

# iDRAC Service Module 3.0.1 User's 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.

# Contents

<b>1 Introduction.....</b>	<b>6</b>
New in this release.....	6
Supported features — operating systems matrix.....	6
Co-existence of Server Administrator and iDRAC Service Module.....	7
Software availability.....	7
Downloading iDRAC Service Module.....	7
Accessing documents from the Dell EMC support site.....	7
Software license agreement.....	8
Other documents you may need.....	8
<b>2 Preinstallation setup.....</b>	<b>9</b>
Installation requirements.....	9
Supported operating systems.....	9
Supported platforms.....	10
System requirements.....	10
<b>3 Installing the iDRAC Service Module.....</b>	<b>11</b>
Initial installation of iDRAC Service Module via iDRAC for Windows.....	11
Initial installation of iSM via iDRAC Express.....	11
Initial installation of iDRAC Service Module via iDRAC for Linux.....	12
Installing the iDRAC Service Module on Microsoft Windows operating systems.....	12
Installing the iDRAC Service Module on Microsoft Windows operating systems.....	12
Modifying the iDRAC Service Module components on Microsoft Windows operating systems.....	13
Repairing the iDRAC Service Module on Microsoft Windows operating systems.....	14
Uninstalling the iDRAC Service Module on Microsoft Windows operating systems.....	14
Installing iDRAC Service Module on supported Linux operating system.....	15
Preinstallation requirement for Linux operating system.....	15
Linux install dependency.....	15
Installing The iDRAC Service Module on Linux operating system.....	16
Uninstalling the iDRAC Service Module on Linux operating system.....	17
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
Uninstalling the iDRAC Service Module on VMware ESXi.....	19
Installing the iDRAC Service Module on Citrix XenServer.....	20
Importing DELL GPG keys to Citrix XenServer.....	20
Installing iDRAC Service Module using Citrix XenCenter management GUI dashboard.....	20
Installing the iDRAC Service Module using SSH or Local Command Shell.....	20
Installing iDRAC Service Module when the System Configuration Lock Down Mode is enabled.....	20
Support for iDRAC URI to get iSM installer.....	21

Support for idrac.local and drac.local as iDRAC FQDN.....	21
Simpler iDRAC Access via host OS.....	21
<b>4 Configuring the iDRAC Service Module.....</b>	<b>22</b>
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
<b>5 iDRAC Service Module monitoring features.....</b>	<b>24</b>
Operating system information.....	24
Lifecycle Controller log replication into operating system.....	24
Automatic System Recovery.....	25
Windows Management Instrumentation Providers.....	25
Prepare to remove NVMe PCIe SSD device.....	25
Remote iDRAC hard reset.....	25
iDRAC access via Host OS.....	25
In-band support for iDRAC SNMP alerts.....	25
Enable WSMAN Remotely.....	26
Auto-updating of iDRAC Service Module.....	26
FullPowerCycle .....	27
SupportAssist on the Box.....	27
SupportAssist registration.....	28
SupportAssist Collection.....	28
SupportAssist Collection Settings.....	29
<b>6 Frequently asked questions.....</b>	<b>31</b>
Do I need to uninstall Open Manage Server Administrator before installing or running the iDRAC Service Module?.....	31
How do I know that the iDRAC Service Module is installed in my system?.....	31
How do I know which version of the iDRAC Service Module I have in my system?.....	31
What is the minimum permission level required to install the iDRAC Service Module?.....	31
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?.....	31
I see the messageThe 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?.....	32
Whenever I try to install the iDRAC Service Module, an error message This operating system is not supported is displayed.....	32
I used the remote iDRAC hard reset feature to reset the iDRAC. However, the IPMI drives is unresponsive and I am not able to troubleshoot.....	32
Where do I find the Replicated LifeCycle log on my Operating System?.....	32
What is the default SNMP protocol configured in iDRAC Service Module to send alerts in Linux operating systems?.....	33
SMUX is not supported on my system. Which protocol should I configure to send alerts?.....	33
How do I configure iDRAC Service Module to use the Agent-x protocol to send alerts by default?.....	33
What are the Linux-dependent packages or executables I should install while completing the Linux installation?.....	33
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?.....	33

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?..... 33

I am not able to access the iDRAC page through the host OS as an Active Directory user over LDAP. I am trying to access the iDRAC page through the host OS, but I get an error saying that the site cannot be reached. How do I troubleshoot the issue?..... 34

I am not able to access the iDRAC page through the host OS after performing an iDRAC factory reset operation, such as racadm racresetcfg. How do I troubleshoot the issue?..... 34

I am seeing the past Life Cycle Logs (LCL) alerts targeted for SNMP traps replicated in Operating System logs. Can I troubleshoot the issue?..... 34

I am seeing 169.254.0.2 as the source IP address in the iDRAC SNMP trap received via iSM. How do I troubleshoot the issue?..... 34

I have configured OS to iDRAC pass-through to LOM and when I try to run dcism-sync, the update operation fails. What can be done?..... 34

