password="SCpassword" keysource="uniqueID">
```

The encryptionkeys element specifies how, and whether, to encrypt the keys that are stored in the Microsoft Dynamics CRM system. Use generate="true" to enable the system-generated keys that are encrypted. The keysource may be any value, but must be different from other keysource values. SCpassword is the password that will be used to create the symmetric certificate.

Warning

Maintaining a configuration file that has password and keysource values specified is a security risk because you are storing a password and key information in plain text. We recommend that you save the password in a secure location from where it can be retrieved later for recovery. Then, delete these elements as soon as the configuration file is used to install Microsoft Dynamics CRM.

```
<encryptionkey physicalname="CrmSymmetricKey"
virtualname="CrmKeyEncryptionKey"/>
```

Each encryptionkeys element specifies a mapping between a symmetric key store in the Microsoft SQL Server database to a virtual key name, hard-coded in Microsoft Dynamics CRM for encrypting data in the configuration database.

```
</encryptionkeys>
```

```
</configdb>
```

Encryption key example

Notice that the following XML is a subset of the XML required to successfully run Setup.

```
...
<configdb>
<encryptionkeys certificate="CrmEncryptionCertificate" generate="true"
password="password" keysource="UniqueValue123!">
<encryptionkey physicalname="CrmSymmetricKey"
virtualname="CrmKeyEncryptionKey"/>
</encryptionkeys>
</configdb>
...
```

Important

To install Microsoft Dynamics CRM Server for Internet access, you must add the following *ifdsettings* elements and associated values.

```
<ifdsettings enabled="true"/>
```

This option should only be used for Internet-facing deployments. Set `enabled = "true"` to notify Microsoft Dynamics CRM Server Setup to configure the deployment for Internet access. If the `<ifdsettings>` element is not specified, the `enabled` attribute value is set to `false`.

Important

Microsoft Dynamics CRM Server Setup configures anonymous authentication for Web sites when the `enabled` attribute in the `<ifdsettings enabled="true">` element is set to `true`. Using anonymous authentication might expose the virtual Help directory and the Web site to denial-of-service attacks. Implement performance counters to mitigate the risk. For information about mitigating the risk of denial-of-service attacks, see *Improving Web application Security: Threats and Counter-measures* (<http://go.microsoft.com/fwlink/?linkid=128944>).

```
<internalnetworkaddress>IP Network Address-Subnet Mask</internalnetworkaddress>
```

IP address and subnet mask, such as 157.56.137.105-255.255.255.0. This is the internal IP address and the associated subnet mask where the Microsoft Dynamics CRM users reside. The subnets you enter will be for the computers that you consider internal and users on these subnets will be routed as internal to the network and not external to the network, such as the Internet. To enter multiple subnets use a comma to separate the values in the configuration file. Notice that, if you leave this element blank, all communication to the Microsoft Dynamics CRM Server will be routed as internal and will default to Windows authentication when users access the Microsoft Dynamics CRM Web site.

```
<rootdomainscheme>https/http</rootdomainscheme>
```

Must be `https`, which will use secure sockets layer (SSL), or `http`, which will use the nonsecure HTTP protocol.

Warning

Setup does not require SSL on the Web site where Microsoft Dynamics CRM is installed. We strongly recommend that you specify the `https` value in the `rootdomainscheme` element. In addition, after Setup is complete, to help protect information that is transmitted between users and Microsoft Dynamics CRM Server, we recommend that you configure the Web site to require SSL. For more information about how to use SSL, see the Internet Information Services (IIS) Manager Help.

```
<sdkrootdomain>domain.com</sdkrootdomain>
```

Specifies the domain name that will be used for applications that use the methods described in the Microsoft Dynamics CRM 4.0 Software Development Kit (SDK). The value that is set here will be prefixed by your unique organization name to form the URL. Therefore, do not include the server name in the value.

```
<webapplicationrootdomain>domain.com </webapplicationrootdomain>
```

Specifies the domain name that will be used for the Microsoft Dynamics CRM Web application and Microsoft Dynamics CRM for Outlook. The value that is set here will be prefixed by your unique organization name to form the URL. Therefore, do not include the server name in the value.

```
</ifdsettings>
```

Sample server XML configuration file

The following configuration file installs an update file that is located on an internal share, installs all Microsoft Dynamics CRM Server components, and creates new databases on an instance of SQL Server that is named SQLServer.

```
<CRMSetup>
  <Server>
    <Patch update="true">\\server\share\patchfile.msp</Patch>
    <LicenseKey>XXXXX-XXXXX-XXXXX-XXXXX-XXXXX</LicenseKey>
    <SqlServer>SQLServer</SqlServer>
    <Database create="true"/>
    <Reporting URL="http://MyReportingServer/ReportServer"/>

    <OrganizationCollation>Latin1_General_CI_AI</OrganizationCollation>
  <basecurrency isocurrencycode="USD" currencyname="US Dollar"
  currencysymbol="$" />
    <Organization>Organization Display Name</Organization>

    <OrganizationUniqueName>Organization Name</OrganizationUniqueName>

    <OU>OU=value,DC=subdomain,DC=subdomain,DC=subdomain,DC=com</OU>
    <WebsiteUrl create="true" port="5555"> </WebsiteUrl>
    <InstallDir>c:\Program Files\Microsoft Dynamics
CRM</InstallDir>
    <CrmServiceAccount type="DomainUser">
      <ServiceAccountLogin>login</ServiceAccountLogin>

    <ServiceAccountPassword>password</ServiceAccountPassword>
      </CrmServiceAccount>
    <SQM optin="true"/>
    <Email>
      <IncomingExchangeServer name="ExchangeServerName"/>
    </Email>
  </Server>
</CRMSetup>
```

Caution

Maintaining the configuration file, which has `<ServiceAccountLogin>` and `<ServiceAccountPassword>` values specified, is a security risk because you are storing a password in plain text. Delete these elements as soon as the configuration file is used to install Microsoft Dynamics CRM Server.

Sample server XML configuration file for installing with pre-created groups

To use the pre-created Active Directory security groups, create a configuration file to point to Microsoft Dynamics CRM. To do this, create an XML configuration file that uses the syntax that is in the following example. Modify the variables as appropriate. The list that follows the sample code describes how to modify the variables that are in this example.

In the following sample XML, the domain name is *domain.domain_extension* and the organizational units are *Company Name*. Replace these names with the actual names that are in your Active Directory deployment. The Active Directory hierarchy is as follows:

- root domain
 - Company Name OU
 - Company Name OU

```
<CRMSetup>
  <Server>
    <Groups AutoGroupManagementOff="true">
      <PrivUserGroup>CN=PrivUserGroup,OU=Company
Name,OU=Company Name,DC=<domain>,DC=<domain_extension></PrivUserGroup>
      <SQLAccessGroup>CN=SQLAccessGroup,OU=Company
Name,OU=Company Name,
DC=<domain>,DC=<domain_extension></SQLAccessGroup>
      <UserGroup>CN=UserGroup,OU=Company Name,OU=Company
Name,DC=<domain>,DC=<domain_extension></UserGroup>
      <ReportingGroup>CN=ReportingGroup,OU=Company
Name,OU=Company Name,
DC=<domain>,DC=<domain_extension></ReportingGroup>
      <PrivReportingGroup>CN=PrivReportingGroup,OU=Company Name,OU=Company
Name, DC=<domain>,DC=<domain_extension></PrivReportingGroup>
    </Groups>
  </Server>
</CRMSetup>
```

Sample server XML configuration file for Internet-Facing Deployments

The following partial configuration file installs the components that are necessary for a Microsoft Dynamics CRM Server deployment that can be accessed through the Internet-facing deployment (IFD).

The `<ifdsettings>` element must be located inside the `<Server>` element described previously.

