

Dell Lifecycle Controller
Integration Version 1.3 for
Microsoft System Center
Configuration Manager
Installation Guide



Notes



NOTE: A NOTE indicates important information that helps you make better use of your computer.

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Introduction

This guide provides information on software prerequisites and requirements to setup Dell Lifecycle Controller Integration (DLCI) for Microsoft System Center Configuration Manager (ConfigMgr). This guide lists the steps to install, upgrade, and uninstall DLCI for ConfigMgr.

Prerequisites

You require familiarity with deploying operating systems using **Dell Server Deployment Pack for Microsoft System Center Configuration Manager (DSDP for ConfigMgr) version 1.2** or later. For more information, see the *Dell Server Deployment Pack for Microsoft System Center Configuration Manager User's Guide* available at support.dell.com/manuals.

Before you install DLCI for ConfigMgr, complete the following:

- 1 Configure an account for use with Discovery and Handshake. For more information, see [Configuring an Account for Use With Discovery and Handshake](#).
- 2 Make sure that the software prerequisites and requirements are available. For more information, see [Software Prerequisites and Requirements](#).
- 3 Make sure that the component specific prerequisites are available. For more information, see [Component-Specific Prerequisites](#).

Configuring an Account for Use With Discovery and Handshake

If you do not want to use an administrator account for the provisioning server to access the ConfigMgr Server, create a user account with minimal permissions.

NOTE: If you install DLCI by providing user credentials authenticated in Active Directory, and then perform the discovery and handshake with a target system using a Non-Active Directory authenticated user credentials, the discovery and handshake with the target system fails; to resolve this, disable the Active directory credentials.

To create a user account with minimal user permissions:

- 1 Create a user account on the domain, as the Dell Provisioning Server impersonates this account while writing the Data Discovery Record (DDR) to the site server's inbox.
- 2 Provide the user with the following permissions:
 - **Collection** — **Read, Modify, and Create**
 - **Site** — **Read, and Import computer entry**
- 3 Configure user access to Windows Management Instrumentation (WMI). For more information, see [Configuring User Access to WMI](#).
- 4 Provide share and folder permissions to write files to the DDR inbox. For more information, see [Providing Share and Folder Permissions](#).

Configuring User Access to WMI

To configure user to access WMI remotely:



NOTE: Make sure that firewall of your system does not block the WMI connection.

- 1 Grant the Dell Provisioning Server user permissions needed for the Distributed Component Object Model (DCOM) on this system, remotely using `DCOMCNFG.exe`. For more information, see [Providing User Permissions for DCOM](#).
- 2 Grant the Dell Provisioning Server user permissions needed for the DCOM Config Windows Management and Instrumentation (WMI) components, using `DCOMCNFG.exe`. For more information, see [Providing User Permissions for DCOM Config WMI](#).
- 3 Set the namespace security and grant permissions. For more information, see [Setting Namespace Security and Granting Permissions](#).
- 4 From the Dell Provisioning Server, validate user permissions of the account. For more information, see [Validating User Permissions from the Provisioning Server](#).

Providing User Permissions for DCOM

To grant user permissions for DCOM:

- 1 Launch the `dcomcnfg.exe`.
- 2 From the left pane of the **Component Services** console, expand **Computers**, right-click on the Provisioning Server Computer, and select **Properties**.
- 3 On the **COM Security** tab:
 - From **Access Permissions**, click **Edit Limits** and select **Remote Access**.
 - From **Launch and Activation Permission**, click **Edit Limits** and select **Local Launch**, **Remote Launch**, and **Remote Activation**.

Providing User Permissions for DCOM Config WMI

To grant user permissions for DCOM Config WMI:

- 1 Launch the `dcomcnfg.exe`.
- 2 Expand **My Computer** and expand **DCOM Config**.
- 3 Right-click **Windows Management and Instrumentation**, and select **Properties**.
- 4 On the **Security** tab, from **Launch and Activation Permission**, click **Edit** and select the **Remote Launch** and **Remote Activation** permissions.

Setting Namespace Security and Granting Permissions

To set namespace security and grant permissions:

- 1 Launch the `WMIMGMT.msc` to set the namespace security.
- 2 In the **WMI Control** pane, right-click **WMI Control**, select **Properties**, and then select the **Security** tab.
- 3 Navigate to `ROOT\SMS\Site_<sitecode> Namespace`.
- 4 Select the **Execute Methods**, **Provide Write**, **Enable Account**, and **Remote Enable** permissions.

Alternatively, the `ConfigMgr` user becomes a member of the `SMS_Admin` group when created in `ConfigMgr`, and you can grant **Remote Enable** to the existing permissions of the group.

