

# Dell Systems Management Overview Guide

Version 14.0

## 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.

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# Dell Systems Management

Dell delivers management solutions that help IT Administrators effectively deploy, update, monitor, and manage IT assets. OpenManage solutions and tools allow you to quickly respond to problems by helping them to manage Dell EMC servers effectively and efficiently; in physical, virtual, local, and remote environments, operating in-band and out-of-band (agent-free). The OpenManage portfolio includes innovative embedded management tools such as the integrated Dell Remote Access Controller (iDRAC) with Lifecycle Controller.

Dell has developed comprehensive systems management solutions based on open standards and has integrated with management consoles that can perform advanced management of Dell hardware. Dell has connected or integrated the advanced management capabilities of Dell hardware into offerings from the industry's top systems management vendors, thus making Dell platforms easy to deploy, update, monitor, and manage.

The key tools for managing Dell EMC PowerEdge servers are iDRAC and the one-to-many OpenManage Essentials (OME) console. The OpenManage Enterprise will soon replace the OpenManage Essentials. OpenManage Enterprise helps the system administrators in complete lifecycle management of multiple generations of PowerEdge servers. Other tools such as Repository Manager, which allows simple yet comprehensive change management, and OpenManage Power Center can be added quickly and work seamlessly with iDRAC and OME.

OpenManage tools integrate with systems management framework from other vendors such as VMWare, Microsoft, BMC Software, and so on. This allows you to utilize the skills of the IT staff to efficiently manage Dell EMC PowerEdge servers.

The four main pillars of Dell EMC systems management closely align with the issues and business challenges faced by many IT departments.

- Automating IT management
  - Dell EMC offers comprehensive automation management for reducing OPEX and increasing uptime and overall efficiency.
  - Comprehensive suite of tools to automate according to your needs.
- Management made simple
  - Simple but powerful tools for managing your Dell EMC servers
  - Built-in tools that streamline support engagements
  - Innovative at-the-box management features
- Secure by default
  - Dell EMC servers offer robust security defenses to prevent the next generation of malicious attacks
  - Security is designed deep into the hardware and firmware architecture for optimal protection
- Smarter infrastructure management
  - It offers a next generation 1-to-many console to manage your IT and server infrastructure
  - Embedded intelligence that is *infrastructure-aware* to optimize troubleshooting and deployment

This document provides an overview of the OpenManage Systems Management offerings to help IT administrators choose the appropriate tools to completely manage Dell EMC PowerEdge servers.

## Dell Systems Management Offerings

Dell's suite of Systems Management offerings consist of a wide variety of tools, products, and services. The strategy is to use an existing systems management framework that you may be currently using.

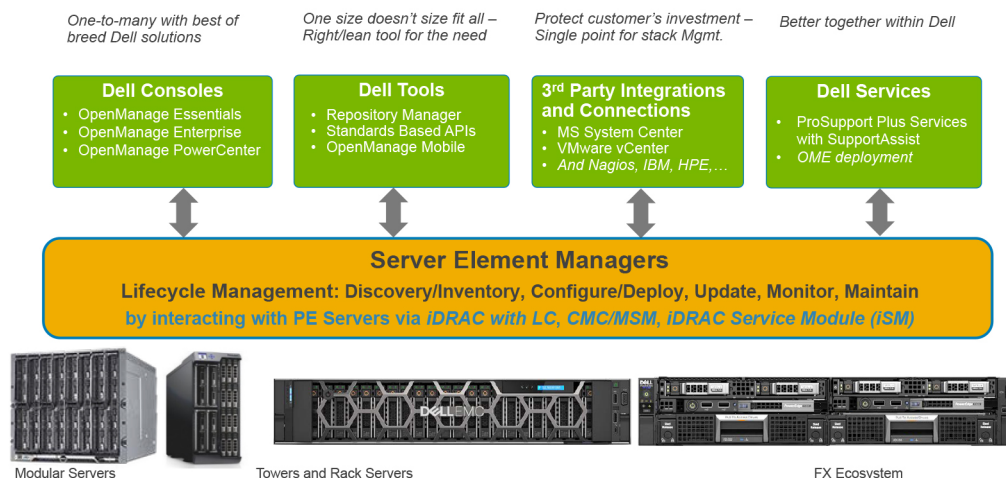
However, if you do not have a framework, Dell EMC provides in-house tools or tools from our partners. Dell also offers professional services to install or train on any of the Dell products and tools. All the solutions are centered on PowerEdge server hardware management featuring iDRAC with Lifecycle Controller.