**7 Linux installer packages.....35**

# 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.

## New in this release

- Support for Red Hat Enterprise Linux 6.9 (64-bit) and Red Hat Enterprise Linux 7.3
- Support for VMware ESXi 6.0 U3 and ESXi 6.5
- Support for Citrix XenServer 7.1
- Support for auto-updating of iDRAC Service Module (Microsoft Windows and Linux operating systems)
- Support for "SupportAssist on the Box" features
- Adds SupportAssist case management and collection upload features to DRAC web GUI
- Support for FullPowerCycle option
- Support for initial installation of iDRAC Service Module from iDRAC GUI (Microsoft Windows and Linux operating systems)
- Support for SupportAssist Collection from Host-OS CLI using Invoke-SupportAssistCollection utility
- Support for OS log collection on VMware ESXi server operating systems
- Support for System Configuration Lock Down Mode
- Support for In-band SNMP Alerts based on SNMP event filters in iDRAC
- Support for iDRAC URI to get iSM installer
- OS Collector OSC integration without exposing USB mass storage is added
- Support for idrac.local and drac.local as iDRAC FQDN
- Simpler iDRAC Access via host OS

## Supported features — operating systems matrix

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

**Table 1. Supported features — operating systems matrix**

Generation	Features	Operating Systems			
		Microsoft Windows (including HyperV systems)	Linux	Virtualization (VMware ESXi)	Virtualization (Citrix XenServer)
14th generation	Sharing OS Information	Yes	Yes	Yes	Yes

LC Log Replication	Yes	Yes	Yes	Yes
Automatic System Recovery/ Watchdog	Yes	Yes	Yes	Yes
Windows Management Instrumentation Providers	Yes	No	No	No
Prepare to Remove NVMe device through iDRAC	Yes	Yes	Yes	Yes
SupportAssist Collection	Yes	Yes	No	Yes
Remote iDRAC hard reset	Yes	Yes	Yes	Yes
iDRAC access via Host OS	Yes	Yes	No	Yes
In-band Support for iDRAC SNMP alerts	Yes	Yes	Yes	Yes
Network interface monitoring support through Redfish client	Yes	Yes	Yes	Yes
Enable WSMAN Remotely	Yes	No	No	Yes

\* — 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.

## 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:

- *Dell EMC Open Manage Systems Management Tools and Documentation* DVD
- Support site — [dell.com/support](http://dell.com/support)

## Downloading iDRAC Service Module

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

## Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — [Dell.com/SoftwareSecurityManuals](http://Dell.com/SoftwareSecurityManuals)

- For Dell EMC OpenManage documents — [Dell.com/OpenManageManuals](http://Dell.com/OpenManageManuals)
- For Dell EMC Remote Enterprise Systems Management documents — [Dell.com/esmmanuals](http://Dell.com/esmmanuals)
- For iDRAC and Dell EMC Lifecycle Controller documents — [Dell.com/idracmanuals](http://Dell.com/idracmanuals)
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — [Dell.com/OMConnectionsEnterpriseSystemsManagement](http://Dell.com/OMConnectionsEnterpriseSystemsManagement)
- For Dell EMC Serviceability Tools documents — [Dell.com/ServiceabilityTools](http://Dell.com/ServiceabilityTools)
- For Client Command Suite Systems Management documents — [Dell.com/DellClientCommandSuiteManuals](http://Dell.com/DellClientCommandSuiteManuals)
- a. Go to [Dell.com/Support/Home](http://Dell.com/Support/Home).
- b. Click **Choose from all products**.
- c. From **All products** section, click **Software & Security**, and then click the required link from the following:
  - **Enterprise Systems Management**
  - **Remote Enterprise Systems Management**
  - **Serviceability Tools**
  - **Dell Client Command Suite**
  - **Connections Client Systems Management**
- d. 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](http://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 14th generation of PowerEdge or later servers. For the list of supported platforms, see [Supported platforms](#).
- Minimum firmware version — For iDRAC9 – 3.00.00.00 or later.
- Administrator privileges.
- 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.

## 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

- Windows 2012 R2 and Windows Server 2016.

### Linux

- Red Hat Enterprise Linux 6.9, Red Hat Enterprise Linux 7.3, and SUSE Linux Enterprise Server 12 SP2 operating system.

### VMware ESXi

- VMware ESXi 6.0 U3, VMware ESXi 6.5.

 **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 2012 R2
- Microsoft Windows Server 2016
- Red Hat Enterprise Linux 6.9
- Red Hat Enterprise Linux 7.3
- SUSE Linux Enterprise Server 12 SP2
- VMware ESXi 6.0 U3
- VMware ESXi 6.5
- CentOS 7.1\*
- CentOS 7.3\*

- Citrix Xen 7.1 Server

\* — iDRAC Service Module can be installed on any of the listed CentOS versions. 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](http://dell.com/support/home).

## Supported platforms

iDRAC Service Module 3.0.1 supports Dell's 14th generation of PowerEdge servers. Servers are classified based on the type, performance, generation, and the processor used.

**Table 2. Server Classification**

Type of Server	Specifics		
	Overall Performance	Generation	Processor
Rack = R	1 to 5 — Low End Server 5-10 — High End Server	4 — 14th generation	0 — Intel processor
Tower = T			
Modular = M			

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

**Table 3. Supported Platforms**

Dell 14th generation PowerEdge servers
R740, R740 XD, R640, R940, and C6420

## 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

The iDRAC Service Module can be installed in any of the following operating systems.

- [Installing the iDRAC Service Module On Microsoft Windows Operating Systems](#)
- [Installing iDRAC Service Module on supported Linux operating system](#)
- [Installing the iDRAC Service Module on VMware ESXi](#)
- [Installing the iDRAC Service Module on Citrix XenServer](#)

## Initial installation of iDRAC Service Module via iDRAC for Windows

Starting from iDRAC Service Module version 3.0.1 you can also install the service module from the iDRAC interface. iSM can be installed by a single-click installation using the iDRAC installer packager with the host OS. By using this installer package, the user do not have to go to the Dell support or OM DVD to install iSM. This feature ensures that the compatible version of iSM is installed for the supported iDRAC firmware.

