

iDRAC Service Module 2.2

Installation Guide

Notes, cautions, and warnings

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

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

| | |
|---|-----------|
| Chapter 1: Introduction..... | 5 |
| New in this release..... | 5 |
| iDRAC Service Module monitoring features..... | 5 |
| Operating system information..... | 5 |
| Lifecycle Controller log replication into operating system..... | 6 |
| Automatic system recovery feature..... | 6 |
| Windows Management Instrumentation Providers..... | 6 |
| Automatic Technical Support Report collection..... | 6 |
| Prepare to remove NVMe PCIe SSD device..... | 6 |
| Supported features — operating systems matrix..... | 7 |
| Co-existence of Server Administrator and iDRAC Service Module..... | 7 |
| Software availability..... | 7 |
| Downloading iDRAC Service Module..... | 8 |
| Accessing documents from Dell support site..... | 8 |
| Software license agreement..... | 8 |
| Other documents you may need..... | 8 |
| Chapter 2: Preinstallation setup..... | 9 |
| Installation requirements..... | 9 |
| Supported operating systems..... | 9 |
| Supported platforms..... | 10 |
| System requirements..... | 10 |
| Chapter 3: Installing the iDRAC Service Module on Microsoft Windows operating systems..... | 11 |
| Installing the iDRAC Service Module on Microsoft Windows operating systems..... | 11 |
| Silent installation..... | 12 |
| Modifying the iDRAC Service Module components on Microsoft Windows operating systems..... | 12 |
| Repairing the iDRAC Service Module on Microsoft Windows operating systems..... | 13 |
| Uninstalling the iDRAC Service Module on Microsoft Windows operating systems..... | 13 |
| Unattended uninstall using the product ID..... | 13 |
| Uninstalling using the add/remove feature..... | 13 |
| Chapter 4: Installing iDRAC Service Module on supported Linux operating system..... | 14 |
| Preinstallation requirement for Linux operating system..... | 14 |
| Linux install dependency..... | 14 |
| Installing The iDRAC Service Module on Linux operating system..... | 15 |
| Silent installation..... | 15 |
| Uninstalling the iDRAC Service Module on Linux operating system..... | 16 |
| Uninstalling the iDRAC Service Module using the uninstall script..... | 16 |
| Uninstalling the iDRAC Service Module using the RPM command..... | 16 |
| Chapter 5: Installing the iDRAC Service Module on VMware ESXi..... | 17 |
| Using the vSphere CLI..... | 17 |
| Using the VMware vSphere Management Assistant..... | 18 |

| | |
|--|-----------|
| Using the VMware Update Manager..... | 18 |
| Using the Power CLI..... | 19 |
| Chapter 6: Installing the iDRAC Service Module on Citrix XenServer..... | 20 |
| Installing the iDRAC Service Module on Citrix XenServer on a running system..... | 20 |
| Installing the iDRAC Service Module on Citrix XenServer during XenServer installation..... | 20 |
| Chapter 7: Configuring the iDRAC Service Module..... | 22 |
| Configuring The iDRAC Service Module From iDRAC Web Interface..... | 22 |
| Configuring the iDRAC Service Module from RACADM..... | 22 |
| Configuring the iDRAC Service Module from WSMAN..... | 23 |
| Chapter 8: Frequently asked questions..... | 24 |
| Chapter 9: Linux installer packages..... | 27 |

Introduction

This guide provides information and step-by-step instructions on how to install iDRAC Service Module on the supported operating systems.

The Integrated Dell Remote Access Controller(iDRAC) Service Module is a lightweight optional software application that can be installed on Dell's 12th generation of PowerEdge servers or later. The iDRAC Service Module complements iDRAC interfaces – Graphical User Interface (GUI), RACADM CLI and Web Service Management (WSMAN) with additional monitoring data. You can configure the features on the supported operating system depending on the features to be installed and the unique integration needs in your environment.

The iDRAC Service Module architecture uses IP socket communication and provides additional Systems Management data (OS/device driver) to iDRAC and presents one-to-many consoles with access to Systems Management data through OS standard interfaces.

Topics:

- [New in this release](#)
- [iDRAC Service Module monitoring features](#)
- [Supported features — operating systems matrix](#)
- [Co-existence of Server Administrator and iDRAC Service Module](#)
- [Software availability](#)
- [Downloading iDRAC Service Module](#)
- [Accessing documents from Dell support site](#)
- [Software license agreement](#)
- [Other documents you may need](#)

New in this release

- Support for Dell's 13th generation of PowerEdge servers. For the list of supported platforms, see [Supported platforms](#)
- Support for Windows Event Log grouping for LC Log replication
- Support for the following operating systems:
 - VMware ESXi 6.0 U1
 - Red Hat Enterprise Linux 6.7 and 7.1 (64-bit)
 - SUSE Linux Enterprise Server 11 SP4 (64-bit)
 - Citrix XenServer 6.5 SP1
 - VMware ESXi 6.0 U1

iDRAC Service Module monitoring features

The services provided are:

- [OS information](#)
- [Lifecycle Controller Log replication into operating system](#)
- [Automatic system recovery](#)
- [Windows Management Instrumentation providers inclusive of storage data](#)
- [Automatic Technical Support Report collection](#)
- [Prepare to remove NVMe SSD device](#)

Operating system information

Server Administrator currently shares operating system information and host name with iDRAC. The iDRAC Service Module provides similar information such as host OS name, server host IP address information, OS version, Fully Qualified Domain Name

(FQDN) with iDRAC. The network interfaces on the host OS are also displayed. By default, this monitoring feature is enabled. This feature is available even if Server Administrator is installed on the host OS.

Lifecycle Controller log replication into operating system

Replicates the Lifecycle Controller (LC) logs to the OS logs. All events that have the OS Log option as the target (in the Alerts page or in the equivalent RACADM or WSMAN interfaces) are replicated in the OS log using the iDRAC Service Module. This process is similar to the System Event Log (SEL) replication performed by Server Administrator.