Validating User Permissions from the Provisioning Server

To validate user permissions:

- 1 Use **WBEMTest** to verify that you can connect via WMI to the Site Server.



NOTE: Make sure that you select **Packet privacy** in the **Authentication level** group box when connecting to the **Site_<sitecode> Namespace**.

- 2 After establishing the connection, run the query `Select * from SMS_site`. If permissions are properly assigned, this command returns a record with the site code.

Providing Share and Folder Permissions

To grant share and folder permissions to write files to the DDR inbox:

- 1 From the ConfigMgr console, under **Computer Management**, grant the user permission to write to the `SMS_<sitecode> share`.
- 2 Using **File Explorer**, navigate to the share location `SMS_<sitecode> share`, and then to the `ddm.box` folder. Grant full control to the domain user.
- 3 Validate these permissions by temporarily mapping a drive from the Dell Provisioning Server with user credentials, and then creating, writing, modifying, and deleting a new file.

Software Prerequisites and Requirements

Before you install DLCI for ConfigMgr, complete the following prerequisites:

- 1 Make sure that at least 40 MB of free disk space is available on the system to install DLCI.
- 2 Install Microsoft System Center Configuration Manager (ConfigMgr) 2007 R2/SP2 or ConfigMgr R3. For details on how to download and install ConfigMgr, see the Microsoft TechNet site at technet.microsoft.com.
- 3 Install Dell Server Deployment Pack (DSDP) for ConfigMgr version 1.2. For details on how to install DSDP for ConfigMgr, see the *Dell Server Deployment Pack for Microsoft System Center Configuration Manager User's Guide* available at support.dell.com/manuals.
- 4 Install .NET version 3.5 SP1.

- 5 On Microsoft Windows Server 2008 and 2008 R2 systems where you have installed the provisioning server, Install Windows Remote Management (WinRM).

For information on component-specific software prerequisites and requirements, see [Component-Specific Prerequisites](#).

Component-Specific Prerequisites

The DLCI for ConfigMgr installer verifies the following prerequisites before installation:

During Initial Startup

- Microsoft Windows Server 2003 SP1 or later
- Regsrv32.exe
- Microsoft .NET version 3.5 SP1
- WinRM

For Dell Lifecycle Controller Utility (DLCU)

- Installation on primary Site Server or ConfigMgr Admin console
- Dell Server Deployment Pack 1.2 or later
- Windows Automation Install Kit (Windows AIK)

For Dell Provisioning Server (DPS)

- Microsoft Windows Server 2003 SP2 or later
- Internet Information Services (IIS) 6 or IIS 7
- IIS WMI compatibility is enabled on IIS 7
- IIS6 WMI Metabase compatibility is enabled on IIS 7
- icacls.exe

DPS is present in the same domain as that of ConfigMgr and DLCU.

Supported Operating Systems

Table 1-1 provides information on supported operating systems for the Site Server, Dell Provisioning Service, and ConfigMgr Admin Console. The matrix presented in the table lists the operating systems supported to install DLCI for ConfigMgr.

For information, on the supported configurations for ConfigMgr, see technet.microsoft.com/en-us/library/cc161860.aspx.

Table 1-1. Support Matrix for Dell Components






















Operating Systems	Dell Provisioning Service	Dell Lifecycle Controller Utility (DLCU) on the ConfigMgr Server	DLCU on the ConfigMgr Admin Console
Windows Server 2003 SP1— Standard and Enterprise x86 Editions			
Windows Server 2003 SP1— Standard, Enterprise, and Datacenter x64 Editions			
Windows Server 2003 SP2— Standard and Enterprise x86 Editions			
Windows Server 2003 SP2 — Standard, Enterprise, and Datacenter x64 Editions			
Windows Server 2003 R2 SP2 — Standard and Enterprise x86 Editions			
Windows Server 2003 R2 SP2 — Standard, Enterprise, and Datacenter x64 Editions			
Windows Server 2008 — Standard and Enterprise x86 Editions			

Table 1-1. Support Matrix for Dell Components (continued)























