```
<ifdsettings enabled="true">
  <internalnetworkaddress>10.10.0.0-
255.255.0.0</internalnetworkaddress>
  <rootdomainscheme>https</rootdomainscheme>
  <sdkrootdomain> subdomain.contoso.com</sdkrootdomain>
  <webapplicationrootdomain> subdomain.contoso.com
</webapplicationrootdomain>
  <discoveryrootdomain>subdomain.contoso.com </discoveryrootdomain>
</ifdsettings>
```

Install Microsoft Dynamics CRM Server roles

By default, Setup installs all Microsoft Dynamics CRM Server roles on the local computer. However, if you are installing Microsoft Dynamics CRM 4.0 Enterprise, you can install one or more server roles on a different computer, or have two or more computers running the same role, which can provide load balancing benefits. To do this, you must configure the XML configuration file and then run Setup at a command prompt on the computer where you want the role installed.

Important

You cannot run Setup to add one or more server roles to a computer that already has one or more server roles installed. If you try to run Setup on a computer that already has at least one server role installed, Setup will uninstall all existing server roles. Before you can add different server roles, you must first uninstall all server roles and then run Setup to install the server roles that you want.

For more information about server roles, see "Planning Deployment" in the Microsoft Dynamics CRM 4.0 Planning Guide. For more information about recommendations for isolating server roles or running multiple computers with the same server role, see "Planning Deployment Advanced Topics" in the Microsoft Dynamics CRM 4.0 Planning Guide.

Parameters

The supported command prompt parameters are the same as what was previously described under "Install Microsoft Dynamics CRM Server" in this guide.

Server XML configuration file

The **/config** [*drive:*] [*path*] *configfilename.xml*] command-line parameter provides Microsoft Dynamics CRM Server Setup with required information. The information supplied by the XML configuration file is what is required by each installation screen.

Important

The XML elements must be in English (US). An XML configuration file that has localized XML elements will not work correctly.

An explanation of each XML element and a sample XML file follows:

<Roles>

<Role name="RoleName1" />

<Role name="RoleName2" />

ApplicationServer

Installs the server role group that applies to the Microsoft Dynamics CRM application. When you specify this option, the AppServer and HelpServer roles are installed. Notice that, the SDKServer server role will also be installed.

PlatformServer

Installs the server role group that applies to Microsoft Dynamics CRM. When you specify this option, the Async, SDKServer, DeploymentService, and DiscoveryService roles are installed.

Async

Installs the Microsoft Dynamics CRM Processing Asynchronous Service. This service is used to process queued asynchronous events such as bulk e-mail or data import.

AppServer

Installs the components that are needed to run the Web application server.

SDKServer

Installs the components that are needed to run applications that use the methods described in the Microsoft Dynamics CRM 4.0 Software Development Kit (SDK).

DeploymentService

Installs the components that are required to manage the deployment by using the methods described in the Microsoft Dynamics CRM 4.0 SDK, such as create an organization or remove a Deployment Administrator role from a user.

DiscoveryService

Installs the components users need to find the organization that they are a member of in a multi-tenant deployment.

HelpServer

Installs the components that are needed to make Microsoft Dynamics CRM Help available to users.

</Roles>

Important

For non-IFD installations, when the SDKServer role is installed on a computer that does not have the DiscoveryService role, you must specify the fully qualified domain name (FQDN) of the computer where the DiscoveryService role is located in the <adsdkrootdomain> element of the Setup XML configuration file.

Similarly, for IFD installations, when the SDKServer role is installed on a computer that does not have the DiscoveryService role, you must specify the fully qualified domain name (FQDN) of the computer where the DiscoveryService role is located in the <sdkrootdomain> element of the Setup XML configuration file. The <sdkrootdomain> element is described in the previous topic "Sample Server XML Configuration File for Internet-Facing Deployments" example.

Sample XML configuration file that installs only the AppServer and Async server roles

The following example installs only the Application and Microsoft Dynamics CRM Help server roles on the local computer. The configuration database already exists.

```
<CRMSetup>
  <Server>
    <Patch update="true">\\server\share\patchfile.msp</Patch>
    <LicenseKey>XXXXX-XXXXX-XXXXX-XXXXX-XXXXX</LicenseKey>
    <SqlServer>SQLServer</SqlServer>
    <database create="false" />
    <WebsiteUrl create="true" />
    <InstallDir>c:\Program Files\Microsoft CRM</InstallDir>
  <Roles>
    <Role name="AppServer"/>
    <Role name="Async" />
  </Roles>
    <SQM optin="true" />
  <CrmServiceAccount type="DomainUser">
    <ServiceAccountLogin>login</ServiceAccountLogin>

    <ServiceAccountPassword>password</ServiceAccountPassword>
  </CrmServiceAccount>
</Server>
</CRMSetup>
```

Caution

Maintaining the configuration file, which has **<ServiceAccountLogin>** and **<ServiceAccountPassword>** values specified, is a security risk because you are storing a password in plain text. Delete these elements as soon as the configuration file is used to install Microsoft Dynamics CRM Server.

Install Microsoft Dynamics CRM Connector for SQL Server Reporting Services

The Microsoft Dynamics CRM Connector for SQL Server Reporting Services connects the Microsoft Dynamics CRM Server computer to the SQL Server Reporting Services computer. The Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services eliminates the Kerberos double-hop authentication that was required for Microsoft Dynamics CRM 3.0 deployments wherein SQL Server Reporting Services was installed on a separate computer.

Microsoft Dynamics CRM Connector for SQL Server Reporting Services requirements

The Microsoft Dynamics CRM Connector for SQL Server Reporting Services has the following requirements:

- You must complete Microsoft Dynamics CRM Server Setup before you run Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup.
- You must run Microsoft Dynamics CRM Connector for SQL Server Reporting Services on a computer that has Microsoft SQL Server 2005 Reporting Services installed.

Command example

The Microsoft Dynamics CRM Connector for SQL Server Reporting Services accepts the same command-line parameters as Microsoft Dynamics CRM Server. To install the Microsoft Dynamics CRM Connector for SQL Server Reporting Services in quiet mode, which uses an XML configuration file named **install-config.xml** and creates a log file named **log.txt**, run the Setup program that is located in the SrsDataConnector folder command from the installation media or the Microsoft Dynamics CRM Server installation files as follows:

```
SetupSrsDataConnector /Q /CONFIG folderpath\install-config.xml /L log.txt
```

Microsoft Dynamics CRM Connector for SQL Server Reporting Services XML configuration file

Before you run Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup at a command prompt, you must modify the XML configuration file to include information, such as the name of the computer where the configuration database is located. A sample Microsoft Dynamics CRM Connector for SQL Server Reporting Services configuration file named **install-config.xml** is located in the SrsDataConnector folder on the installation media, or download location, of the Microsoft Dynamics CRM Server installation files.

The **/config [drive:] [[path] configfilename.xml]** command-line parameter provides the Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup with required information. The information this configuration file supplies is the same that each installation screen requires. The XML elements must be in English (US); special or extended characters cannot be used. An XML configuration file that has localized XML elements will not work correctly. An explanation of each XML element and a sample XML file follows:

<srsdataconnector>

The configuration file must be a valid XML file that uses **<srsdataconnectorinstall>** as the root element. All the Microsoft Dynamics CRM Connector for SQL Server Reporting Services entries that follow must be within the srsdataconnectorinstall tags.

<InstallType>Uninstall/Repair</InstallType>

Specifies the type of installation that Setup will perform. The following options are available:

Uninstall. Uninstalls Microsoft Dynamics CRM Server.

Repair. Starts Setup in repair mode.

<Patch update="true"/"false">\\ServerName\ShareName\Patch_Location</Patch>

If you do not specify a location, by default Setup will go online to a location that is managed by Microsoft to search for available updates. Or, you can point Setup to install a Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup update .msp file from a different location, such as an internal share.

update

Specifies whether Setup will look for, download, and apply updates for Microsoft Dynamics CRM Server Setup. We recommend that you let Setup download the latest version by selecting true. By default, this value is set to false. If the value is set to false, Setup will ignore this step and continue with the installation.

`<configdbserver>SQLServerName</configdbserver>`

Specifies the name of the computer that is running SQL Server that stores the configuration database.

`<reportserverurl>ReportServerURL</reportserverurl>`

Specifies the URL of the Web site where SQL Server Reporting Services is installed and running. If you specify a URL similar to `http://localhost/ReportServer`, Setup will look for SQL Server Report Server in the default Web site. However, the URL can contain the port number to specify a different Web site, such as `http://SSRS:5555/ReportServer`.

`<instancename>SQLServerInstance</instancename>`

Specifies the instance of SQL Server Reporting Services that will be used to install the Microsoft Dynamics CRM Connector for SQL Server Reporting Services. If no name is specified, Setup will use the instance name **MSSQLSERVER**.

`<InstallDir>c:\program files\Microsoft CRM</InstallDir>`

Specifies the folder in which Microsoft Dynamics CRM Connector for SQL Server Reporting Services files will be copied.

`<autogroupmanagementoff>>true/false</autogroupmanagementoff>`

If `<automanagegroupsoff>` is true, Setup will not add or remove any members to the security group in Active Directory.

Sample Microsoft Dynamics CRM Connector for SQL Server Reporting Services XML configuration file

The following XML configuration contents will install the Microsoft Dynamics CRM Connector for SQL Server Reporting Services. This has all databases on the local computer named SQLServer.