For initial installation of iSM via iDRAC:

1. Navigate to the **iDRAC Service Module Setup** page. Click the **Install Service Module** button. **Service Module Installer** dialog box is displayed.
2. Select the appropriate script for your system, and then click **Launch Virtual Console**.
3. In the **Security Warning** dialog box, click **Continue**.  
You can view the verifying application status in the dialog box.
4. In the **Security Warning** dialog box, accept the terms of license agreement, and then click **Run**.
5. Login to the remote/local system (Host OS) using your credentials.  
You can find the installer file in the local system.

 **NOTE: The installer will be available to the Host OS for 30 minutes. If you do not start the installation within 30 minutes, you must restart the service module installation.**

6. Double-click the installer and type `ISM_Win.bat` in the command prompt. **iDRAC Service Module** installer wizard is displayed.
7. Proceed with the typical installation steps and finish the installation.

 **NOTE: After the installation is complete, the installer file is deleted from the local/Host OS.**

 **NOTE: On the iDRAC Service Module Setup page, the Install Service Module button is disabled after the installation is complete. The service module status is displayed as running.**

## Initial installation of iSM via iDRAC Express

1. From the **iDRAC Service Module** setup page, click **Install Service Module**.
2. The Service Module Installer is exposed to the Host OS and a job has been created in iDRAC.
3. For Microsoft Windows OS, RDP to the server or go to the physical server console. For Linux OS, SSH to the host IP or go to the physical server console.
4. Find the mounted volume in your device list labeled **"SMINST"** and click the appropriate script to initiate install. For Microsoft Windows OS, run the batch file "ISM-Win.bat" from the command prompt. For Linux OS, run the script "ISM-Lx.sh" from the shell.

5. After the installation is complete, iDRAC will show the Service Module as **Installed** and will display the last installed date.

 **NOTE: The installer will be available to the Host OS for 30 minutes. If you do not start the installation within 30 minutes, you must restart the Service Module installation.**

## Initial installation of iDRAC Service Module via iDRAC for Linux

For initial installation of iDRAC Service Module via iDRAC for Linux operating systems, use the following command:

```
sh ISM_Lx.sh
```

## 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.

### 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](http://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**
- **Windows Remote Management**
- **iDRAC access via Host OS**
- **iDRAC Hard Reset**

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

 **NOTE: By default, the In-Band SNMP Traps feature is not enabled.**

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.**

- c. Select the authentication mode to enable WSMAN remotely and also choose to install a self-signed certificate if the authentication certificate is not found. Provide a WINRM port number to establish the communication. By default, the port number should be 5986.

5. Provide a unique port number to be used by iDRAC access via Host OS feature.

 **NOTE: Provide a port number between the range 1024 to 65535.**


 **NOTE:**

If you do not provide a port number, *port number 1266* or a previously configured port (if any) is assigned by default.

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


6. Click **Install** to continue with the installation.

You can also click **Back** to change the preferences.

 **NOTE: At times, though you have configured OS to iDRAC pass-through channel in the OS log to establish communication with iDRAC, the Communication between iDRAC Service Module and iDRAC could not be established. Please refer the latest iDRAC Service Module installation guide message is displayed. For more information on troubleshooting, refer [Frequently asked questions](#).**

The iDRAC Service Module is successfully installed.

7. Click **Finish**.

 **NOTE: On Microsoft Windows 2016 operating system, the iDRAC USB NIC device description is displayed as “Remote NDIS Compatible Device”. No action is required from the user.**

### 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 install iDRAC access via Host OS iDRAC feature using silent installation, type `msiexec /i <location of the installer file>/iDRACSvcMod.msi ADDLOCAL=IBIA /qn`
- To install WSMAN, type `msiexec.exe /i iDRACSvcMod.msi ADDLOCAL="WSMAN_Enablement" CP_SELF_SIGN_CERT="2" CP_WSMAN_PORT="1234" CP_CERTIFICATE="1" CP_NEGOTIATE="1" /qn`
- To view the user interface in the supported languages, type `msiexec /i iDRACSvcMod.msi TRANSFORMS= <locale number>.mst`, where locale number is:



**Table 4. Silent installation**



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. Provide a unique port number to be used by iDRAC access via Host OS feature.
  -  **NOTE: Provide a port number between the range 1024 to 65535.**
  -  **NOTE: If you do not provide a port number, port number 1266 or a previously configured port (if any) is assigned by default.**
7. Click **Install** to continue the process.  
You can also click **Back** to change the preferences.  
The iDRAC Service Module is successfully modified.
8. 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 using two different methods:

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

### Unattended uninstall using the product ID

Type `msiexec /x {6728BF98-EB2D-413D-A629-F24A3C0C9631} /qn` 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 Red Hat Enterprise Linux 6, Red Hat Enterprise Linux 6.9, Red Hat Enterprise Linux 7.3, SUSE Linux Enterprise Server 12 SP2 operating systems.