Operating Systems	Dell Provisioning Service	Dell Lifecycle Controller Utility (DLCU) on the ConfigMgr Server	DLCU on the ConfigMgr Admin Console
Windows Server 2008 — Standard, Enterprise, and Datacenter x64 Editions			
Windows Server 2008 SP2 — Standard, and Enterprise x86 Editions			
Windows Server 2008 SP2 — Standard, Enterprise, and Datacenter x64 Editions			
Windows Server 2008 R2 — Standard, Enterprise, and Datacenter Editions			
Microsoft Windows XP SP2 x86 Professional Edition			
Microsoft Windows XP SP2 x64 Professional Edition			
Microsoft Windows XP SP3 x86 Professional Edition			
Microsoft Windows XP SP3 x64 Professional Edition			
Microsoft Windows XP SP2 x86 Business Edition			
Microsoft Windows XP SP2 x64 Business Edition			
Microsoft Windows XP SP3 x86 Business Edition			










Table 1-1. Support Matrix for Dell Components (continued)

Operating Systems	Dell Provisioning Service	Dell Lifecycle Controller Utility (DLCU) on the ConfigMgr Server	DLCU on the ConfigMgr Admin Console
Microsoft Windows XP SP3 x64 Business Edition			
Microsoft Windows Vista x86 Business Edition			
Microsoft Windows Vista x64 Business Edition			
Microsoft Windows Vista SP1 x86 Business Edition			
Microsoft Windows Vista SP1 x64 Business Edition			
Microsoft Windows 7 x86 Edition			
Microsoft Windows 7 x64 Edition			

Supported Microsoft .NET Versions

Table 1-2 provides the list of supported .NET versions to install DLCI for ConfigMgr.

Table 1-2. Supported .NET Versions for DLCI Components

Microsoft .NET Version	Dell Provisioning Service	Dell Lifecycle Controller Utility (DLCU) on the ConfigMgr Server	DLCU on the ConfigMgr Admin Console
Microsoft .NET 3.5			
Microsoft .NET 3.5 SP1			
Microsoft .NET 4.0			

Installing DLCI for ConfigMgr

The DLCI for ConfigMgr installer contains two components — Dell Lifecycle Controller Utility (DLCU) and Dell Provisioning Server (DPS).

DLCU is a plug-in for ConfigMgr; select this option when you have ConfigMgr installed on a site server.

DPS is a component for provisioning dell servers into ConfigMgr. You can install DPS on a system that meets the prerequisites for DPS; ConfigMgr installation is not required.

You can install both the components together or install them individually on separate systems.

It is recommended that you close ConfigMgr before installing, upgrading, or uninstalling the DLCI for ConfigMgr.

To install DLCI for ConfigMgr:

- 1** Go to support.dell.com → **Drivers & Downloads**.
- 2** Select the product, which is ideally a Dell PowerEdge *yx1x* system.
In the server name format *yx1x*; *y* denotes alphabets, for example M, R, or T; and *x* denotes numbers.
- 3** Select the operating system.
- 4** In the **Category** field, select **All**.
- 5** Click **Lifecycle Controller** from the list displayed.
- 6** Click **Download** against the **Dell Lifecycle Controller Integration** option.
- 7** Download the **DLCI_1.3.0_Axx.zip** and extract the contents to a folder on your system.
- 8** Double-click the **Dell_Lifecycle_Controller_Integration_1.3.0.xxx.msi** package.
The **Welcome** screen is displayed.
- 9** Click **Next**.
The license agreement is displayed.
- 10** Accept the license agreement and click **Next**.
The **Setup Type** screen is displayed.

- 11 Select to install either the Dell Lifecycle Controller Utility or the Dell Provisioning Server, or both.

Installing Both the Components

To install the DLCI for ConfigMgr on a Site Server or Admin Console:

- 1 From the **Custom Setup** screen, select both the **Dell Lifecycle Controller Utility** and the **Dell Provisioning Server** options and click **Next**.

The Custom Setup Confirmation showing both the options is displayed.

- 2 Click **Next**.

The **Dell Provisioning Service User Credentials for ConfigMgr Access** screen is displayed.

- 3 Perform one of the following actions:

- On a Site Server, enter an account (with required privileges) for use by Dell Provisioning service to access ConfigMgr, on all newly discovered systems with iDRAC, and click **Next**.
- On a ConfigMgr Admin Console with IIS, enter the primary site server name, user name, and password that is provisioned on all newly discovered systems with iDRAC, and click **Next**.

The **Dell Lifecycle Controller Utility User Credentials for iDRAC Access** screen is displayed.

- 4 Enter the iDRAC credentials and click **Next**.

The **Change Firewall Setting** screen is displayed.

- 5 Select the **Add Provision Web Site Port in the firewall exception list** option. This enables the Provisioning Server to discover the target systems even when firewall is enabled.



NOTE: This screen is displayed only when you select the **Dell Provisioning Server** in the installer.

- 6 Click **Next**.

The **Ready to Install the Program** window is displayed.