```
<CRMSetup>
  <srsdataconnector>
    <Patch update="true">\\server\share\patchfile.msp</Patch>
    <configdbserver>SQLServer</configdbserver>
    <autogroupmanagementoff>>false</autogroupmanagementoff>
  </srsdataconnector>
</CRMSetup>
```

Logging

By default, Setup creates a file that is named `SrsDataConnectorSetup.log` in the `c:\Documents and Settings\<username>\Application Data\Microsoft\MSCRM\Logs` folder on the computer where Setup is run.

Install Microsoft Dynamics CRM for Outlook

To install Microsoft Dynamics CRM for Outlook is a two-step procedure. First, you must run Setup to install the files on the computer. Next, you run the Microsoft Dynamics CRM Configuration Wizard to configure the application and complete the installation.

Note

Do not attempt to override configuration file settings by specifying conflicting values at the command line. If there is a conflict between a value in the configuration file and a value in command-line parameters, the configuration file takes precedence. For example, if the configuration file contains <InstallLevel>Offline</InstallLevel>, and you specify `INSTALLLEVEL=2` in the `SetupClient.exe` command (which installs the Desktop version of the client) the Offline version of the client will be installed.

Step 1: Install files

The following command displays the available options to run Microsoft Dynamics CRM for Outlook Setup at the command prompt:

```
Setupclient.exe [/A] [/Q] [/X] [/L [drive:][[path] logfile.log]] [/targetdir [drive:][[path]]] [/P [drive:][[path] updatefilename.msp]]
```

Command examples

For users who travel, or who are not always connected to the Microsoft Dynamics CRM Server, Microsoft Dynamics CRM for Outlook with Offline Access provides access to their customer data. To install Microsoft Dynamics CRM for Microsoft Office Outlook with Offline Access in quiet mode:

```
Setupclient /Q /l c:\clientinstalllog.txt INSTALLLEVEL=3 /targetdir "c:\Program Files\Microsoft Dynamics CRM Client"
```

To uninstall Microsoft Dynamics CRM for Outlook with Offline Access in quiet mode:

```
msiexec /X /Q Client.msi /l c:\clientuninstall.txt Client.msi
```

Parameters**None**

Used without parameters, `Setupclient.exe` will run with all display screens.

INSTALLLEVEL=2/3

This parameter determines the type of Microsoft Dynamics CRM for Outlook that will be installed. The following choices are available:

2. Installs Microsoft Dynamics CRM for Outlook. If this parameter is not specified Microsoft Dynamics CRM for Outlook (not Microsoft Dynamics CRM for Outlook with Offline Access) is installed during a quiet mode installation.
3. Installs Microsoft Dynamics CRM for Outlook with Offline Access.

/targetdir <"drive:\path">

Specifies the folder in which Microsoft Dynamics CRM for Outlook files will be installed.

/A

This parameter creates an administrative installation of Microsoft Dynamics CRM for Outlook by creating a Windows Installer package. This package lets users run Setup from a network share or nonadministrative users run Setup that is driven from a group policy. This parameter must be used with the **/targetdir** parameter described earlier. When using this parameter, the **/targetdir** value does not have to be located on the local computer. A mapped drive or network share such as `\\share\mscrm_client_admin` can be used. For example, the command:

```
Setupclient /Q /A /targetdir "\\share\mscrm_client_admin"
```

/F

Repairs the installation.

/Q

Quiet mode installation. This parameter requires a configuration file in XML format. The **config=** parameter contains the name of the XML configuration file. No dialog boxes or error messages will appear on the display screen. To capture error message information, include the log file parameter (/L).

/L [**drive:**][**[path]** **logfile.log**]

Creates a log file of installation activity. You must specify the file name of the log file and where to put it. You can specify the file name of the log file and where to put it, but the path cannot be a relative path, such as %appdata%\CRMLogs.

/x

Uninstalls Microsoft Dynamics CRM for Outlook.

/P

By default, the Microsoft Dynamics CRM for Outlook Setup program will attempt to download updates from a Microsoft site on the Internet. Using the /P parameter without a path value (not recommended) will turn off the update Setup feature and updates will not be downloaded and applied. Alternatively, you can specify this parameter with a location, such as the local computer or a share, to an update file to apply to update the Microsoft Dynamics CRM for Outlook Setup program. The path value must be in quotation marks.

```
Setupclient /P
"c:\Users\crmuser\Desktop\2136.patch\client_i386_kb971782_1033.msp"
```

Step 2: Configure Microsoft Dynamics CRM for Outlook by using an XML configuration file

After you install Microsoft Dynamics CRM for Outlook, you must configure it. You can do this by running the client Configuration Wizard at the command prompt. The client Configuration Wizard file is named **Microsoft.Crm.Client.Config.exe** and is located in the Client\ConfigWizard folder where Microsoft Dynamics CRM for Outlook is installed. By default, the folder is C:\Program Files\Microsoft CRM.

Note

The Configuration Wizard looks for the configuration file in the roaming profile folder (%appdata%\Roaming\Microsoft\MSCRM). If the file is located in the non-roaming location used by other applications (%localappdata%\Microsoft\MSCRM), it will not be honored.

Command examples

To configure Microsoft Dynamics CRM for Outlook with Offline Access by using an XML configuration file that is named **install_client.xml** in quiet mode:

```
Microsoft.Crm.Client.Config /Q /config c:\install_client.xml /l
c:\clientinstalllog.txt
```

The **/config [drive:] [[path] configfilename.xml]** command-line parameter provides Microsoft Dynamics CRM for Outlook Setup with required information. It is the same information that each installation screen requires. The XML elements must be in English (US); special or extended characters cannot be used. An XML configuration file that has localized XML elements will not work correctly. An explanation of each XML element and a sample XML file follows:

```
<CRMConfiguration> </CRMConfiguration>
```

The configuration file must be a valid XML file that uses <CRMConfiguration> as the root element.

```
<Client> </Client>
```

Specifies a Microsoft Dynamics CRM for Outlook installation. All the Microsoft Dynamics CRM for Outlook entries that follow must be within the Client tags.

```
<ServerUrl Type="OnPremise\Live\SPLA"  
ShowUser="true>false">http://website</ServerUrl>
```

Specifies the URL for the Web site associated with the Microsoft Dynamics CRM Server computer.

Type

Specifies the Microsoft Dynamics CRM Server type. The following values are available:

OnPremise

Specify this option for Microsoft Dynamics CRM for Outlook to connect to a deployment that is installed at a company site and accessed internally or externally through a virtual private network (VPN).

Live

Specify this option for Microsoft Dynamics CRM for Outlook to connect to Microsoft Dynamics CRM Online.

SPLA

Specify this option if Microsoft Dynamics CRM for Outlook will connect to a partner-hosted Web site that is operating under a service-provider license agreement (SPLA). In addition, you must select this option for Microsoft Dynamics CRM for Outlook users who will connect to Microsoft Dynamics CRM Server on premise versions over the Internet.

ShowUser

Specifies whether to display the Connection Type page to the user who is running the Configuration Wizard. If set to true, the Connection Type page is displayed and the user can override the default settings that are provided in the XML configuration file. If set to false, the Type attribute in the <ServerUrl> element will be used and the Connection Type page will not be displayed during configuration.

```
<CEIP option="true / false" />
```

Specifies whether you will participate in the Customer Experience Improvement Program. If you specify true, you will participate in the program.

Note

By default, the Customer Experience Improvement Program feature in Microsoft Dynamics CRM is turned on. If later you decide that you do not want to participate in the Customer Experience Improvement Program, you can turn off this feature in the Microsoft Dynamics CRM Web application. To do this, in the Navigation Pane, click **Settings**, under **Settings**, click **Administration**, in the **Administration** area click **Privacy Preferences**, in the **Privacy Preferences** dialog box clear the **Yes, I am willing to participate anonymously in the Customer Experience Improvement Program** check box, and then click **OK**.

```
<Organization>OrganizationName</Organization>
```

Specifies the name of the organization that the client will connect to.

Note

OrganizationName is case-sensitive.

```
<Database Reuseexisting="true / false" />
```

Microsoft Dynamics CRM for Outlook with Offline Access only. Specifies whether to use an existing Microsoft Dynamics CRM for Outlook with Offline Access database or whether to create a new one.

Important

To install Microsoft Dynamics CRM for Outlook to access a Microsoft Dynamics CRM Server by using the Internet, you must add the following *ExtranetServerUrl* element and associated values.