The default set of logs to be included in the OS logs are the same as the logs configured for SNMP traps/alerts. Only the events logged in the LC log after the iDRAC Service Module was installed are replicated to the OS Log. If Server Administrator is installed, the monitoring feature is disabled to avoid duplicate SEL entries in the OS log.

Starting iDRAC Service Module 2.1, you can customize the location to replicate the LC logs. By default, the LC logs are replicated in the **System** group of the **Windows logs** folder in the Windows **Event Viewer**. You can replicate the LC logs to an existing group or create a new folder in the **Application and Services Logs** folder in the Windows **Event Viewer**.

i **NOTE:** You can choose the location to replicate the LC logs only during iDRAC Service Module custom installation or iDRAC Service Module modification.

i **NOTE:** The source name of the iDRAC Service Module LCL logs has been changed from **iDRAC Service Module** to **Lifecycle Controller Log**.

Automatic system recovery feature

Automatic System Recovery feature is a hardware-based timer, which is used to reset the server in the event of a hardware failure. You can perform automatic system recovery operations such as reboot, power cycle, or power off after a specified time interval. This feature is enabled only when the operating system watchdog timer is disabled. If Server Administrator is installed, the monitoring feature is disabled to avoid duplicate watchdog timers.

Windows Management Instrumentation Providers

Windows Management Instrumentation Providers available with iDRAC Service Module exposes hardware data through Windows Management Instrumentation (WMI). WMI is a set of extensions to the Windows Driver Model that provides an operating system interface through which instrumented components provide information and notification. WMI is Microsoft's implementation of the Web-Based Enterprise Management (WBEM) and Common Information Model (CIM) standards from the Distributed Management Task Force (DMTF) to manage Server hardware, operating systems and applications. WMI Providers helps to integrate with Systems Management Consoles such as Microsoft System Center and enables scripting to manage Microsoft Windows Servers.

Automatic Technical Support Report collection

The Technical Support Report (TSR) feature in iDRAC collects information about the hardware, OS and relevant application data and compresses this information. Currently, you have to manually run the OS Collector tool to generate the TSR. Using iDRAC Service Module 2.0 or later versions, the OS Collector tool automatically collects relevant OS and hardware information. Automatic Support Log collection including OS and Application Information Collection with TSR.

By using iDRAC Service Module you reduce the number of manual steps to collect the Technical Support Report as the collection process is automated.

i **NOTE:** This feature is available by default when you install iDRAC Service Module 2.0 or later versions on systems running supported Microsoft or Linux operating systems. You cannot disable the feature.

i **NOTE:** The OS log collection feature of Automatic Technical Support Report is not supported on CentOS.

Prepare to remove NVMe PCIe SSD device

You can remove a Non-Volatile Memory Express (NVMe) Peripheral Component Interconnect Express (PCIe) Solid State Device (SSD) without shutting down or rebooting the system. When you are removing a device, all the activities associated with

the device must be stopped to prevent data loss. To prevent loss of data use the Prepare to Remove option, which stops all the device-associated background activities, after which you can remove the NVMe PCIe SSD physically.

Supported features — operating systems matrix

The following is the list of supported features and the operating system.

| | Features | Operating Systems | | |
|--|---|--|-------|------------------------------|
| | | Microsoft Windows (including HyperV systems) | Linux | Virtualization (VMware ESXi) |
| 12th generation and 13th generation | Sharing OS Information | Yes | Yes | Yes |
| 12th generation and 13th generation | LC Log Replication | Yes | Yes | Yes |
| 12th generation and 13th generation | Automatic System Recovery/Watchdog | Yes | Yes | Yes |
| 13th generation | Windows Management Instrumentation Providers | Yes | No | No |
| 13th generation | Prepare to Remove NVMe device through iDRAC | Yes | Yes | Yes* |
| 13th generation | Automating Technical Support Report OS collection | Yes | Yes | No |

* — The **Prepare to Remove NVMe device through iDRAC** feature is supported only on VMware ESXi 6.0 and not on any other versions of VMware ESXi operating systems.

NOTE: The features such as **Windows Management Instrumentation Providers, Prepare to Remove NVMe device through iDRAC, Automating Technical Support Report OS collection** are supported only on Dell's 13th generation of PowerEdge servers with a minimum firmware version of 2.00.00.00 or later.

NOTE: For the list of platforms supported by iDRAC Service Module, see [Supported operating systems](#).

Co-existence of Server Administrator and iDRAC Service Module

In a system, both Server Administrator and the iDRAC Service Module can co-exist. If you enable the monitoring features during the iDRAC Service Module installation, after the installation is complete, if the iDRAC Service Module detects the presence of Server Administrator, iDRAC Service Module disables the set of monitoring features that overlap. The iDRAC Service Module keeps polling Server Administrator and its features. At any time if the Server Administrator service stops, the respective iDRAC Service Module feature is enabled.

Software availability

The iDRAC Service Module software is available on the

- *Systems Management Tools and Documentation (SMTD) DVD*
- Support site — dell.com/support

Downloading iDRAC Service Module

You can download the iDRAC Service Module software from [dell.com/support/home](https://www.dell.com/support/home) .

Accessing documents from Dell support site

You can access the required documents in one of the following ways:

- Using the following links:
 - For all Enterprise Systems Management documents—<https://www.dell.com/esmanuals>
 - For OpenManage documents—<https://www.dell.com/openmanagemanuals>
 - For Remote Enterprise Systems Management documents—<https://www.dell.com/esmanuals>
 - For OpenManage Connections Enterprise Systems Management documents—<https://www.dell.com/OMConnectionsEnterpriseSystemsManagement>
 - For Serviceability Tools documents—<https://www.dell.com/serviceabilitytools>
 - For OpenManage Connections Client Systems Management documents—<https://www.dell.com/omconnectionsclient>
- From the Dell Support site:
 1. Go to www.dell.com/support/home.
 2. Under **Select a product** section, click **Software & Security**.
 3. In the **Software & Security** group box, click the required link from the following:
 - **Enterprise Systems Management**
 - **Remote Enterprise Systems Management**
 - **Serviceability Tools**
 - **Dell Client Command Suite**
 - **Connections Client Systems Management**
 4. To view a document, click the required product version.
- Using search engines:
 - Type the name and version of the document in the search box.