 **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 SupportAssist Collection is not supported on CentOS.

### 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](http://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.

**Table 5. Linux install dependency**

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"> <li>· chkconfig</li> </ul> SUSE Linux Enterprise Server <ul style="list-style-type: none"> <li>· aaa_base</li> </ul>

install_initd	RedHat Enterprise Linux · redhat-lsb-core SUSE Linux Enterprise Server · 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] iDRAC access via Host OS
- [5] iDRAC Hard Reset
- [6] All features.

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

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

 **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.

 **NOTE: Starting iDRAC Service Module 2.4, you can also modify the features after installation.**

 **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.**

 **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.**

 **NOTE:**

You must provide a unique port number between the range 1024 to 65535 if you chose to install iDRAC access via Host OS feature. If you do not provide a port number, *port number 1266* or a previously configured port (if any) is assigned by default.

 **NOTE: if OpenManage Server Administrator (OMSA) is already installed on 1311, the same port could not be utilized for iDRAC Service module.**

### 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:

**Table 6. Silent installation**

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
-O	iDRAC access via Host OS: Enables the iDRAC access via Host OS feature

 **NOTE: On Linux operating systems, if a feature modifying operation with silent option is enabled from the Linux webpack (using setup.sh), then the previously enabled feature states will be overridden by the new features select during modifying operation.**

## 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](http://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-3.0.1-<bltno>.VIB-<version>i.zip**, where <version> is the supported ESXi version.

The zip files for the supported ESXi versions are:

- For ESXi 6.0 – `ISM-Dell-Web-3.0.1-<bltno>.VIB-ESX60i.zip`
- For ESXi 6.5 – `ISM-Dell-Web-3.0.1-<bltno>.VIB-ESX65i.zip`

 **NOTE: The feature configuration of iDRAC Service Module is not retained as is after a forced/ungraceful reboot. A backup of the configuration files is created by the ESXi hypervisor through the script `/sbin/auto-backup.sh` that runs periodically for every 60 minutes. If you want to retain the configuration, manually run the `backup.sh` script before you reboot the system.**

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.

## 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-3.0.1-<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 5.5: `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>`.

For VMware ESXi 6.5: `esxcli --server <IP Address of ESXi 6.5 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-3.0.1-<bltno>.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 5.5: `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>`.  
For VMware ESXi 6.5: `esxcli --server <IP Address of ESXi 6.5 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-3.0.1-<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 5.5, ESXi 6.0 U1, ESXi 6.0 U2 and create a datastore.
6. Create a folder `ISM-Dell-Web-3.0.1-<bldno>.VIB-<version>i` on ESXi 5.5, ESXi 6.0 U1, ESXi 6.0 U2 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-3.0.1-<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 5.5 `Install-VMHostPatch -VMHost <VMHost I.P address> - HostPath /vmfs/volumes/<datastore_name>name/ISM-Dell-Web-3.0.1-<bldno>.VIB-<version>i/ cross_oem-dell-iSM-esxi_3.0.1.ESXi550-0000-metadata.zip`.  
for ESXi 6.0 `Install-VMHostPatch -VMHost <VMHost I.P address> - HostPath /vmfs/volumes/<datastore_name>name/ISM-Dell-Web-3.0.1-<bldno>.VIB-<version>i/ cross_oem-dell-iSM-esxi_3.0.1.ESXi600-0000-metadata.zip`.  
for ESXi 6.5 `Install-VMHostPatch -VMHost <VMHost I.P address> - HostPath /vmfs/volumes/<datastore_name>name/ISM-Dell-Web-3.0.1-<bldno>.VIB-<version>i/ cross_oem-dell-iSM-esxi_3.0.1.ESXi650-0000-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.**

## Uninstalling the iDRAC Service Module on VMware ESXi

The iDRAC Service Module can be uninstalled using the following command:

```
$ esxcli software vib remove -n iSM
```

# Installing the iDRAC Service Module on Citrix XenServer

The iDRAC Service Module is installed on Citrix XenServer in the form of a Supplemental Pack (Update Package) ISO image. The iDRAC Service Module Supplemental Pack can be installed either during OS installation when prompted to add additional Supplemental Packs or any time after OS installation.

## Importing DELL GPG keys to Citrix XenServer

For importing Dell GPG keys to the Citrix XenServer 7.1, complete the following tasks:

1. Download Dell GPG keys to Citrix XenServer: [http://linux.dell.com/repo/pgp\\_pubkeys/0x1285491434D8786F.asc](http://linux.dell.com/repo/pgp_pubkeys/0x1285491434D8786F.asc).  
or download the file directly to the host using SSH or Local Command Shell with:  

```
$ wget http://linux.dell.com/repo/pgp_pubkeys/0x1285491434D8786F.asc
```
2. The file must be renamed:  

```
$ mv 0x1285491434D8786F.asc RPM-GPG-KEY-DELL
```
3. Import the Dell GPG Key:  

```
$ /opt/xensource/debug/import-update-key RPM-GPG-KEY-DELL
```

## Installing iDRAC Service Module using Citrix XenCenter management GUI dashboard


Launch compatible Citrix XenCenter and connect to your Citrix XenServer 7.1.

1. Under the **Tools** menu select **Install Update**.
2. Click **Next** to proceed to the **Select Update** screen.
3. Choose Select Update or supplemental pack from the disk and browse to the iSM supplemental pack ISO file.
4. Check the Citrix XenServer hosts to deploy. Then click **Next**.
5. Once the message says "Update successfully loaded" click **Next**.
6. Verify all the Prechecks pass and click **Next** to select the **Update Mode** option.
7. Click **Install Update**.
8. Click **Finish**.