```
<ExtranetServerUrl>http://PathToExternalDiscoveryService</ExtranetServerUrl>
```

Specifies the external URL of the Microsoft Dynamics CRM Server, where the Discovery Service server role is running. For full server deployments all server roles are installed on the same server.

Sample Microsoft Dynamics CRM for Outlook XML configuration files

The following configuration-file example configures Microsoft Dynamics CRM for Outlook to participate in the Customer Experience Improvement Program and connects to the organization named *OrganizationName* on the Microsoft Dynamics CRM Server that is named MSCRM.

```
<CRMConfiguration>
  <Client>
    <ServerUrl Type="OnPremise">http://MSCRM</ServerUrl>
    <Organization>OrganizationName</Organization>
    <CEIP optin="true" />
  </Client>
</CRMConfiguration>
```

Note

The *OrganizationName* required here is the unique organization name. This name does not contain special characters or spaces, and is displayed in the **Name** column in the **Organizations** area of Deployment Manager.

Install Microsoft Dynamics CRM E-mail Router

The E-mail Router accepts the same command prompt parameters as Microsoft Dynamics CRM Server. To install the E-mail Router in quiet mode, that uses an XML configuration file that is named `install-config.xml` and that creates a log file that is named `log.txt`, run the `SetupExchange.exe` command in the Exchange folder on the installation media, or download location of the Microsoft Dynamics CRM Server installation files as follows:

```
Setuexchange /Q /CONFIG folderpath\install-config.xml /L log.txt
```

E-mail Router XML configuration file

The `/config [drive:] [[path] configfilename.xml]` command-line parameter provides Microsoft Dynamics CRM 3.0 Exchange E-mail Router Setup with required information. It is the same information that each installation screen requires.

Important

To use the E-mail Router after it is installed, you must run the E-mail Router Configuration Manager to configure it. You cannot configure the E-mail Router by using an XML configuration file.

The XML elements must be in English (US). An XML configuration file that has localized XML elements will not work correctly.

An explanation of each XML element and a sample XML file follows:

```
<CRMSetup> </CRMSetup>
```

The configuration file must be a valid XML file that uses `<CRMSetup>` as the root element.

```
<Exchange> </ Exchange>
```

Specifies a Microsoft Dynamics CRM E-mail Router installation. The Exchange tag must be within the CRMSetup open and end tags. All the E-mail Router entries that follow must be within the Exchange tags.

```
<InstallType>Uninstall/Repair</InstallType>
```

Specifies the type of installation that Setup will perform. The following options are available:

Uninstall

Uninstalls Microsoft Dynamics CRM Server.

Repair

Starts Setup in repair mode.

```
<Patch update="true"/"false">\\ServerName\ShareName\Patch_Location</Patch>
```

If you do not specify a location, by default Setup will go online to a location that is managed by Microsoft to search for available updates. Or, you can point Setup to install a Microsoft Dynamics CRM Connector for SQL Server Reporting Services Setup update .msp file from a different location, such as an internal share.

update

Specifies whether Setup will look for, download, and apply updates for Microsoft Dynamics CRM Server Setup. We recommend that you let Setup download the latest version by selecting true. By default, this value is set to false. If the value is set to false, Setup will ignore this step and continue with the installation.

```
<InstallDir>c:\Program Files\Microsoft CRM Email</InstallDir>
```

Specifies the folder where the E-mail Router will be installed. By default, the E-mail Router is installed to c:\Program Files\Microsoft CRM Email.

```
<Features></Features>
```

If a value is not specified, Setup installs the E-mail Router service and the E-mail Router Configuration Manager, but does not install the Rule Deployment Wizard.

The following features are available:

```
<SinkService />
```

Add this entry if you want to install the E-mail Router service and E-mail Router Configuration Manager.

```
<RulesWizard />
```

Add this entry if you want to install the Rule Deployment Wizard.

Sample Microsoft Dynamics CRM E-mail Router XML configuration file

The following configuration-file sample instructs Setup to check a Microsoft Web site for available updates to E-mail Router Setup. It applies the updates, and then installs the E-mail Router service and Rule Deployment Wizard in the c:\Program Files\Microsoft Dynamics CRM Email folder.