Software license agreement

The software license for the supported versions of the operating system of the iDRAC Service Module is on the installer. Read the `license_agreement.txt` file. By installing or copying any of the files on the media, you are agreeing to the terms in `license_agreement.txt` file.

Other documents you may need

In addition to this guide, you can access the following guides available at [dell.com/support/home](https://www.dell.com/support/home).

- The *Integrated Dell Remote Access Controller (iDRAC) User's Guide* provides detailed information on configuring, and using the iDRAC.
- The *Dell Remote Access Controller Racadm User's Guide* provides information about using the Racadm command-line utility.
- The *Dell Update Packages User's Guide* provides information about obtaining and using Dell Update Packages as part of your system update strategy.
- The *Dell Event Messages Reference Guide* provides information on the event and error information generated by firmware and other agents that monitor system components.
- The *Dell Lifecycle Controller 2 Web Services Interface Guide* provides information and examples for utilizing the Web services for Management (WS-Man) Management protocol.

Preinstallation setup

Ensure that you assess the following before installing the iDRAC Service Module:

- Dell's 12th generation of PowerEdge or later servers. For the list of supported platforms, see [Supported platforms](#).
- Minimum firmware version — For iDRAC7 – 1.57.57 or later and for iDRAC8 – 2.00.00.00 or later.
- **NOTE:** If you install iDRAC Service Module 2.0 or later on iDRAC7 1.5x.5x, you cannot use the new features provided by iDRAC Service Module 2.0 or later versions. However, you get the features of iDRAC Service Module 1.0.
- Read the installation instructions for the operating system.
- Read the applicable release notes files and the *Systems Software Support Matrix*.
- Read the Installation Requirements to ensure that the system meets or exceeds the minimum requirement.
- Close all applications running on the system before installing the iDRAC Service Module application.

Topics:

- [Installation requirements](#)
- [Supported operating systems](#)
- [Supported platforms](#)
- [System requirements](#)

Installation requirements

This section describes the general requirements of the iDRAC Service Module and provides information on supported operating systems and the basic system requirements.

Windows

- Microsoft Windows 2008 x64 SP2, Windows 2008 R2 SP1, Windows 2012, or Windows 2012 R2 operating system.
- Administrator privileges.

Linux

- Red Hat Enterprise Linux 6.5, Red Hat Enterprise Linux 6.7, Red Hat Enterprise Linux 7, Red Hat Enterprise Linux 7.1, SUSE Linux Enterprise Server 11 SP3, SUSE Linux Enterprise Server 11 SP4, and SUSE Linux Enterprise Server 12 operating system.

NOTE: Prerequisites specific to an operating system are listed as part of the installation procedures.

NOTE: The iDRAC Service Module can be installed using an User Interface. The installer also supports a silent installation mechanism.

Supported operating systems

The iDRAC Service Module support is available on the following 64-bit operating system:

- Microsoft Windows Server 2008 SP2
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows 2012
- Microsoft Windows 2012 R2
- Red Hat Enterprise Linux 6.5
- Red Hat Enterprise Linux 6.7
- Red Hat Enterprise Linux 7
- Red Hat Enterprise Linux 7.1
- SUSE Linux Enterprise Server 11 SP3
- SUSE Linux Enterprise Server 11 SP4
- SUSE Linux Enterprise Server 12

- VMware ESXi 5.1 U2
- VMware ESXi 5.1 U3
- VMware ESXi 5.5 U2
- VMware ESXi 5.5 U3
- VMware ESXi 6.0
- VMware ESXi 6.0 U1
- Citrix XenServer 6.5
- Citrix XenServer 6.5 SP1
- CentOS 6.5*
- CentOS 7*

* — iDRAC Service Module can be installed on CentOS version 6.5 and 7.0. Dell provides only limited support for CentOS. For more information or support on CentOS, contact the CentOS community.

For information on supported operating systems, see the *Systems Software Support Matrix* at dell.com/support/home.

Supported platforms

iDRAC Service Module 2.2 supports Dell's 12th generation of PowerEdge or later servers. Servers are classified based on the type, performance, generation, and the processor used.

| Type of Server | Specifics | | |
|----------------|---|--|--|
| | Overall Performance | Generation | Processor |
| Rack = R | 1 to 5 — Low End Server 5–10 — High End Server | 2 — 12 th generation 3 — 13 th generation | 0 — Intel processor 5 — AMD processor |
| Tower = T | | | |
| Modular = M | | | |

For example: **M820** is a Dell's 12th generation PowerEdge modular high-end server which uses an Intel processor.

The following is the list of supported platforms for iDRAC Service Module.

| Dell 13 th generation PowerEdge servers | Dell 12 th generation PowerEdge servers |
|---|---|
| R530 XD, R730, R730 XD, R630, T630, R230, R330, R430, R530, R930, T130, T330, T430, M630, M830, FC430, FC630, FC830, C4130, C6230 | M820, M620, M520, M820, M820, M620, M520, M420, R220, R320, R420, R520, R620, R720, R720 XD, R820, R920, T320, T420, T620 |

System requirements

- One of the supported operating systems. For more information on supported operating systems, see [Supported operating systems](#).
- Minimum 2GB RAM.
- Minimum 512MB of hard drive space.
- Administrator rights.
- TCP/IPv4 connection.

Installing the iDRAC Service Module on Microsoft Windows operating systems

The iDRAC Service Module installer installs all the features on the supported operating system and enables all the features by default.

Topics:

- [Installing the iDRAC Service Module on Microsoft Windows operating systems](#)
- [Modifying the iDRAC Service Module components on Microsoft Windows operating systems](#)
- [Repairing the iDRAC Service Module on Microsoft Windows operating systems](#)
- [Uninstalling the iDRAC Service Module on Microsoft Windows operating systems](#)

Installing the iDRAC Service Module on Microsoft Windows operating systems

The iDRAC Service Module installer for the supported operating systems is available on the *Systems Management Tools and Documentation DVD*. You can also download the iDRAC Service Module installer from dell.com/support/home.