## Installing the iDRAC Service Module using SSH or Local Command Shell

1. Copy the ISO file to either the Citrix XenServer host or a remote ISO library share mounted to the host. *Consult Citrix XenServer documentation for further details.*
2. Install the supplemental pack:  

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

 **NOTE: Invalid signature while installing Supplemental pack (Update package):** If the error "Invalid Signature" occurs during the iDRAC Service Module supplemental pack installation, the proper Dell GPG Key does not exist in the host signature database. This is possible on Citrix XenServer 7.1 installation and the key must first be manually imported to each host. For more information about importing DELL GPG keys to Citrix XenServer 7.1, see [Importing DELL GPG keys to Citrix XenServer](#).

## Installing iDRAC Service Module when the System Configuration Lock Down Mode is enabled

When the System Configuration Lock Down Mode is enabled through iDRAC, no configuration operations can be performed for iDRACService Module. All the features that were enabled before the System Configuration Lock Down Mode was turned on will continue to be enabled. If iSM is installed after the System Configuration Lock Down Mode is enabled, then only the iSM features that were enabled earlier will be available for the users. Whenever the System Configuration Lock Down Mode is turned off in iDRAC, then all the configuration operations can be performed.

## Support for iDRAC URI to get iSM installer

Starting from 14th generation of servers, you can download the iSM web packs by using the following URL: [https:// <iDRACIP>/software/ism/package.xml](https://<iDRACIP>/software/ism/package.xml). To download the packages, iSM LC DUP should be uploaded and available in iDRAC. This can also be loaded in iDRAC by enabling the iDRAC LC auto-update.

To download the packages, use the filename present in the xml to append to the URL.

Example:

```
<PayloadConfiguration>
<Image filename="OM-iSM-Dell-Web-LX-3.0.1.tar.gz" id="5DD5A8BA-1958-4673-BE77-40B69680AF5D"
skip="false" type="APAC" version="3.0.1"/>
<Image filename="OM-iSM-Dell-Web-LX-3.0.1.tar.gz.sign" id="E166C545-82A9-4D5D-8493-
B834850F9C7A" skip="false" type="APAC" version="3.0.1"/>
<Image filename="OM-iSM-Dell-Web-X64-3.0.1.exe" id="5015744F-F938-40A8-B695-5456E9055504"
skip="false" type="APAC" version="3.0.1"/>
<Image filename="iDRACSvcMod-3.0.1.appx" id="2457013e-c1b3-44fb-9b84-2cb6fb74c317"
skip="false" type="APAC" version="3.0.1"/>
<Image filename="RPM-GPG-KEY-dell" id="0538B4E9-DA4D-402A-9D96-A4A55EE2234C" skip="false"
type="APAC" version=""/>
<Image filename="sha256sum" id="06F61B54-58E2-41FB-8CE3-B7137A60E4B7" skip="false"
type="APAC" version=""/>
</PayloadConfiguration>
```

To download Microsoft Windows webpack, access the following URL: <https://<iDRACIP>/software/ism/OM-iSM-Dell-Web-X64-3.0.1.exe>.

## Support for idrac.local and drac.local as iDRAC FQDN

Starting from 14th generation of servers, you can connect to iDRAC GUI from the Host OS by typing drac.local or idrac.local in the web browser irrespective of multicast Domain Name System (mDNS) support on the Host OS.

## Simpler iDRAC Access via host OS

Starting from 14G servers, users need not append login.html to the iDRAC URL. Typing [https:// <iDRACIP>: <ListenPortNumber>](https://<iDRACIP>:<ListenPortNumber>) automatically redirects to the iDRAC login page.

# Configuring the iDRAC Service Module

You can configure the iDRAC Service Module using the:

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

## 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**.

The screenshot shows the iDRAC Web Interface for an Integrated Dell Remote Access Controller 9 Enterprise. The navigation menu includes Dashboard, System, Storage, Configuration, Maintenance, and iDRAC Settings. The 'iDRAC Service Module Setup' section is expanded, showing the following details:

Service Module Installation	
Installation Status	Installed
Date of Last Install	5/31/2017
Available Installer Version	3.0.1
<a href="#">Install Service Module</a>	
Version	
Installed Version on Host OS	3.0.1
Service Module Status	
Connection Status on Host OS	Running
Service on Host OS	Enabled ▼

## 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
- iDRAC access via Host OS
- iDRACHardReset

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](http://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](http://dell.com/support/home).

# 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](#)
- [Prepare to remove NVMe SSD device](#)
- [Remote iDRAC hard reset](#)
- [iDRAC access via Host OS](#)
- [In-band support for iDRAC SNMP alerts](#)
- [Enable WSMAN remotely](#)
- [Auto-updation of iDRAC Service Module](#)
- [FullPowerCycle](#)
- [Support Assist on the Box](#)

## 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.

Starting iDRAC Service Module 2.4, you can also view VLAN, IPV6 policy table, or such information through Redfish client plug-in for browsers.

 **NOTE: The minimum iDRAC firmware version required to view information using Redfish client is 3.00.00.00.**

## 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**.

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

 **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

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.

## 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.

## Remote iDRAC hard reset

Using iDRAC, you can monitor the supported servers for critical system hardware, firmware, or software issues. Sometimes, iDRAC may become unresponsive due to various reasons. During such scenarios, you may have to turn off the server by plugging it off from the socket, after which the iDRAC can be reset.