- 7 Click **Install**.

The Progress bar is displayed. After installation, the completion message is displayed.

- 8 Click **Next** and then click **Finish**.



NOTE: As part of the installation, a provisioning website is created and configured under Internet Information Services (IIS).

Installing Dell Lifecycle Controller Utility Only

For information on component-specific requirements, see [Component-Specific Prerequisites](#).



NOTE: Make sure that you install the Dell Lifecycle Controller Utility on the Site Server before using it on the Admin Console.

To install only the Dell Lifecycle Controller Utility:

- 1 In the **Custom Setup** screen, select **Dell Lifecycle Controller Utility**, deselect **Dell Provisioning Server**, and click **Next**.
- 2 The **Custom Setup Confirmation** screen displays the component that you selected. Click **Next**.
- 3 In the **Dell Lifecycle Controller Utility User Credentials for iDRAC Access** screen, enter the user name and password for out-of-band controller management. This account is provisioned on the iDRAC.
- 4 Click **Next**.

The **Ready to Install the Program** message is displayed.



NOTE: This screen appears only if you are installing DLCI for ConfigMgr on a Site Server.

- 5 Click **Install**.

The Progress bar is displayed. After installation, the completion message is displayed.

- 6 Click **Next** and then click **Finish**.

Installing the Dell Provisioning Server Only

For information on component-specific requirements, see [Component-Specific Prerequisites](#).

To install only the Dell Provisioning Server:

- 1 In the **Custom Setup** screen, select **Dell Provisioning Server**, deselect **Dell Lifecycle Controller Utility** and click **Next**.

- 2 The **Custom Setup Confirmation** screen displays the component that you selected. Click **Next**.
- 3 In the **Dell Provisioning Service User Credentials for ConfigMgr Access** screen, enter the primary site server name or IP of the server, user name and password, and click **Next**.
The **Change Firewall Setting** screen is displayed.
- 4 Select the **Add Provision Web Site Port in the firewall exception list** option. This enables the Provisioning Server to discover the target systems even when firewall is enabled.
- 5 Click **Next**.
The **Ready to Install the Program** message is displayed.
- 6 Click **Install**.
The Progress bar is displayed. After installation, the completion message is displayed.
- 7 Click **Next** and then click **Finish**.

Installing on a User Account Controller Enabled System

The minimum permissions required to install or uninstall the Dell Lifecycle Controller Utility feature on a site server are as follows:

- You are a local administrator or a domain admin on the server.
- On a Microsoft Windows Server 2008 operating system with User Account Controller (UAC) enabled, launch the MSI file from a command prompt using **Run As Administrator**.
- The minimum permissions on ConfigMgr are:
 - Site = Read
 - Package = Read, Delete, and Create

To install DLCI for ConfigMgr on a UAC- enabled system:

- 1 Right-click on **Command Prompt** and select **Run As Administrator**.
- 2 Run the **Dell_Lifecycle_Controller_Integration_1.3.0.xxx.msi** file from the folder where you have extracted it.
- 3 Follow the Installation wizard to install DLCI on the system.

Upgrading DLCI for ConfigMgr From a Previous Version



NOTE: DLCI for ConfigMgr supports upgrading from version 1.2 to version 1.3 only. To upgrade from version 1.0, or version 1.1 to 1.3, you must first uninstall version 1.0 or 1.1 and then install version 1.3. When you uninstall version 1.0 or 1.1, the previous settings are not retained and you must re-discover the target systems after you install version 1.3.

Prerequisites for Upgrading

Before you upgrade to DLCI for ConfigMgr version 1.3, you must upgrade the firmware on the target systems in the following sequence:

- 1 Upgrade the BIOS of the target systems to the latest version.
- 2 Upgrade Lifecycle Controller on the target systems to version 1.5 or later. For more information, see the *Dell Lifecycle Controller USC/USC-LCE Version 1.5 User's Guide* available at support.dell.com/manuals.
To upgrade Lifecycle Controller, use the Firmware Upgrade Tool in ConfigMgr version 1.3.
- 3 Upgrade iDRAC on the target systems to version 1.7 or later for monolithic systems and iDRAC version 3.2 or later for modular systems. For more information, see the *Integrated Dell Remote Access Controller 6 (iDRAC6) Version 1.5 User's Guide*, and the *Integrated Dell Remote Access Controller 6 (iDRAC6) Enterprise for Blade Servers Version 3.0 User's Guide* available at support.dell.com/manuals.