You can perform a manual or an automated installation using appropriate command-line switches. You can install the iDRAC Service Module through the **push** mechanism using consoles like OpenManage Essentials (OME).

1. Browse to **SYSMGMT > iSM > Windows**, and then run `iDRACSvcMod.msi`.
The **iDRAC Service Module - InstallShield Wizard** is displayed.
2. Click **Next**.
The **License Agreement** is displayed.
3. Read the software license agreement, select **I accept the terms in the license agreement**, and then click **Next**.
4. Select the **Setup Type** from the following options, and click **Next**.
 - **Typical** – All program features are installed (Requires the most disk space).
 - **Custom** – Customize the installation by choosing the program features you want to install along with the location (Recommended for advanced users).

The available options are:

- **Operating System Information**
- **Automatic System Recovery**
- **Lifecycle Log Replication**
- **Windows Management Instrumentation (WMI) Providers**

NOTE: The following steps are applicable, only if you select the **Custom** option in the **Setup Type** window.

- a. Choose the program features you want to install and click **Next**.
The **Lifecycle Controller Log Replication** window is displayed.
- b. Specify the location where the LC logs are to be replicated. By default, **Typical (Windows Logs/System)** option is selected and the LC logs are replicated in the **System** group of the **Windows Logs** folder in the **Event Viewer**. Click **Next**.

NOTE: You can also create a custom group in the **Application and Services Log** folder by selecting the **Custom** option in the **Lifecycle Controller Log Replication** window.

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

5. Click **Install** to continue with the installation.
You can also click **Back** to change the preferences.

The iDRAC Service Module is successfully installed.

6. Click **Finish**.

Silent installation

You can install the iDRAC Service Module using silent installation in the background without any interactive console.

- To install iDRAC Service Module using silent installation, type `msiexec /i iDRACSvcMod.msi /qn` on the command prompt.
- To generate the install logs, type `msiexec /i iDRACSvcMod.msi /L*V <logname with the path>`
- To replicate the LC logs in an existing group or a custom folder, type `msiexec /i iDRACSvcMod.msi CP_LCLOG_VIEW="<existing group name or custom folder name>"`.
- To view the user interface in the supported languages, type `msiexec /i iDRACSvcMod.msi TRANSFORMS= <locale number>.mst`, where locale number is:

| Locale Number | Language |
|---------------|--------------------|
| 1031 | German |
| 1033 | English (US) |
| 1034 | Spanish |
| 1036 | French |
| 1041 | Japanese |
| 2052 | Simplified Chinese |

Modifying the iDRAC Service Module components on Microsoft Windows operating systems

To modify iDRAC Service Module components:

1. Browse to **SYSMGMT > iSM > Windows**, and then run `iDRACSvcMod.msi`.
The **iDRAC Service Module - InstallShield Wizard** is displayed.
2. Click **Next**.
3. Select **Modify**.
4. Enable or disable the features as required and then click **Next**.
The **Lifecycle Controller Log Replication** window is displayed.
5. Specify the location where you need the LC logs to be replicated. By default, **Typical (Windows Logs/System)** option is selected and the LC logs are replicated in the **System** group of the **Windows Logs** folder in the **Event Viewer**. Click **Next**.

NOTE: You can also create a custom group in the **Application and Services Log** folder by selecting the **Custom** option in the **Lifecycle Controller Log Replication** window.

NOTE: You may have to restart the system in the following scenarios:

- If you switch between **Typical (Windows Logs/System)** and **Custom** options.
- If you switch from one custom folder to another folder.

The **Ready to install** screen is displayed.

6. Click **Install** to continue the process.
You can also click **Back** to change the preferences.
The iDRAC Service Module is successfully modified.
7. Click **Finish**.

Repairing the iDRAC Service Module on Microsoft Windows operating systems

If you want to repair the iDRAC Service Module component that is faulty or non-functional:

1. Browse to **SYSMGMT > iSM > Windows**, and then run `iDRACSvcMod.msi`.
The **iDRAC Service Module - InstallShield Wizard**.
2. Click **Next**.
3. Select **Repair** and click **Next**.
The **Ready to install** is displayed.
4. Click **Repair** to continue the process.
You can also click **Back** to change the preferences.
The iDRAC Service Module component is successfully repaired.
5. Click **Finish**.

Uninstalling the iDRAC Service Module on Microsoft Windows operating systems

The iDRAC Service Module can be uninstalled in two different methods:

- [Unattended uninstall using the product ID](#)
- [Uninstalling using the add/remove feature](#)

Unattended uninstall using the product ID

Type `msiexec /x {360B72DD-74B7-4594-8C62-C8BE889B3A33}` to uninstall the iDRAC Service Module using the product ID.

Uninstalling using the add/remove feature

The iDRAC Service Module can be uninstalled by using the **Add** or **Remove** option from the control panel. To do so, go to **Start > Control Panel > Programs and Features**.

 **NOTE:** You can also uninstall by selecting **Uninstall** after you run the `iDRACSvcMod.msi`.

 **NOTE:** You can view the iDRAC Service Module logs in the **Application** group of the **Windows Logs** folder in the Windows **Event Viewer**.

Installing iDRAC Service Module on supported Linux operating system

The complete iDRAC Service Module is packaged in a single Red Hat Package Manager (rpm). The package, accompanied by a shell script can install, uninstall, or enable/disable the features available.

As the Installer on Linux is a single rpm install, there is no granular install support. You can enable/disable the features through the scripted installs only.

NOTE: The Installer is available for all iDRAC Service Module supported 64-bit versions of operating systems Red Hat Enterprise Linux 5, Red Hat Enterprise Linux 6, Red Hat Enterprise Linux 6.7, Red Hat Enterprise Linux 7, Red Hat Enterprise Linux 7.1, SUSE Linux Enterprise Server 11, SUSE Linux Enterprise Server 11 SP4, SUSE Linux Enterprise Server 12, Citrix XenServer 6.2 SP1, VMware ESXi 5.1 U2, VMware ESXi 5.1 U3, VMware ESXi 5.5 U2, and VMware ESXi 6.0. There is no support for ESX classic.