Using the Remote iDRAC hard reset feature, whenever iDRAC becomes unresponsive, you can perform a remote iDRAC reset operation without the need to shut down the server. To reset the iDRAC remotely, ensure that you have administrative privileges on the host OS. By default, the remote iDRAC hard reset feature is enabled.

## iDRAC access via Host OS

Using Dell's PowerEdge Servers, you can manage the hardware or the firmware of a device through iDRAC by configuring an iDRAC dedicated network. Through the dedicated network port, you can access the iDRAC interfaces such as GUI, WSMAN, RACADM, and Redfish client.


The prerequisite to manage the hardware or the firmware is to have a dedicated connection between a device and the supported iDRAC interface. Using the iDRAC access via Host OS feature, you can connect to an iDRAC interface from an OS IP or host irrespective of the connection between a device and an iDRAC dedicated network. This feature allows you to monitor the hardware or firmware even if the iDRAC is not connected to the servers.

## In-band support for iDRAC SNMP alerts

Using iDRAC, an out-of-band server management and monitoring tool, the SNMP traps/alerts can be recorded in the log. However, from a host OS systems management using in-band agent perspective, the preference is more on the SNMP alert received from the host OS than the traps received from iDRAC. When an SNMP alert is received from iDRAC, it would be challenging to determine the source of the alert as it is from an iDRAC IP and not the system IP.

Starting from 14th generation of servers, all events that have the "SNMP Trap" option as the target (in the Alerts page or in the equivalent RACADM or WSMAN interfaces) can be received as SNMP trap through the OS using the iDRAC Service Module. Starting iSM 3.0.1 or later and iDRAC firmware 3.0.0 or later, this feature does not require iSM LCL replication feature to be enabled. Only the events logged in the LC log after the iDRAC Service Module was installed are sent as SNMP traps.

Using iDRAC Service Module 2.3 or later, you can receive SNMP alerts from the host OS which is similar to the alerts that are generated by iDRAC.

 **NOTE: By default this feature is disabled. Though the In-band SNMP alerting mechanism can coexist along with iDRAC SNMP alerting mechanism, the recorded logs may have redundant SNMP alerts from both the sources. It is recommended to either use the in-band or out-of-band option, instead of using both.**

 **NOTE: You can use the In-band SNMP feature on 12th generation of Dell's PowerEdge Servers or later with a minimum iDRAC firmware version 2.30.30.30.**

## Enable WSMAN Remotely

Currently with the WMI information feature, you can connect to the host Microsoft Windows WMI namespace to monitor the system hardware. The WMI interface on the host is enabled by default and you can access it remotely. However, if you wish to access the WMI interfaces using WINRM's WMI adapter, you have to enable it manually as it is not enabled by default. Using this feature, you can access the WINRM WMI namespaces remotely by enabling it during installation.

This feature can be accessed using PowerShell commands. The commands used are as follows:

**Table 7.**

Command	Description
<code>Enable-iSMWSMANRemote -Status enable - Forcereconfigure yes -Createselfsigncert yes - IPAddress &lt;IP address&gt; -Authmode Basic, Kerberos, Certificate</code>	Enabling and configuring the remote WSMAN feature
<code>Enable-iSMWSMANRemote -Status get</code>	Viewing the status of remote WSMAN feature
<code>Enable-iSMWSMANRemote -Status disable</code>	Disable remote WSMAN feature
<code>Enable-iSMWSMANRemote -Status enable - Forcereconfigure yes -Createselfsigncert yes - IPAddress &lt;IP address&gt;</code>	Reconfigure the remote WSMAN feature

 **NOTE: You must have a server authenticating certificate and a https protocol to work with this feature.**

## Auto-updating of iDRAC Service Module

Starting from iDRAC Service Module version 3.0.1 you can do the auto-update. It aims at making the update process easier for you, by integrating iSM update with the iDRAC auto-update process.


 **NOTE: If iDRAC auto-update is enabled, iDRAC Service Module LC DUP must be updated to the latest version from [dell.com/support](http://dell.com/support).**

 **NOTE: User does not have to download the updates from support.dell.com. The updated iSM package is locally available in iDRAC.**

- To install or update iSM type `dcism-sync.exe` in the command prompt. Complete the steps in the installation wizard.
- To display the help content, type `--help/-h`.
- To do silent install or update, type `--silent/-s`.
- To uninstall the current version and install the update package available in LC, type `--force/-f`.

 **NOTE: This option overwrites the previous configuration.**

- To get details about the update package version and the installed version of iDRAC Service Module, type `--get-version/-v`.
- To download the iDRAC Service Module update packages to the user specified directory, type `--get-update/-g`.
- To install specific features, the same as CLI arguments used with `msiexec.exe`, type `dcism-sync.exe -p "feature"`. For example, to install iDRAC access via Host OS iDRAC feature on Windows, type `dcism-sync.exe -p "ADDLOCAL=IBIA"`.

-  **NOTE:** iSM auto-update executable files are available on [Dell TechCenter](#). The iSM auto-update executable `dcism-sync.exe` is dependent on Microsoft C and C++ runtime libraries such as `msvcr100.dll` and `msvcrt100.dll`. These DLLs are required for `dcism-sync` to run successfully. You can download these libraries from the tech center as `<auto-update.zip>` file or copy the dependent DLLs into the folder where `dcism-sync` exists.