Upgrading to DLCI for ConfigMgr Version 1.3

When you upgrade to DLCI for ConfigMgr version 1.3, the installer prompts you to upgrade the firmware on the target systems to the latest versions before you proceed with the upgrade. You may continue with the upgrade process and update the firmware on the target systems later.

If you update the firmware of the discovered target systems after completing the upgrade process, you must update the firmware information on the target systems in the ConfigMgr database. For more information, see the section **Using Import.exe to Update Target System Information** in the *Dell Lifecycle Controller Integration for Microsoft System Center Configuration Manager User's Guide* available at support.dell.com/manuals.

To upgrade DLCI for ConfigMgr from version 1.2 to version 1.3:

- 1 Run the **Dell_Lifecycle_Controller_Integration_1.3.0.xxx.msi** file from the folder where you have extracted it.
- 2 A dialog box displays the message that another version of DLCI for ConfigMgr is found. Click **Yes** to continue.
The **Welcome** screen is displayed.
- 3 Click **Next**.
The license agreement is displayed.
- 4 Accept the license agreement and click **Next**.
The **Custom Setup** screen is displayed.
- 5 Select one or both the components.
- 6 Follow the steps as given in [Installing Both the Components](#), [Installing Dell Lifecycle Controller Utility Only](#), or [Installing the Dell Provisioning Server Only](#).



NOTE: You cannot abort the upgrade process by closing the installation wizard. If you close the installation wizard, the following message is displayed: **Are you sure you want to cancel Dell Lifecycle Controller Integration v1.3 installation?** The upgrade process continues irrespective of the selection you make on the message box.

Using the Modify Option in the Installer

The **Modify** option in the DLCI for ConfigMgr installer, modifies the program features that are installed. This option enables you to perform the following actions:

- Install a feature that you did not install earlier.
- Remove a feature that you have installed earlier.

To install a feature that you did not install earlier:

- 1 Run the **Dell_Lifecycle_Controller_Integration_1.3.0.xxx.msi** file from the folder where you have extracted it.
- 2 Click **Next**. The installer displays three options.
- 3 Select the **Modify** option.
The **Custom Setup** screen is displayed.

- 4 In the **Custom Setup** screen, select the feature that you did not install earlier.
- 5 Click **Install** to begin installing the feature.
When the installation process completes, click **Finish** to exit the installer.

To remove a feature that you had installed earlier:

- 1 Repeat [step 1](#) - [step 3](#) mentioned in the previous procedure.
- 2 In the **Custom** screen, select the feature that you want to remove.
- 3 Click the feature and select the option **This feature will not be available** and click **Next**.
- 4 Click **Install**. The installer removes the feature.

Using the Repair Option in the Installer

To repair the installation of DLCI for ConfigMgr:

- 1 Double-click the .msi package that you used to install DLCI for ConfigMgr initially.
The **Welcome** screen is displayed.
- 2 In the **Program Maintenance** screen, select **Repair** and click **Next**.
The **Ready to Repair the Program** screen is displayed.
- 3 Click **Install**.
A progress screen displays the progress of the installation. Once the installation is complete, the **InstallShield Wizard Completed** window is displayed.
- 4 Click **Finish**.

Uninstalling DLCI for ConfigMgr

To uninstall the DLCI for ConfigMgr:

For Microsoft Windows Server 2003

- 1 Click Start→ Control Panel→ Add or Remove Programs.
- 2 Select Dell Lifecycle Controller Integration 1.3 and click Remove.
- 3 Follow the instructions to complete the uninstallation.

Or, double-click the .msi, select **Remove**, and follow the instructions on the screen.

For Microsoft Windows Server 2008

- 1 Click Start→ Control Panel→ Programs and Features.
- 2 Select Dell Lifecycle Controller Utility 1.3 and click Uninstall.
- 3 Follow the instructions to complete the uninstallation.

Or, double-click the .msi, select **Remove**, and follow the instructions on the screen.

Troubleshooting

Errors During DPS Installation on System

When installing DPS on a system other than the site server, if you specify incorrect system name or user credentials for accessing the site server, the information is not authenticated by the installer, and the installation is completed.

However, when DPS is trying to access the site server, failure to access the site server occurs. When such failure occurs; from the DPS installation directory location, in the file import.log, check the log information for this error message:

```
ERROR2011-10-14 03:01:02 - SCCMProxy::Connect() -  
Failed to connect - Error The RPC server is  
unavailable. (Exception from HRESULT: 0x800706BA) at  
Microsoft.ConfigurationManagement.ManagementProvider.  
WqlQueryEngine.WqlConnectionManager.Connect(String  
configMgrServerPath)
```

If the error message is present, then install DPS again and provide the correct system name.