```
<CRMSetup>
  <Exchange>
    <Features>
      <SinkService />
      <RulesWizard />
    </Features>
    <Patch update="true"></Patch>
  </Exchange>
</CRMSetup>
```

Microsoft Dynamics CRM Server installation troubleshooting

The following section describes known issues and troubleshooting steps when you are installing Microsoft Dynamics CRM at a command prompt.

Setup fails or client receives an unhandled exception when trying to connect after you install Microsoft Dynamics CRM Server

Setup may not complete successfully or any of the Microsoft Dynamics CRM 4.0 clients may receive an error message when trying to connect to the Microsoft Dynamics CRM Server. The message may resemble the following text:

Exception from HRESULT: 0x80048306.

Description: An unhandled exception occurred during the execution of the current Web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details: System.Runtime.InteropServices.COMException: Exception from HRESULT: 0x80048306.

Source Error:

An unhandled exception was generated during the execution of the current Web request. Information about the origin and location of the exception can be identified by using the exception stack trace below.

This problem can occur if you run Microsoft Dynamics CRM Setup when the following conditions are true:

- One or more of the following Active Directory security groups was created in the organizational unit where you are installing Microsoft Dynamics CRM:
 - ▶ PrivUserGroup
 - ▶ SQLAccessGroup
 - ▶ UserGroup
 - ▶ ReportingGroup
 - ▶ PrivReportingGroup
- The previously-mentioned security groups do not have the correct group membership.
- You use the automanagegroupsoff=false attribute and value in the <Groups> entry for the Setup XML configuration file. To do this, you must install Microsoft Dynamics CRM Server at a command prompt.

To resolve this issue, you must manually add the correct membership to each of the required security groups in Active Directory, and then run Microsoft Dynamics CRM Server Setup again.

To manually add the objects to Active Directory, use Active Directory Users and Computers. You must add the following users and computers to each security group:

Security Group	Description	Object Type
PrivUserGroup	User who is running Microsoft Dynamics CRM Server Setup	User
PrivUserGroup	Computer on which Microsoft Dynamics CRM is installed	Computer
PrivUserGroup	Computer on which Microsoft Exchange Server is installed (if using the E-mail Router)	Computer
SQLAccessGroup	Computer on which Microsoft Dynamics CRM is installed.	Computer
PrivReportingGroup	Computer on which Microsoft Dynamics CRM Connector for SQL Server Reporting Services is installed	Computer
ReportingGroup	User who is running Microsoft Dynamics CRM Server Setup	User
ReportingGroup	Any user who will run reports	User

Security Group	Description	Object Type
UserGroup	User who is running Microsoft Dynamics CRM Server Setup	User
UserGroup	Any user who will run Microsoft Dynamics CRM	User

You Receive an Unknown Error (0x80005000) error message during a quiet-mode installation

You may receive an "Unknown Error (0x80005000)" during a quiet-mode installation. This issue can occur when you try to install Microsoft Dynamics CRM Server on a Windows Server computer that does not have Internet Information Services (IIS) installed and configured. To resolve this issue, install IIS and then run Setup again. For more information about how to install IIS, see the Windows Server Help.

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Uninstall and Repair Instructions

This section describes how to uninstall or repair a Microsoft Dynamics CRM system. Uninstalling Microsoft Dynamics CRM and purging the computer system of all Microsoft Dynamics CRM data and system changes involves a series of automated and manual procedures. These procedures are the same if the Microsoft Dynamics CRM installation involves one computer or several in the system. These procedures also involve working in four areas:

- Microsoft Dynamics CRM
- Microsoft SQL Server
- Microsoft SQL Server Reporting Services
- Active Directory

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Uninstall or repair Microsoft Dynamics CRM Server

To remove (uninstall) Microsoft Dynamics CRM Server, on the computer where the application is installed go to **Add or Remove Programs**, click Microsoft Dynamics CRM Server, click **Change/Remove**, select **Uninstall** to remove Microsoft Dynamics CRM Server, and then click **Uninstall**. Follow the instructions that are on the screen.

Important

The Microsoft Dynamics CRM uninstall process does not remove some components, such as the SQL Server databases, Active Directory groups, or the Microsoft Dynamics CRM Web site. Those components must be removed manually.

For more information about how to remove these components, or how to remove components if Setup cannot successfully remove them, see **KB article 946980: How to manually remove the Microsoft Dynamics CRM 4.0 server** (<http://go.microsoft.com/fwlink/?linkid=108179>).

To repair a damaged Microsoft Dynamics CRM Server installation, click **Microsoft Dynamics CRM Server**, click **Change/Remove**, select **Repair**, and then click **Next**. Follow the instructions that are on the screen.

Note

Repairing a Microsoft Dynamics CRM Server installation reinstalls the program files. It has no effect on the databases. To recover from Microsoft Dynamics CRM database problems, you must re-create one or both of the databases: MSCRM_CONFIG and *OrganizationName_MSCRM*. For information about database backup and failure recovery, see the Microsoft Dynamics CRM 4.0 Operating and Maintaining Guide.

Uninstall or repair Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services

To remove (uninstall) the Microsoft Dynamics CRM 4.0 Connector for Microsoft SQL Server Reporting Services, go to **Add or Remove Programs**, click **Microsoft Dynamics CRM Connector for Microsoft SQL Server Reporting Services**, click **Remove**, select **Uninstall**, and then click **Uninstall**. Follow the instructions on the screen.

To repair the Microsoft Dynamics CRM 4.0 Connector for SQL Server Reporting Services, click **Microsoft Dynamics CRM Connector for Microsoft SQL Server Reporting Services**, click **Remove**, select **Repair**, and then click **Next**. Follow the instructions on the screen.

Uninstall or repair E-mail Router

To remove (uninstall) the Microsoft Dynamics CRM E-mail Router, open **Add or Remove Programs**, or on Windows Vista open **Programs and Features**, click **Microsoft Dynamics CRM E-mail Router**, click **Change/Remove**, select **Uninstall**, and then click **Uninstall**. Follow the instructions on the screen.

To repair E-mail Router, click **Microsoft Dynamics CRM E-mail Router**, click **Change/Remove**, select **Repair**, and then click **Next**. Follow the instructions.

Note

During Setup, the computer where the E-mail Router is installed is added to the Active Directory PrivUserGroup security group. However, if the E-mail Router is uninstalled, the computer is not removed from the security group, and therefore has an unnecessary permission. If you uninstall the E-mail Router and decide not to reinstall it on the same computer, we recommend that you manually remove the computer from the PrivUserGroup security group.

Uninstall or repair Microsoft Dynamics CRM for Outlook

Note

The following procedure must be completed while you are logged on to the client computer as the user who originally installed.

- **To remove (uninstall) or repair the Microsoft Dynamics CRM for Microsoft Office Outlook, follow these steps:**
- 1. Click **Start**, point to **Settings**, click **Control Panel**, and then double-click **Add or Remove Programs**. In Windows Vista, click **Start**, type **programs and features** in the **Start Search** box, and then click **Programs and Features** in the **Programs** list.
- 2. Select **Microsoft Dynamics CRM for Outlook** and then click **Change**.
- 3. On the **Microsoft Dynamics CRM for Outlook Maintenance** page, select **Uninstall to remove the application**, and then click **Uninstall**. To repair the application, select **Repair**, and then click **Next**. Follow the instructions that are on the screen.
- 4. If you are removing the application, delete the Microsoft Dynamics CRM folder that is located at *SystemDrive:\Program Files\Microsoft Dynamics CRM*.

Note

Uninstalling Microsoft Dynamics CRM for Outlook may require you to restart the computer.

Uninstall Data Migration Manager

➤ **To uninstall Data Migration Manager, follow these steps:**

1. Log on to the computer where Data Migration Manager is installed.
2. Click **Start**, click **Control Panel**, and then click **Add or Remove Programs**. In Windows Vista, click **Start**, type *programs and features* in the **Start Search** box, and then click **Programs and Features** in the **Programs** list.
3. Select **Microsoft Dynamics CRM Data Migration Manager**, and then click **Change**.
4. On the **Microsoft Dynamics CRM Data Migration Manager Maintenance page**, select **Uninstall to remove the application**, and then click **Uninstall**. To repair the application, select **Repair**, and then click **Next**. Follow the instructions that are on the screen.
5. In Windows Explorer, locate the folder where you installed the Data Migration Manager. By default, the folder is C:\Program Files\Microsoft Dynamics CRM Data Migration Manager. If the folder exists, remove it.
6. If Data Migration Manager is configured to use Microsoft SQL Server 2005 Express, download and install **Microsoft SQL Server Management Studio Express** (<http://go.microsoft.com/fwlink/?linkid=122248>), and then remove the databases.

If Data Migration Manager is configured to use SQL Server 2005, use Reporting Services to delete the database. After you delete the database, run Setup again.

To delete the database, follow these steps:

- a. Start Reporting Services or Reporting Services Express.
 - b. On the **Connect to Server** screen, specify the server name where the data migration database is installed, and then click **Connect**.
 - c. Expand **Databases**, right-click **MSCRM_MIGRATION**, and then click **Delete**.
 - d. Click **OK**.
7. If you installed Microsoft SQL Server 2005 Express Edition when you installed Data Migration Manager, you must also uninstall the **CRM: Database Engine** instance that was created during Data Migration Manager Setup. To do this, follow these steps:
 - a. Click **Start**, click **Control Panel**, and then click **Add or Remove Programs**.
 - b. Select **Microsoft SQL Server 2005**, and then click **Remove**.
 - c. Select the CRM: Database Engine instance, and then click **Next**.
 - d. Click **Finish**.

Troubleshooting Data Migration Manager repair or uninstall issues

This section describes troubleshooting information and known issues when repairing or uninstalling the Data Migration Manager.

"ClientInstallInfo.ConfigType is not available" error message when you try to repair or uninstall Data Migration Manager

When you run Setup to try to repair or uninstall the Data Migration Manager, you may receive an error message. This problem can occur if the **CRM_DMClient_InstallDir** subkey has been removed from the Windows registry.

➤ **To work around this problem, follow these steps:**

1. Click **Start**, click **Run**, type **Regedt32**, and then click **OK**.
2. Locate the following Windows registry subkey:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Data Migration Manager

3. Right-click the Data Migration Manager folder, point to **New**, and then click **String Value**.
4. Type **CRM_DMClient_InstallDir**, and then press **ENTER**.
5. Right-click **CRM_DMClient_InstallDir**, click **Modify**, type the full path to the location of the Data Migration Manager installation files, and then click **OK**. By default, the Data Migration Manager installation files are located in the C:\Program Files\Microsoft Dynamics CRM Data Migration Manager folder.
6. Exit Registry Editor.
7. Try running the repair or uninstall again.

Uninstall or disable a Language Pack

You can disable a Language Pack in the organization. When you do this, users will no longer be able to see the Microsoft Dynamics CRM user interface and Help language in the associated Language-Pack language. Later, you can enable the Language Pack by clicking the language in the **Language Settings** list.

If you uninstall a Language Pack, you must reinstall the Language Pack and then enable it before it is available to users again.

When a Language Pack is removed or disabled, users who have that Language Pack language selected on the **Personal Preferences** form will have to use the base language. For example, consider the following scenario. A Microsoft Dynamics CRM deployment has English as the base language, but the Spanish Language Pack was used in the organization. Then, when the system administrator disables (or uninstalls) the Spanish-Language-Pack, users who selected the user interface to be in Spanish will see it in English.

To disable a Language Pack, see the Microsoft Dynamics CRM Help.

➤ To uninstall a Language Pack, follow these steps:

1. Log on to the Microsoft Dynamics CRM server.
2. Click **Start**, point to **Control Panel**, and then click **Add or Remove Programs**.
3. Select the Language Pack, such as Microsoft Dynamics CRM German Language Pack, and then click **Remove**.
4. If there are other users logged on to the computer, you will receive a warning message. Click **Continue** if you want to continue and remove the Language Pack.
5. Click **Yes**, to confirm that you want to remove the Language Pack.
6. Click **OK**.

Troubleshooting uninstall or repair issues

This section describes troubleshooting issues that occur during or after uninstall or repair.