NOTE: On repository-based installs such as, Yellowdog Updater, Modified (YUM), VMware Update Manager (VUM) and Citrix XenServer supplemental pack, all the features are enabled by default.

NOTE: The OS log collection feature of Automatic TechSupport Report is not supported on CentOS.

Topics:

- [Preinstallation requirement for Linux operating system](#)
- [Linux install dependency](#)
- [Installing The iDRAC Service Module on Linux operating system](#)
- [Uninstalling the iDRAC Service Module on Linux operating system](#)

Preinstallation requirement for Linux operating system

To install the iDRAC Service Module on systems running the supported Linux operating system, run `setup.sh`.

Ensure that the basic functional requirements are met, such as:

- The OS-to-iDRAC Pass-through feature for USBNIC mode is enabled by default. If it is disabled, enable it manually.
- The IPv4 Network stack is enabled in the Host Operating system.
- The USB subsystem is enabled.
- `udev` is enabled; required to start iDRAC Service Module automatically.

For more information on iDRAC, see the latest *Integrated Dell Remote Access Controller User's Guide* at dell.com/support/home.

Linux install dependency

The following are the list of dependent packages/executable(s) that need to be installed to complete the installation.

| Executable Commands | Package Name |
|----------------------|--------------|
| /sys | fileSystem |
| grep | grep |
| cut, cat, echo, pwd, | coreutils |

| | |
|-----------------------|--|
| lsusb | usbutils |
| find | findutils |
| Shell Script commands | bash |
| ifconfig | net-tools |
| ping | iputils |
| chkconfig | RedHat Enterprise Linux <ul style="list-style-type: none"> • chkconfig SUSE Linux Enterprise Server <ul style="list-style-type: none"> • aaa_base |
| install_initd | RedHat Enterprise Linux <ul style="list-style-type: none"> • redhat-lsb-core SUSE Linux Enterprise Server <ul style="list-style-type: none"> • insserv |
| /etc/init.d/ipmi | OpenIPMI |
| Systemctl | systemd |

Installing The iDRAC Service Module on Linux operating system

1. The available features that can be installed are displayed on the screen. The available options are:

- [1] Watchdog Instrumentation Service.
- [2] Lifecycle Log Replication.
- [3] Operating System Information.
- [4] All features.

2. To install the required feature, enter the number of the respective feature.

i **NOTE:** Separate the number of the features to be installed by a comma.

i **NOTE:** To install all the three features select **All features** option.

3. If you do not want to continue the installation, enter **q** to quit.

i **NOTE:** To know if iDRAC Service Module is installed on your Linux operating system, run the command `/etc/init.d/dcismeng status`. If the iDRAC Service Module is installed and running, the status **running** is displayed.

i **NOTE:** Use the `systemctl status dcismeng.service` command instead of the `init.d` command to check if the iDRAC Service Module is installed on RedHat Enterprise Linux 7 or SUSE Linux Enterprise 12 operating system.

Silent installation

You can install the iDRAC Service Module silently in the background without a user console. This can be achieved by using `setup.sh` with parameters.

The parameters that can be passed to use `setup.sh` are:

| Parameter | Description |
|-----------|--|
| -h | Help: Displays the help. |
| -l | Install: Installs and enables the selected features. |

| | |
|----|--|
| -x | Express: Installs and enables all available features. |
| -d | Delete: Uninstall the iDRAC Service Module component. |
| -w | Automatic System Recovery: Enables the Automatic System Recovery Instrumentation Service |
| -l | LC LOG: Enables the Lifecycle Log Replication |
| -o | OS Information: Enables the Operating System Information |
| -a | Autostart: Start the installed service after the component has been installed. |

Uninstalling the iDRAC Service Module on Linux operating system

The iDRAC Service Module can be uninstalled in two different methods:

- [Using uninstall script](#)
- [Using RPM command](#)

Uninstalling the iDRAC Service Module using the uninstall script

The script used for uninstalling the iDRAC Service Module is `dcism-setup.sh`. Run the shell script and select `d` to uninstall the iDRAC Service Module.

Uninstalling the iDRAC Service Module using the RPM command

The iDRAC Service Module can be uninstalled using the RPM command `rpm -e dcism` in the command line.

Installing the iDRAC Service Module on VMware ESXi

VMware ESXi is factory-installed on some systems. For a list of these systems, see the latest *Systems Software Support Matrix* at dell.com/support/home.

The iDRAC Service module is available as a .zip file for installing on systems running VMware ESXi operating system. The .zip file follows the naming convention **ISM-Dell-Web-2.2.0-<bltno>.VIB-<version>i.zip**, where <version> is the supported ESXi version.

The zip files for the supported ESXi versions are:

- For ESXi 5.1 – ISM-Dell-Web-2.2.0-<bltno>.VIB-ESX51i.zip
- For ESXi 5.5 – ISM-Dell-Web-2.2.0-<bltno>.VIB-ESX55i.zip
- For ESXi 6.0 – ISM-Dell-Web-2.2.0-<bltno>.VIB-ESX60i.zip

Download VMware vSphere Command Line Interface (vSphere CLI) from <http://vmwaredepot.dell.com/> and install on the Microsoft Windows or Linux system. Alternately, you can import VMware vSphere Management Assistant (vMA) to the ESXi host.