## FullPowerCycle

FullPowerCycle is a calling interface function that provides a way to reset the server auxiliary power. An increasing amount of server hardware runs on server auxiliary power; and troubleshooting of some server issues requires the user to physically unplug the server power cord to reset the hardware running on auxiliary power. Forcing someone to physically unplug/plug the power cords leads to a significant cost and hassle for customers as well as support personnel.

When a Full Power Cycle **Request** is issued through this interface, the system power is not immediately affected. Instead, a flag is set that will be queried when the system transitions to S5. If the flag is set on S5 entry, the system will temporarily be forced into a lower power state, similar to removing and replacing AC. The flag can be cleared using the **Cancel** function any time the system is in the S0 state prior to the system entering the S5 state.

Starting from iDRAC Service Module version 3.0.1 you can avail different options of FullPowerCycle on your system. Use the following commands to request, get status, and cancel the Full Power Cycle on your system:

- To request FullPowerCycle on your system, type `./Invoke-FullPowerCycle -status request`.

 **NOTE:** A message is displayed that the VirtualAC Power Cycle operation is triggered by the server operating system.

- To get the status of the Full Power Cycle on your system, type `./Invoke-FullPowerCycle -status get`.
- To cancel the Full Power Cycle on your system, type `./Invoke-FullPowerCycle -status cancel`.

 **NOTE:** A message is displayed that the system is going for turn off at the scheduled date and time.

 **NOTE:** For Windows Operating systems, shortcuts are available for the FullPowerCycle operation.

## SupportAssist on the Box

Starting from iDRAC Service Module version 3.0.1 you can perform the registration of SupportAssist. SupportAssist saves time and streamlines the technical support cases. A collection based on an event creates an open service request with SupportAssist. Scheduled collections helps to monitor and maintain your environment. These collections include the hardware data, RAID controller logs, OS, and Application Data. The features supported are :

- SupportAssist Registration** — Version 3.0.1 onwards, iSM supports the SupportAssist Registration. This is one time activity. You can enter the required details such as name, email, address, and number and complete the registration.
- SupportAssist Collection**— The SupportAssist Collection feature in iDRAC collects information about the hardware, OS and relevant application data and compresses this information.

SupportAssist also provides:

- Proactive issue identification
- Automated case creation
- Support contact initiated by a Dell technical support agent

 **NOTE:** You must complete the registration to take the advantages of SupportAssist.

You can view the following items in the SupportAssist dashboard.

### Service Request Summary

In the Service Request Summary session, you can view the details of the following requests:


- Open
- Closed
- Submitted

### Support Assist Overview

You can view the **Service Contract** details such as Contract Type and Expiration Date and the **Automatic Collection** settings details in this session.

On the **Service Requests** tab, you can also view the list of requests created and the status, description, source, service request ID, date opened, the date closed, and so on.




If you click the **Collection Log** tab, you can view the collection time, job ID, collection type, data collected, collection status, sent time, and so on.

 **NOTE: Starting from 14th generation of servers, when user manually initiate SupportAssist collection from iDRAC, the USB mass storage device will not be exposed to the host OS. The transfer of OS Collector files and the collected log files is handles internally between iDRAC and iSM.**

## SupportAssist registration

The iDRAC Service Module should be installed and running in the host OS.

There should be proper internet connection also.

1. Login to iDRAC. From the **Maintenance** drop-down menu, select the **SupportAssist** feature.  
The **SupportAssist Registration** wizard is displayed.
2. On the **Welcome** tab, click **Next**.
3. On the **Contact and Shipping Info** tab, provide your primary contact information such as **First Name, Last Name, Phone Number, Alternate Number, Email Address, Company Name, Address Line 1, Address Line 2, City, State, Zip Code, and Country**.  
 **NOTE: You can add the secondary contact information, by clicking the Add Secondary Contact Information option.**  
 **NOTE: To continue with the registration, you must fill all the mandatory information required.**
4. After filling the contact and shipping information, click **Next**.
5. Read the software license agreement, select **I accept the terms of the license agreement**, and then click **Register**.  
 **NOTE: It might take few minutes to complete the registration process. After the registration is completed successfully, user will get a welcome email from SupportAssist to the email address registered.**
6. On the **Summary** tab, you can view the **Registration ID** and **Automatic Features** current setting details.
7. To close the **SupportAssist Registration** wizard, click **Close**.  
In the SupportAssist page, if you navigate to the bottom you can view the contact information. Click the **Edit** option to make any changes in the primary or secondary contact information. Click **Save** to apply the changes.

## SupportAssist Collection

The SupportAssist Collection 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 SupportAssist Collection Report. 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 SupportAssist Collection feature.

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

You can perform the SupportAssist collection function by clicking the **Start a Collection** button, in the **SupportAssist** home page.

You can start a collection in any of the following methods:

- Manual
- Event-Based
- Schedule-Based

### Data to Collect

SupportAssist automatically creates and send a collection to technical support when there is an event-based trigger and or on a scheduled cadence. You can collect the following type of information:

- **System Information**
- **Storage Logs**
- **OS and Application Data**
- **Debug Logs**

### Collection Preferences

User can select or set the collection preferences using this feature. You can select any of the following types of collection preferences to save the collection reports:

- **Send Now**— You will get a notification that ‘the job has been successfully added to the job queue’ after you click the **Collect** option.
- **Save Locally**
- **Save to Network**— If you select this option, you must provide the **Network Settings** details such as **Protocol, IP Address, Share Name, Domain Name, User Name,** and **Password.**

You can select any of the collection preferences and click **Collect** to receive the data.