Microsoft Dynamics CRM for Outlook uninstall and repair activity logging

By default, logging is disabled for Microsoft Dynamics CRM for Outlook uninstall and repair activities. To enable logging, see **How to enable Windows Installer logging** (<http://go.microsoft.com/fwlink/?LinkId=166324>).

Event ID 208 appears in Event Log after uninstall

If you have upgraded from an earlier version of Microsoft Dynamics CRM, you may have to remove the SQL Server Agent Jobs associated with the previous deployment of Microsoft Dynamics CRM, such as MSCRM <name of job> and Start_Incremental_on_ap_box_rtm_MSCRM.ftcat_documentindex.[7.5].

If the jobs are not removed, events similar to the following may be recorded to the application log on the SQL Server every few minutes:

Event Type: Warning
Event Source: SQLSERVERAGENT
Event Category: Job Engine
Event ID: 208
Date: 10/3/2007
Time: 10:00:07 AM
User: N/A
Computer: *ComputerName*

Description:

SQL Server Scheduled Job 'f6fbbd4919434a63a3471d48dcd09256.Start_Incremental
ftcat_documentindex.[7.5]' (0x10C8CC9CDF252546AEA0DC0934D11DF2) - Status: Failed - Invoked on:
2007-10-03 10:00:00 - Message: The job failed. The Job was invoked by Schedule 13 (Indexed Document
Title Schedule). The last step to run was step 1 (Full-Text Indexing).

To remove these jobs, start Microsoft SQL Server Management Studio, expand **SQL Server Agent**, expand **Jobs**, and then delete the jobs described previously.

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Post-Installation and Configuration Guidelines

This chapter describes several of the Microsoft Dynamics CRM components and tasks that the administrator should configure after installing the application. Because Microsoft Dynamics CRM has a rich feature and functionality set, this chapter is not meant to be an exhaustive resource used to configure any and all deployments. Instead, use this chapter as a guideline to determine what components to configure, based on your organization's needs.

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Make Microsoft Dynamics CRM 4.0 client-to-server network communications more secure

With any network design, it is important to consider the security of your organization's client-to-server communications. When making necessary decisions that can help protect data, we recommend that you understand the following information about Microsoft Dynamics CRM network communication and about the technology options that are available to you that provide more secure data transmissions.

By default, Microsoft Dynamics CRM client-to-server communications are not encrypted. Authentication information from Microsoft Dynamics CRM clients is transmitted in clear text and therefore possibly vulnerable to malicious intent.

Microsoft Dynamics CRM client-to-server communication

Impersonation is a way that someone with malicious intent can gain access to data. Because transmitted data between the Microsoft Dynamics CRM client and Microsoft Dynamics CRM Web-server computers is not encrypted, Microsoft Dynamics CRM electronic keys, which authenticate users and services, can be used to manufacture CRM tickets and thereby impersonate valid users.

Therefore, to better protect your organization's data, we strongly recommend that you enable secure sockets layer (SSL) for communications between Microsoft Dynamics CRM clients and the Microsoft Dynamics CRM Web site.

Securing Microsoft Dynamics CRM client-to-server communication

SSL encrypts data transmitted between computers and is implemented between the Transport and Application layers of the Open-Systems Interconnection (OSI) model, a seven-layer method for network-protocol design. SSL enables server authentication, client authentication, data encryption, and data integrity over networks such as the Web.

To enable SSL, you must request, receive, and apply a certificate from a certification authority (CA), and configure SSL on the Microsoft Dynamics CRM Web site.

For more information about CAs, see the following Microsoft TechNet article:

- **What Are Certificates?** (<http://go.microsoft.com/fwlink/?linkid=108842>)

For more information about SSL, see the following TechNet article:

- **What Is TLS/SSL?** (<http://go.microsoft.com/fwlink/?linkid=107342>)

For more information about enabling SSL, view the following article:

- **How to enable SSL for all customers who interact with your Web site in Internet Information Services** (<http://go.microsoft.com/fwlink/?linkid=108843>)

Configure Microsoft Dynamics CRM client-to-server communication for internal deployments

➤ **For deployments that will not be used by external clients, which connect over the Internet, follow these steps:**

1. Obtain a certificate from a CA. To use certificates, you will have set up a public key infrastructure (PKI), which consists of one or more CAs that are linked in a hierarchy. These CAs and the PKI are required to manage certificate issuance, validation, renewal, and revocation in one or more organizations. You can use a third-party PKI with Microsoft Windows Server 2003, or you can establish your own PKI, based on Windows Server 2003 Certificate Services.
2. Make sure that there are no users accessing Internet Information Services (IIS) where the Microsoft Dynamics CRM Web application is installed. To do this, stop the Microsoft Dynamics CRM Web site: right-click the Web site, and then click **Stop**.
3. Configure the Microsoft Dynamics CRM Web site to use SSL. To do this, perform the following steps on the server running IIS where the Microsoft Dynamics CRM Web application is installed:
 - a. Start Internet Information Services (IIS) Manager.
 - b. Right-click the Microsoft Dynamics CRM Web site, and then click **Properties**.
 - c. Click the **Directory Security** tab, click **Server Certificate**, and then follow the instructions in the Web Server Certificate Wizard.
 - d. If you want clients to only use SSL when they connect to the Microsoft Dynamics CRM application, on the **Directory Security** tab in the **Secure communications** area, click **Edit**.
 - e. On the **Secure Communications** dialog box, click the **Require secure channel (SSL)** check box.
 - f. Close Internet Information Services (IIS) Manager.

Important

You can apply only a single certificate to the Microsoft Dynamics CRM Web site. Therefore, if you have configured Microsoft Dynamics CRM Server for both internal and Internet-facing (external) access, you cannot configure SSL for both internal and external connections to the Microsoft Dynamics CRM Web site.

4. Manually modify the following values in the configuration database.

Warning

Incorrectly modifying the configuration database (MSCRM_CONFIG) can cause unexpected behavior in the Microsoft Dynamics CRM system or cause the system to stop working. We recommend that you back up the Microsoft Dynamics CRM system before you complete these steps. For information about how to back up the Microsoft Dynamics CRM system, see the Operating and Maintaining Guide that is part of the Microsoft Dynamics CRM 4.0 Implementation Guide document set.

- a. On the computer running Microsoft SQL Server, start Reporting Services.
- b. Expand **Databases**, expand **MSCRM_CONFIG**, expand **Tables**, right-click **dbo.DeploymentProperties**, and then click **Open Table**.
- c. In the **dbo.DeploymentProperties** table under the **ColumnName** column, in the **ADRootDomainScheme** row, change the **NVarCharColumn** column value from **http** to **https**. This value must be in lowercase letters.

- d. In the `dbo.DeploymentProperties` table, under the `ColumnName` column, in the `ADSdkRootDomain` row, change the `NVarCharColumn` column value by using the name of the certificate configured for the Microsoft Dynamics CRM Web site. The name of the certificate can be found, in Internet Information Services (IIS) Manager, on the **Directory Security** tab of the Microsoft Dynamics CRM Web site properties page.
 - e. Click **View Certificate**.
 - f. On the **Certificate** dialog box, click **Details**.
 - g. Click the **Friendly Name** field to locate the certificate name. If the certificate name is the same as the computer name, you can use the format `ServerName:SSLPortNumber`. By default, the TCP port for SSL connections is 443.
 - h. In the `dbo.DeploymentProperties` table, under the `ColumnName` column, in the `ADWebApplicationRootDomain` row, change the `NVarCharColumn` column value by using the name of the certificate configured for the Microsoft Dynamics CRM Web site. If the certificate name is the same as the computer name, you can use the format `ServerName:SSLPortNumber`. By default, the TCP port for SSL connections is 443.
 - i. Make sure your modifications are saved and then close Reporting Services.
5. If the Microsoft Dynamics CRM Web site is *not* configured to use the default http (80) and https (443) TCP ports, you must modify the `LocalSDKPort` registry subkey value as follows:

Warning

Serious problems might occur if you modify the registry incorrectly by using Registry Editor or by using another method. These problems might require you to reinstall the operating system and Microsoft Dynamics CRM. We cannot guarantee that these problems can be resolved. Modify the registry at your own risk.

- a. Start Registry Editor, and locate the `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM` subkey.
 - b. Right-click **LocalSdkPort**, click **Modify**, and then click **OK**.
 - c. In the **Base** area, click **Decimal**, and then type the TCP port.
 - d. Click **OK**.
 - e. Close Registry Editor.
6. Restart IIS. To do this, at the command prompt, run the `iisreset` command.
 7. Start the Microsoft Dynamics CRM Web site. To do this, start Internet Information Services (IIS) Manager, right-click the Microsoft Dynamics CRM Web site, and then click **Start**.
 8. Restart the Microsoft Dynamics CRM Asynchronous Processing Service. To do this, click **Start**, point to **Administrative Tools**, and then click **Services**. In the list of services, right-click **Microsoft Dynamics CRM Asynchronous Processing Service**, and then click **Restart**.
 9. Verify that you can successfully connect to the Microsoft Dynamics CRM Web site. To do this, you must use a URL that begins with **https**. For example, in Internet Explorer the URL will appear similar to the address `https://ServerName/OrganizationName/loader.aspx`
 10. If the Microsoft Dynamics CRM Web site is not configured to require SSL connections, verify that you can successfully connect to the site by using an http connection, for example, `http://ServerName/OrganizationName/loader.aspx`.

Configure Microsoft Dynamics CRM client-to-server communication for Internet-facing Deployments

If you have installed Microsoft Dynamics CRM for client access over the Internet, or an Internet-facing Deployment (IFD), you must configure a security connection.

➤ **To configure a security connection, follow these steps:**

1. Obtain a certificate from a CA. To use certificates, you will have set up a public key infrastructure (PKI), which consists of one or more CAs that are linked in a hierarchy. These CAs and the PKI are required to manage certificate issuance, validation, renewal, and revocation in one or more organizations. You can use a third-party PKI with Windows Server 2003, or you can establish your own PKI, based on Windows Server 2003 Certificate Services.

Important

The CA must support wildcard certificates and the common name for the certificate requested from the Microsoft Dynamics CRM Web site must use a wildcard. This wildcard certificate requirement only applies to Internet-facing Microsoft Dynamics CRM Web sites.

A wildcard certificate for the fictitious Contoso organization might appear similar to the following example:
*.contoso.com

For more information about wildcard certificates, see the following TechNet article:

Obtaining and Installing a Wildcard Server Certificate (IIS 6.0)
(<http://go.microsoft.com/fwlink/?linkid=109008>)

2. Make sure that there are no users accessing Internet Information Services (IIS) where the Microsoft Dynamics CRM Web application is installed. To do this, stop the Microsoft Dynamics CRM Web site: right-click the Web site, and then click **Stop**.
3. Configure the Microsoft Dynamics CRM Web site to use SSL. To do this, perform the following steps on the server running IIS where the Microsoft Dynamics CRM Web application is installed:
 - a. Start IIS Manager
 - b. Right-click the Microsoft Dynamics CRM Web site, and then click **Properties**.
 - c. Click the **Directory Security** tab, click **Server Certificate**, and then follow the instructions in the Web Server Certificate Wizard.
 - d. If you want clients to use only SSL when connecting to the Microsoft Dynamics CRM application, on the **Directory Security** tab, in the **Secure communications** area, click **Edit**. On the **Secure Communications** dialog box, select the **Require secure channel (SSL)** check box.
 - e. Close IIS Manager.

Important

You can apply only a single certificate to the Microsoft Dynamics CRM Web site. Therefore, if you have configured Microsoft Dynamics CRM Server for both internal and Internet-facing (external) access, you cannot configure SSL for both internal and external connections to the Microsoft Dynamics CRM Web site.

4. You must manually modify the following values in the configuration database.

Warning

Incorrectly modifying the configuration database (MSCRM_CONFIG) can cause unexpected behavior in the Microsoft Dynamics CRM system or cause the system to stop working. We recommend that you back up the Microsoft Dynamics CRM system before you complete these steps. For information about how to back up the Microsoft Dynamics CRM system, see the Operating and Maintaining Guide that is part of the *Microsoft Dynamics CRM Implementation Guide* document set.