Topics:

- [Using the vSphere CLI](#)
- [Using the VMware vSphere Management Assistant](#)
- [Using the VMware Update Manager](#)
- [Using the Power CLI](#)

Using the vSphere CLI

To install the iDRAC Service Module software on VMware ESXi using the vSphere CLI:

1. Copy and unzip the ISM-Dell-Web-2.2.0-<bltno>.VIB-<version>i.zip file to a directory on the system.
2. Shut down all guest operating systems on the ESXi host and put the ESXi host in maintenance mode.
3. If you are using vSphere CLI on Windows, go to the directory where you have installed the vSphere CLI utilities. If you are using vSphere CLI on Linux, perform the command from any directory.
4. Perform the following command:

```
For VMware ESXi 5.1: esxcli --server <IP Address of ESXi 5.1 host> software vib install
-d /var/log/vmware/<iDRAC Service Module file>.
```

```
For VMware ESXi 5.5: esxcli --server <IP Address of ESXi 5.5 host> software vib install
-d /var/log/vmware/<iDRAC Service Module file>.
```

```
For VMware ESXi 6.0: esxcli --server <IP Address of ESXi 6.0 host> software vib install
-d /var/log/vmware/<iDRAC Service Module file>.
```

 **NOTE:** The .pl extension is not required if you are using vSphere CLI on Linux.

5. Type the root username and password of the ESXi host when prompted. The command output displays a successful or a failed update.
6. Restart the ESXi host system.

To get or list the information about the installed VIBs, use `esxcli --server <IP>software vib get` or `software vib list`.

Using the VMware vSphere Management Assistant

The vSphere Management Assistant (vMA) allows administrators and developers to run scripts and agents to manage ESXi systems. For more information on vMA, see <http://vmware.com/support/developer/vima/>.

1. Log on to vMA as an administrator and provide the password when prompted.
2. Copy and unzip the `ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i.zip` file to a directory on the vMA.
3. Shut down all guest operating systems on the ESXi host and put the ESXi host in maintenance mode.
4. In vMA, execute the following command:
For VMware ESXi 5.1:

```
esxcli --server <IP Address of ESXi 5.1 host> software vib install -d /var/log/vmware/<iDRAC Service Module file>.
```


For VMware ESXi 5.5:

```
esxcli --server <IP Address of ESXi 5.5 host> software vib install -d /var/log/vmware/<iDRAC Service Module file>.
```


For VMware ESXi 6.0:

```
esxcli --server <IP Address of ESXi 6.0 host> software vib install -d /var/log/vmware/<iDRAC Service Module file>.
```
5. Enter the root username and password of the ESXi host when prompted.
6. Restart the ESXi host system.

After completing the above steps:


1. Install **iDRAC Service Module** separately on a management station.
2. After installing the iDRAC Service Module, enable the services.

Using the VMware Update Manager

To install the iDRAC Service Module using VMware Update Manager (VUM):

1. Install VMware vSphere 5.x or later versions (vCenter Server, vSphere Client, and VMware vSphere Update Manager) on a supported Microsoft Windows operating system.
2. On the desktop, double-click VMware vSphere Client and login to vCenter Server.
3. Right-click vSphere Client host and click **New Datacenter**.
4. Right-click **New Datacenter** and click **Add Host**. Provide information for the ESXi server per online instructions.
5. Right-click the ESXi host added in the previous step and click **Maintenance Mode**.
6. From **Plug-ins**, select **Manage Plug-ins > download VMware Update Manager**. (The status is enabled if the download is successful.) Follow the instructions to install the VUM client.
7. Select the ESXi host. Click **Update Manager > Admin view > Patch Repository > Import Patches** and follow the online instructions to upload the patch successfully.
The offline bundle is displayed.
8. Click **Baselines and Groups**.
9. Click **create from Baselines** tab, mention baseline name and select **Host Extension** as baseline type.
Complete the rest as per instructions.
10. Click **Admin View**.
11. Click **Add to Baseline** (against the uploaded patch name) and select the baseline name that you have created in step 8.
12. Click **Compliance view**. Select the **Update Manager** tab. Click **Attach** and select the **Extension Baseline** created in step 8 and follow the instructions.
13. Click **Scan** and select **Patches and Extensions** (if not selected by default) and click **Scan**.
14. Click **Stage**, select created **Host Extension** and follow the instructions.
15. Click **Remediate** and follow the instructions once the staging is completed.
iDRAC Service Module installation is complete.
16. Reboot the host.


 **NOTE:** For more information on VMWare Update Manager, see the VMWare official website.

 **NOTE:** You can install iDRAC Service Module from the VUM repository <https://vmwaredepot.dell.com/>.

Using the Power CLI

To install the iDRAC Service Module using Power CLI:

1. Install the supported PowerCLI of ESXi on the supported Microsoft Windows operating system.
2. Copy the `ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i.zip` file to the ESXi host.
3. Navigate to the bin directory.
4. Run Connect-VIServer and provide the server and other credentials.
5. Log on to the ESXi host using supported vSphere CLI of ESXi 5.1, ESXi 5.5, or ESXi 6.0 and create a datastore.
6. Create a folder **ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i** on ESXi 5.1, ESXi 5.5, or ESXi 6.0 host under **/vmfs/volumes/<datastore_name>** directory.
7. Copy the ESXi zip file on ESXi 5.0 U1 host to **/vmfs/volumes/<datastore_name>ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i** directory.
8. Unzip the zip file in the above specified directory.
9. Run the following command in Power CLI.
for ESXi 5.1 `Install-VMHostPatch -VMHost <VMHost I.P address>- HostPath /vmfs/volumes/<datastore_name>name>/ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i/ cross_oem-dell-ISM-esxi_2.2.0.ESXi510-0000-metadata.zip`
for ESXi 5.5 `Install-VMHostPatch -VMHost 10.94.171.97 - HostPath /vmfs/volumes/<datastore_name>name>/ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i/ cross_oem-dell-ISM-esxi_2.2.0.ESXi550-0000-metadata.zip .`
for ESXi 6.0 `Install-VMHostPatch -VMHost 10.94.171.97 - HostPath /vmfs/volumes/<datastore_name>name>/ISM-Dell-Web-2.2.0-<bldno>.VIB-<version>i/ cross_oem-dell-ISM-esxi_2.2.0.ESXi600-0000-metadata.zip .`
10. Reboot the ESXi host.
11. Run the following command to check if the iDRAC Service Module is installed successfully on the host. `esxcli software vib list|grep -i open`.
12. iDRAC Service Module is displayed.