 **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.**

 **NOTE: The OS log collection feature of Automatic SupportAssist Collection is not supported on CentOS.**

### SupportAssist Collection Settings

You can navigate in the SupportAssist dashboard and click the **Settings** drop-down menu, to open the SupportAssist Collection Settings.

#### Set Archive Directory

You can store the copies of collections performed by SupportAssist in to a directory. You must click the **Set Archive Directory** button to set the location.

#### Identification Information

You can include the identification information in data sent by clicking the drop-down menu and select any of the following options:

- **No**
- **Yes**

#### Email Notifications

You can select the preference to receive email notifications when a new support case is opened or a new SupportAssist collection is uploaded. From the **Receive Email Notifications** drop-down menu, select any of the following:

- **Yes**
- **No**

You can also select the language preference also. The available languages are:

- **English**
- **German**
- **French**
- **Japanese**
- **Spanish**
- **Simplified Chinese**

#### Automatic Collection

By default, the automatic collection feature is enabled. To disable this feature, use the drop-down menu:

- **Enable**
- **Disable**

You can also specify or set the time for scheduled collection by selecting any of the following options from the **Schedule automatic collections** drop-down menu:

- **Weekly**
- **Monthly**
- **Quarterly**
- **Never**

You can also set the automatic collection as recurring.

To view the ProSupport Plus Recommendations report, select **Yes** from the **Send ProSupport Plus Recommendations Report** drop-down menu.

After setting the preferences, click **Apply** to save the changes.

## 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 12<sup>th</sup> 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.

**Table 8. Details**

Destination	Gateway	Genmask	Flags	Metric	Ref	Use lface
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](#).

## I used the remote iDRAC hard reset feature to reset the iDRAC. However, the IPMI drives is unresponsive and I am not able to troubleshoot.

If you try to use the remote iDRAC hard reset feature on **VMware ESXi 5.5 U3** or **ESXi 6.0 U1**, the IPMI drivers becomes unresponsive, because of this the iDRAC Service Module communication is stopped. You may have to reboot the server and load the IPMI driver again to resolve the issue.

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

To view the replicated LifeCycle logs:

**Table 9. Frequently asked question**

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

## What is the default SNMP protocol configured in iDRAC Service Module to send alerts in Linux operating systems?

By default, the SNMP multiplexing protocol (SMUX) is configured in iDRAC Service Module to send alerts.

## SMUX is not supported on my system. Which protocol should I configure to send alerts?

If SMUX is not supported on your system, Agent-x is used as a default protocol.

## How do I configure iDRAC Service Module to use the Agent-x protocol to send alerts by default?

You can configure Agent-x as the default protocol using `./Enable-iDRACSNMPTrap.sh 1/agentx -force` command. If `-force` is not specified, ensure that the net-SNMP is configured and restart the snmpd service.

## 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.

## **I am not able to access the iDRAC page through the host OS as an Active Directory user over LDAP. I am trying to access the iDRAC page through the host OS, but I get an error saying that the site cannot be reached. How do I troubleshoot the issue?**

When you are trying to access the iDRAC page through the host OS, you may get an error saying that the site cannot be reached. Ensure that the iDRAC network is configured for authentication as an LDAP user. You can also login as a local user or a guest.

## **I am not able to access the iDRAC page through the host OS after performing an iDRAC factory reset operation, such as `racadm racresetcfg`. How do I troubleshoot the issue?**

Ensure that the OS to iDRAC passthru channel is enabled. By default, it is disabled in factory mode. To enable the OS to iDRAC passthru channel on iDRAC, use the following command, `racadm set idrac.os-bmc.adminstate 1`.

## **I am seeing the past Life Cycle Logs (LCL) alerts targeted for SNMP traps replicated in Operating System logs. Can I troubleshoot the issue?**

iSM will not be able to distinguish between the past Life Cycle Log (LCL) alerts targeted for SNMP traps and past LCL alerts targeted for OS Logs. Hence user may see past LCL alerts targeted for OS Logs in SNMP traps as well and vice versa.

## **I am seeing 169.254.0.2 as the source IP address in the iDRAC SNMP trap received via iSM. How do I troubleshoot the issue?**

On Linux OS, the iDRAC SNMP traps received via Host OS displays the hostname or source IP address as 169.254.0.2 instead of the actual Host OS name or IP address. This is decided by the OS to populate the entry before rendering the trap to the user.

## **I have configured OS to iDRAC pass-through to LOM and when I try to run `dcism-sync`, the update operation fails. What can be done?**

OS to iDRAC pass-through should be configured to USB-NIC mode. This is a pre-requisite for iDRAC Service Module installation and update.

# Linux installer packages

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

**Table 10. Linux installer packages**

Supported Linux Operating System	Installer Packages
Red Hat Enterprise Linux 6	SYSMGMT\iSM\linux\RHEL6\x86_64\dcism-3.0.1- <bldno>.el6.x86_64.rpm
Red Hat Enterprise Linux 7	SYSMGMT\iSM\linux\RHEL7\x86_64\dcism-3.0.1- <bldno>.el7.x86_64.rpm
SUSE Linux Enterprise Server 12	SYSMGMT\iSM\linux\SLES12\x86_64\dcism-3.0.1- <bldno>.sles12.x86_64.rpm

 **NOTE: You can use any installer package from the list to install iDRAC Service Module on CentOS.**