- a. On the computer running Microsoft SQL Server, start Reporting Services.
- b. Expand **Databases**, expand **MSCRM_CONFIG**, expand **Tables**, right-click **dbo.DeploymentProperties**, and then click **Open Table**.
- c. In the **dbo.DeploymentProperties** table under the **ColumnName** column, in the **IFDRootDomainScheme** row, change the **NVarCharColumn** column value from **http** to **https**. This value must be in lowercase letters.

- d. In the dbo.DeploymentProperties table, under the ColumnName column, in the IFDSdkRootDomain row, change the NVarCharColumn column value by using the name of the certificate configured for the Microsoft Dynamics CRM Web site.
 - e. In the dbo.DeploymentProperties table, under the ColumnName column, in the IFDWebApplicationRootDomain row, change the NVarCharColumn column value by using the name of the certificate configured for the Microsoft Dynamics CRM Web site. The name of the certificate can be found in Internet Information Services (IIS) Manager on the **Directory Security** tab of the Microsoft Dynamics CRM Web site properties page. Click **View Certificate**, on the **Certificate** dialog box, click **Details**. Click the **Friendly Name** field to locate the certificate name.
 - f. Make sure that your modifications are saved and then close Reporting Services.
5. If the Microsoft Dynamics CRM Web site is configured to use the default http (80) and https (443) TCP ports, you do not have to modify the LocalSDKPort registry subkey value, and you can skip this step.

Note

If the Microsoft Dynamics CRM Web site is not configured to use these default TCP ports, you must complete the following steps.

Warning

Serious problems might occur if you modify the registry incorrectly by using Registry Editor or by using another method. These problems might require you to reinstall the operating system and Microsoft Dynamics CRM. We cannot guarantee that these problems can be resolved. Modify the registry at your own risk.

- a. Start Registry Editor, and locate the **HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM subkey**.
 - b. Right-click LocalSdkPort, click **Modify**, and then click **OK**.
 - c. In the **Base** area, click **Decimal**, and then type the TCP port.
 - d. Click **OK**.
 - e. Close Registry Editor.
6. Restart IIS. To do this, at the command prompt, run the **iisreset** command.
7. Start the Microsoft Dynamics CRM Web site. To do this, start Internet Information Services (IIS) Manager, right-click the Microsoft Dynamics CRM Web site, and then click **Start**.
8. Restart the Microsoft Dynamics CRM Asynchronous Processing Service. To do this, click **Start**, point to **Administrative Tools**, and then click **Services**. In the list of services, right-click **Microsoft Dynamics CRM Asynchronous Processing Service**, and then click **Restart**.
9. Verify that you can successfully connect to the Microsoft Dynamics CRM Web site over the Internet by using an external URL that begins with https. For example, in Internet Explorer the URL will appear similar to the address `https://ServerName.DomainName.com/OrganizationName/`.

By following the steps to enable SSL you can make client-to-Web server connections more private, which can help protect sensitive CRM data, as well as reduce the likelihood of an invalid user gaining access to the system.

Configuration guide and roadmap

The following tables contain configuration goals and associated tasks that should be performed by the Microsoft Dynamics CRM administrator. The goals and their tasks are arranged in the order that they should be completed for a typically deployment.

Each task has an associated Help topic that explains it.

To view the Help information for each task, select one of the following clients:

- Web application. Click **Contents** on the **Help** menu.

- Microsoft Dynamics CRM for Outlook. Point to **Help**, and then click **Contents** on the **CRM** menu.

You can view a Help topic associated with each subtask by locating the Help topic title in the table of contents or by typing the Help topic title in the Search box for search Help.

Goal 1: Tailor Microsoft Dynamics CRM to your business

The following table lists the tasks to configure system-wide settings in the application. These tasks should be performed or evaluated before you start to use Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
<p>Define settings that apply to all users. Configure areas that should be defined before users start using Microsoft Dynamics CRM. (These tasks are completed in the Administration and Business Management areas in Settings.)</p>	<ul style="list-style-type: none"> • Set language options: Language Settings Dialog Box • Set auto-numbering options: <i>Set Auto-Numbering</i> • Set system settings: Manage System Settings <p>Create subject tree: <i>Work with Subjects</i></p>
<p>Set up users and data access. Set up business units and security roles so that users can access the most suitable data, and then add users. (These tasks are completed in the Administration area of Settings.)</p>	<ul style="list-style-type: none"> • Understand the security model: <i>Controlling Data Access</i> • Create business units: Work with Business Units • Review security roles: Work with Security Roles <p>Configure users: Manage a User's Record</p>
<p>Review your user interface. Determine whether changes are needed to forms and views. These changes can all be made from the application. (This task is completed in the Customization area of Settings.)</p>	<ul style="list-style-type: none"> • Learn about what can be changed: <i>Requesting User Interface Changes</i> • Customize entities: Customization Privileges
<p>Define which Getting-Started tasks new users see. Control which business goals and tasks appear on the Getting Started page. (This task is completed in the Business Goals section of Getting Started.)</p>	<ul style="list-style-type: none"> • Select goals and tasks to display: <i>Business Goals Form</i>

Goal 2: Integrate e-mail with Microsoft Dynamics CRM

In this table you will find the tasks to integrate e-mail messaging with Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
<p>Decide how e-mail message will be processed. If you want to track incoming and outgoing e-mail messages in Microsoft Dynamics CRM, you must first understand the configurations that are possible for incoming and outgoing e-mail.</p>	<ul style="list-style-type: none"> • Learn about e-mail configurations: Understanding E-mail Configurations

Task	Subtask: Help Topic Title
Configure e-mail for each user. Determine whether the E-mail Router is required, and install it if necessary.	<ul style="list-style-type: none"> Update all user records. <i>Manage a User's Record</i>
Install and configure the E-mail Router. Determine whether the E-mail Router is required, and install it if necessary.	<ul style="list-style-type: none"> Install and configure the E-mail Router: <i>Install the Microsoft Dynamics CRM E-mail Router</i>
Learn about how to manage e-mail activities. Understand how each e-mail message that you receive and send can be tracked as an activity.	<ul style="list-style-type: none"> Learn about how to manage e-mail activities: <i>Managing E-Mail Activities</i>
Set system-wide e-mail options. Determine whether to use tracking tokens in the subject line of each e-mail message, and set other options that affect all users. (This task is completed in the Administration area of Settings.)	<ul style="list-style-type: none"> Configure system-wide e-mail options: <i>Manage System Settings</i>

Goal 3: Manage customer support

The following table lists the tasks that help you manage customer-support features in Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
Set up queues for cases. Learn how to organize incoming cases by using queues. (These tasks are completed in the Business Management area of Settings.)	<ul style="list-style-type: none"> Learn how to create queues: <i>Creating Queues for Incoming Cases</i> Verify that e-mail is configured for queues: <i>Understanding E-mail Configurations</i> Create queues: <i>Work with Queues</i> <p>Create routing rules to move cases to queues: Install the Microsoft Dynamics CRM E-mail Router</p>
Create service contract templates. Set up service-contract templates to track service contracts with your customers. (These tasks are completed in the Templates area of Settings.)	<ul style="list-style-type: none"> Learn how to create contract templates: <i>Creating Contract Templates</i> Create or edit contracts and contract templates: <i>Work with Contract Templates</i>

Goal 4: Manage schedulable resources

In the following table, you will find the tasks to manage resource-scheduling features in Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
<p>Organize resources and schedule services. Define when and where services are offered, and which resources are required for each type of service. (These tasks are completed in the Business Management area of Settings.)</p>	<ul style="list-style-type: none"> Understanding service scheduling: <i>Configuring Service Scheduling</i> Set business closures: <i>Work with Business Closures</i> Create service sites: <i>Work with Sites</i> Create facilities/equipment: <i>Work with Facilities and Equipment</i> Configure individual/facility work hours: <i>Work with Weekly Schedules</i> Create resource groups: <i>Work with Resource Groups</i>

Goal 5: Manage marketing

The following table lists the tasks that you can perform manage marketing features in Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
<p>Set system-wide marketing options. Set options that apply to all campaigns and marketing lists. (This task is completed in the Administration area of Settings.)</p>	<ul style="list-style-type: none"> Configure marketing settings: <i>System Settings Dialog Box - Marketing Tab</i>

Goal 6: Manage sales transactions

The following table lists the tasks to manage sales features in Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
<p>Set up competitors for tracking won and lost sales. Start tracking information about competitors. To do this, you must enter data about your competitors.</p>	<ul style="list-style-type: none"> Create competitors: <i>Work with Competitor Records</i>
<p>Manage products and price lists. Create the product catalog, which includes all price lists and products. (These tasks are completed in the Product Catalog area of Settings.)</p>	<ul style="list-style-type: none"> Understand the Product Catalog: <i>Creating the Product Catalog</i> Create discount lists: <i>Work with Discount Lists</i> Create unit groups: <i>Work with Unit Groups</i> Create price lists: <i>Work with Price Lists</i> Create products: <i>Work with Products</i>

Task	Subtask: Help Topic Title
Track data by sales territory. Define territories and add salespeople to territories so that sales processes and results can be tracked by territory. (These tasks are completed in the Business Management area of Settings.)	<ul style="list-style-type: none"> • Create sales territories: <i>Work with Territories</i>
Track progress against quotas. Track performance by assigning and tracking sales quotas for each salesperson. (These tasks are completed in the Business Management and Administration areas of Settings.)	<ul style="list-style-type: none"> • Define the fiscal year for quotas: <i>Work with Fiscal Year Settings</i> • Add quotas for individual users: <i>Work with Salespeople with Quotas</i>

Goal 7: Automate business processes

The following table lists the tasks to automate business processes in Microsoft Dynamics CRM.

Task	Subtask: Help Topic Title
Learn about how to automate business processes. Learn how business processes can be automated by creating workflows.	Learn about how to use workflow: <i>Creating and Using Workflows</i>
Create workflows. Make sure users follow standard procedures by creating workflows. (These tasks are completed in the Workflows area of Settings.)	<ul style="list-style-type: none"> • Create a workflow: <i>Work with Workflows</i>
Configure duplicate detection. Decide how duplicates are defined, and when duplicate detection should be enabled. (These tasks are completed in the Data Management area of Settings.)	<ul style="list-style-type: none"> • Set up duplicate-detection rules: <i>Work with Duplicate-detection Rules</i> • Review duplicate detection settings: <i>Enable and Disable Duplicate Detection</i>

Instructions for removing the Resource Center

The Resource Center is a place in the application where users, administrators, and implementers will find information to help them use and configure Microsoft Dynamics CRM 4.0. Much of the content in the Resource Center is created by experts in the Microsoft Dynamics CRM community. The Resource Center includes links to an external Web site hosted by Microsoft and is not displayed when users are offline.

However, if users of the on-premise version of Microsoft Dynamics CRM do not have access to the Internet they cannot use the content on the Resource Center. In these situations, the Resource Center can be removed from the application.

➤ To remove the Resource Center from the application, follow these steps:

1. Export the SiteMap by using the Export Customizations feature.
 - a. In the Navigation Pane, click **Settings**, click **Customization**, and then click **Export Customizations**.
 - b. Select SiteMap, then on the **Actions** toolbar, click **More Actions**, and then click **Export Selected Customizations**.
 - c. Save the customization compressed (.zip) file and make a copy of it as a backup.

2. Extract the **customization.xml** file from the **customization.zip** file.
3. Open the **customization.xml** file by using a text editor such as Microsoft Visual Studio or Notepad.
4. Locate the following node in the file.