 **NOTE:** For more information on Power CLI, see the VMWare official website.

Installing the iDRAC Service Module on Citrix XenServer

The iDRAC Service Module is installed on Citrix XenServer using the Supplemental Pack. The Supplemental Pack for Citrix XenServer can be installed in two ways:

- [On a running system](#)
- [During the installation](#)

Topics:

- [Installing the iDRAC Service Module on Citrix XenServer on a running system](#)
- [Installing the iDRAC Service Module on Citrix XenServer during XenServer installation](#)

Installing the iDRAC Service Module on Citrix XenServer on a running system

To install the Supplemental Pack for Citrix XenServer 6.x on a running system:

1. Burn the Supplemental Pack ISO file to a CD/DVD or download the ISO file to the server.

If you are downloading the ISO file, mount it on a temporary directory as follows:

```
$ mount -o loop <iDRACServiceModule-supplemental-pack-filename>.iso /mnt
```

If you burned the ISO file to a CD/DVD, insert it in the optical drive and run:

```
$ mount /dev/cdrom /mnt
```

2. Install the supplemental pack:

```
$ cd /mnt
```

```
$ ./install.sh
```

OR

```
$ xe-install-supplemental-pack <iDRACServiceModule-supplemental-pack-filename>.iso
```

3. When the installation is complete, unmount the ISO file or CD:

```
$ cd ..
```

```
$ umount /mnt
```

Installing the iDRAC Service Module on Citrix XenServer during XenServer installation

To install the Supplemental Pack for Citrix XenServer during the installation of XenServer:

1. Start the installation of XenServer as usual and follow the instructions on the screen.
2. One of the early questions during the installation process of XenServer is if you want to install any Supplemental Packs, click **Yes** and continue with the installation process.
3. After the base XenServer image is installed (5–10 minutes depending on the speed of the system), you are prompted to insert the Supplemental Pack CD. Eject the XenServer installation CD from the optical drive, insert the Supplemental Pack CD and click OK. The message `iSM Supplemental Pack was found` is displayed. To confirm installation, click Use and click OK.

NOTE: If you have more than one Supplemental Pack (either the Linux Supplemental Pack from Citrix or other third-party applications) you can install them in any order, although it is recommended that you install the Supplemental Pack last.

4. After completing the Supplemental Pack installation (2–5 minutes, depending on the speed of the system), you are prompted to install other Supplemental Packs. If you do not want to install other supplemental packs, click Skip and press <Enter>. The XenServer is installed successfully.

When installing RPM packages, to avoid warnings concerning the RPM–GPG key, import the key with a command similar to the following:

```
rpm --import<OM DVD mountpoint>SYSMGMT/srvadmin/linux/RPM-GPG-KEY
```

Configuring the iDRAC Service Module

You can configure the iDRAC Service Module using the:

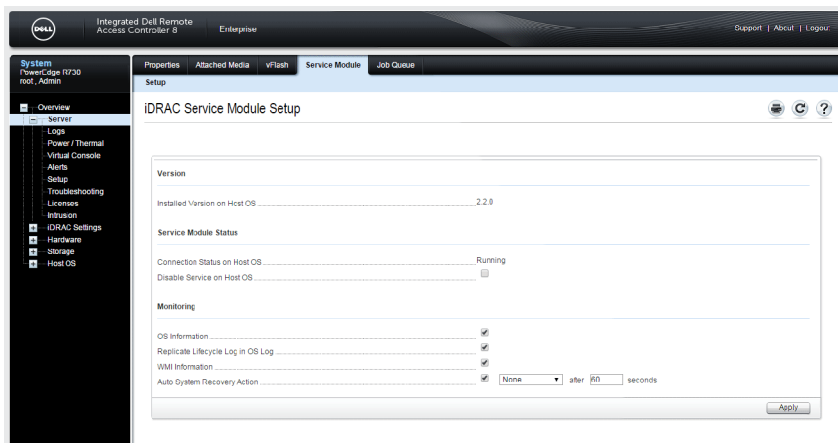
- [iDRAC web interface](#)
- [RACADM CLI command](#)
- [WSMAN command](#)

Topics:

- [Configuring The iDRAC Service Module From iDRAC Web Interface](#)
- [Configuring the iDRAC Service Module from RACADM](#)
- [Configuring the iDRAC Service Module from WSMAN](#)

Configuring The iDRAC Service Module From iDRAC Web Interface

To use the iDRAC Service Module from the iDRAC Web interface, go to **Overview > Server > Service Module**.



Configuring the iDRAC Service Module from RACADM

The iDRAC Service Module can be accessed and configured through RACADM CLI commands. To know the status of the features provided by the iDRAC Service Module, use `racadm get idrac.servicemodule` command. This command lists the features and their status of the iDRAC Service Module:

- OSInfo
- LCLReplication
- WMI Information
- Auto System Recovery Action

To set or configure the features, use `racadm set idrac.servicemodule. <feature name> <enabled or disabled>`.

NOTE: The name of the feature or the attribute listed starting from an # symbol cannot be modified.

To use the iDRAC Service Module from RACADM, see the objects in the **Service Module** group in the *RACADM Command Line Reference Guide for iDRAC8 and CMC* available at dell.com/support/home.

Configuring the iDRAC Service Module from WSMAN

The iDRAC Service Module can be accessed and configured through WSMAN using the command

```
To configure the iDRAC Service Module use winrm i ApplyAttributes http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/root/dcim/DCIM_iDRACCardService?CreationClassName=DCIM_iDRACCardService+Name=DCIM:iDRACCardService+SystemCreationClassName=DCIM_ComputerSystem+SystemName=DCIM:ComputerSystem -u:root -p:calvin -r:https://<Host IP address>/wsman -SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic @{"Target="iDRAC.Embedded.1";AttributeName="AgentLite.1#<feature>";AttributeValue="1"}
```


To use the iDRAC Service Module from WSMAN, see *The Dell Lifecycle Controller 2 Web Services Interface Guide* provides information and examples for utilizing the Web services for Management (WS-Man) Management protocol. available at dell.com/support/home.

Frequently asked questions

This section lists some frequently asked questions about the iDRAC Service Module.