```
/ImportExportXml/SiteMap/SiteMap/Area Id="ResourceCenter"
```

5. Comment the Area by using `<!--` and `-->` tags where the `Id` attribute is set to "ResourceCenter" as follows:

```
<!--<Area Id="ResourceCenter"
ResourceId="Area_ResourceCenter"
Icon="/_imgs/resourcecenter_24x24.gif"
DescriptionResourceId="ResourceCenter_Area_Description">
<Group Id="ResourceCenter">
<SubArea Id="nav_lc_overview"
ResourceId="Homepage_LearningOverview"
DescriptionResourceId="LearningOverview_SubArea_Description"
Icon="/_imgs/ico_18_129.gif"
Url="/resourcecenter/overview.aspx"
AvailableOffline="false" />
<SubArea Id="nav_lc_sales"
ResourceId="Homepage_LearningSales"
DescriptionResourceId="LearningSales_SubArea_Description"
Icon="/_imgs/ico_16_sales.gif"
Url="/resourcecenter/sales.aspx"
AvailableOffline="false" />
<SubArea Id="nav_lc_marketing"
ResourceId="Homepage_LearningMarketing"
DescriptionResourceId="LearningMarketing_SubArea_Description"
Icon="/_imgs/ico_16_marketing.gif"
Url="/resourcecenter/marketing.aspx"
AvailableOffline="false" />
<SubArea Id="nav_lc_services"
ResourceId="Homepage_LearningServices"
DescriptionResourceId="LearningServices_SubArea_Description"
Icon="/_imgs/area/18_service.gif"
Url="/resourcecenter/services.aspx"
AvailableOffline="false" />
<SubArea Id="nav_lc_customization"
ResourceId="Homepage_LearningCustomization"
DescriptionResourceId="LearningCustomization_SubArea_Description"
Icon="/_imgs/area/18_settings.gif"
Url="/resourcecenter/customization.aspx"
AvailableOffline="false" />
</Group>
</Area>-->
```

6. Make your changes to the **customization.xml** file.
7. Import the updated XML file by using the Import Customizations feature.
8. In the Navigation Pane, click **Settings**, click **Customization**, and then click **Import Customizations**.
9. Locate your modified XML file and then click **Upload**.
10. On the **Actions** toolbar, click **Import All Customizations**.

Recovering from errors that occur after you remove the Resource Center

The import tool performs validations on the SiteMap. However, it is still possible that some errors might occur.

Because the SiteMap controls the application Navigation pane, an error in the SiteMap could cause the Navigation pane to be unusable. In that case, you must directly access the Import customization screen with the following URL in on-premise versions of Microsoft Dynamics CRM.

```
http://<CRM_Servername>/<OrganizationName>/tools/systemcustomization/ImportCustomizations/importCustomizations.asp
```

Locate your back-up copy of the exported **customization.zip** file. Upload and import this backup file. You can then use the Navigation Pane again.

----- Send Feedback About This Chapter -----

We appreciate hearing from you. To send your feedback, click the following link and type your comments in the message body.

Note

The subject-line information is used to route your feedback. If you remove or modify the subject line, we may be unable to process your feedback.

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