Do I need to uninstall Open Manage Server Administrator before installing or running the iDRAC Service Module?

No. Before you install or run the iDRAC Service Module, ensure that you have stopped the features of Server Administrator that the iDRAC Service Module provide.

 **NOTE:** Uninstalling the Server Administrator is not required.

How do I know that the iDRAC Service Module is installed in my system?


To know if the iDRAC Service Module is installed on your system,

- On Windows:

Run the `service.msc` command. Find from the list of services if there is a service by name **DSM iDRAC Service Module**.

- On Linux:

Run the command `/etc/init.d/dcismeng status`. If the iDRAC Service Module is installed and running, the status displayed will be **running**.

 **NOTE:** Use the `systemctl status dcismeng.service` command instead of the `init.d` command to check if the iDRAC Service Module is installed on RedHat Enterprise Linux 7 and SUSE Linux Enterprise 12 operating system.

How do I know which version of the iDRAC Service Module I have in my system?

To check the version of the iDRAC Service Module in the system, click **Start > Control Panel > Programs and Features**. The version of the installed iDRAC Service Module will be listed in the **Version** tab. You can also check the version by go to **My Computer > Uninstall or change a program**.

What is the minimum permission level required to install the iDRAC Service Module?

To install the iDRAC Service Module, you must have Administrator level privileges.

Whenever I try to install the iDRAC Service Module, it shows an error message **This is not a supported server.**

Consult the User Guide for additional information about the supported servers. What should I do now?

Before installing the iDRAC Service Module, ensure that the server or the system on which the iDRAC Service Module is to be installed is a Dell's 12th generation PowerEdge server or later. Also make sure that you have a 64-bit system.

I see the message **The iDRAC Service Module is unable to communicate with iDRAC using the OS to iDRAC Pass-through channel** in the OS log, even when the OS to iDRAC Pass-through over USBNIC is configured properly. Why do I get this message?

iDRAC Service Module uses the OS to iDRAC Pass-through over USBNIC to establish communication with iDRAC. Sometimes, the communication is not established though the USBNIC interface is configured with correct IP endpoints. This may happen when the host OS routing table has multiple entries for the same destination mask and the USBNIC destination is not listed as the first one in routing order.

| Destination | Gateway | Genmask | Flags | Metric | Ref | Use Iface |
|-------------|-------------|---------------|-------|--------|-----|----------------|
| default | 10.94.148.1 | 0.0.0.0 | UG | 1024 | 0 | 0 em1 |
| 10.94.148.0 | 0.0.0.0 | 255.255.255.0 | U | 0 | 0 | 0 em1 |
| link-local | 0.0.0.0 | 255.255.255.0 | U | 0 | 0 | 0 em1 |
| link-local | 0.0.0.0 | 255.255.255.0 | U | 0 | 0 | 0 enp0s20u12u3 |

In the example **enp0s20u12u3** is the USBNIC interface. The link-local destination mask is repeated and the USBNIC is not the first one in order. This results in the connectivity issue between iDRAC Service Module and iDRAC over the OS to iDRAC Pass-through. To troubleshoot the connectivity issue, you can perform one of the following steps:

Ensure that the iDRAC USBNIC IPv4 address (by default it's 169.254.0.1) is reachable from the host OS. If not:

- Change the iDRAC USBNIC address on a unique destination mask.
- Delete the unwanted entries from the routing table to ensure USBNIC is chosen by route when the host wants to reach the iDRAC USBNIC IPv4 address.

Whenever I try to install the iDRAC Service Module, an error message **This operating system is not supported** is displayed.

The iDRAC Service Module can be installed only on the supported operating systems. For information on operating systems that are supported, see [Supported operating systems](#).

Where do I find the Replicated LifeCycle log on my Operating System?

To view the replicated LifeCycle logs:

| Operating System | Location |
|---|---|
| Microsoft Windows | Event viewer > Windows Logs > <Existing group or Custom folder> . All the iDRAC Service Module LifeCycle logs are replicated under the source name iDRAC Service Module . |
| Red Hat Enterprise Linux , SUSE Linux, CentOS, and Citrix XenServer | /var/log/messages |
| VMware ESXi | /var/log/syslog.log |

What are the Linux dependent packages or executables I should install while completing the Linux installation?

To see the list of Linux dependent packages, see [Linux dependencies](#).

I created a custom folder in Windows Event Viewer, but the LC logs are not replicated in my custom folder. What do I have to do now to replicate the LC logs?

Ensure to close the Windows **Event Viewer** after creating the custom folder. Open the Windows **Event Viewer** again to view the replicated LC logs.

I chose custom install option from the Graphical User Interface during iDRAC Service Module installation and disabled a feature, but I am not able to enable the feature using any of the other interfaces. How do I enable the feature again?


On systems running Microsoft Windows operating system, a feature that is enabled using the installer and disabled using any interface other than the installer, can only be enabled using the same interface or the installer in Graphical User Interface mode.

For example, you may not be able to enable a feature using the RACADM CLI commands, that was disabled from the Graphical User Interface during iDRAC Service Module installation.

Linux installer packages

The installer packages for the supported Linux OS are provided here:

| Supported Linux Operating System | Installer Packages |
|----------------------------------|---|
| Red Hat Enterprise Linux 6 | SYSMGMT\iSM\linux\RHEL6\x86_64\dcism-2.2.0- <bldno>.el5.x86_64.rpm |
| Red Hat Enterprise Linux 7 | SYSMGMT\iSM\linux\RHEL7\x86_64\dcism-2.2.0- <bldno>.el7.x86_64.rpm |
| SUSE Linux Enterprise Server 11 | SYSMGMT\iSM\linux\SLES11\x86_64\dcism-2.2.0- <bldno>.sles11.x86_64.rpm |
| SUSE Linux Enterprise Server 12 | SYSMGMT\iSM\linux\SLES12\x86_64\dcism-2.2.0- <bldno>.sles12.x86_64.rpm |

 **NOTE:** You can use any installer package from the list to install iDRAC Service Module on CentOS version 6.5 or 7.0 operating system.