In addition, Dell EMC provides OpenManage Enterprise, which is the next generation OpenManage Essentials. It simplifies, centralizes, and automates the full span of server lifecycle management activities. It helps in discovery, configuration, deployment, updation, and remediation. These tasks are performed within a single console that unifies management of tower, rack, and modular platforms. OpenManage Enterprise helps in standardizing and supporting IT management policies and practices.

For an interactive tool to see the best OpenManage tools for your datacenter environment, see online *OpenManage Advisor Tool*. This tool covers a wide range of topics regarding your datacenter and provides a detailed output based on your information. The following figure shows the Dell systems management offerings that are used in the Advisor tool.

## Dell OpenManage Portfolio

Simplifying hardware management through ease of use and automation



## Dell Hardware Management Tools

- Integrated Dell Remote Access Controller (iDRAC) with Lifecycle Controller (LC)
- Dell Chassis Management Controller (CMC) for blade servers
- iDRAC Service Module (iSM)
- Remote Access Controller Administration (RACADM) CLI
- Embedded Management APIs: iDRAC RESTful API (with Redfish support), WSMAN, IPMI, SNMP

## Dell Consoles

- OpenManage Essentials (OME)
- OpenManage Power Center (OMPC)
- Dell EMC OpenManage Enterprise (Tech Release)

## Dell Mobile Applications

- OpenManage Mobile (OMM)

# Dell EMC Update Utilities

- Dell EMC Repository Manager (DRM)
- Dell EMC Update Packages (DUP)
- Dell EMC Server Update Utility (SUU)
- Dell EMC Linux Repository

# Integration With Third-Party Consoles

- Dell EMC Server Deployment Pack for Microsoft System Center Configuration Manager (SCCM)
- Dell EMC Server PRO Management Pack for Microsoft System Center Virtual Machine Manager (SCVMM)
- Dell EMC Server Management Pack Suite for Microsoft System Center Operations Manager (SCOM)
- Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Configuration Manager
- Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Virtual Machine Manager
- OpenManage Integration for VMware vCenter
- BMC Software
- iDRAC with BMC Software BladeLogic Server Automation (BSA)
- OpenManage Server Administrator with BMC ProactiveNet Performance Management Suite

# Connections For Third-Party Consoles

- Hewlett Packard Enterprise (HPE)
  - Dell EMC OpenManage HPE Operations Manager i (OMi) Operations Connector
  - Dell Smart Plug-in (SPI) for HP Operations Manager (HPOM) for Windows
- IBM
  - OpenManage Connection for IBM Tivoli Netcool/OMNIBus (ITNO)
  - OpenManage Connection for IBM Tivoli Network Manager (ITNM) IP Edition
- Nagios
  - OpenManage Plug-in for Nagios Core
  - OpenManage Plug-in for Nagios XI
- Oracle
  - OpenManage Plug-in for Oracle Enterprise Manager (OEM)
- CA Technologies
  - OpenManage Connection for CA Network and Systems Management (CA NSM)
  - CA Spectrum and CA Unified Infrastructure Management (Native Integration)

# Integration with DevOps and Automation Tools

- OpenManage Ansible Modules (Beta)

# Dell TechCenter

For additional information about white papers, videos, blogs, forums, technical material, tools, usage examples, and other information, visit the OpenManage page at [delltechcenter.com/OpenManage](https://delltechcenter.com/OpenManage) or the following product pages on Dell TechCenter:

- For general information and interactive graphics for Systems Management Products, see <http://en.community.dell.com/techcenter/systems-management/w/wiki>.
- For Integrated Dell Remote Access Controller (iDRAC) page, see [delltechcenter.com/idrac](http://delltechcenter.com/idrac).
- For Lifecycle Controller (LC) page, see [delltechcenter.com/lc](http://delltechcenter.com/lc).
- For OpenManage Ansible Modules (BETA) page, see <http://en.community.dell.com/techcenter/systems-management/w/wiki/12422.dell-emc-openmanage-ansible-modules-beta>
- For OpenManage Essentials (OME) page, see [delltechcenter.com/ome](http://delltechcenter.com/ome).
- For OpenManage Mobile (OMM) page, see [delltechcenter.com/omm](http://delltechcenter.com/omm).
- For OpenManage Integration for VMware vCenter (OMIVV), see [delltechcenter.com/omivv](http://delltechcenter.com/omivv).
- For OpenManage Integration for Microsoft System Center (OMIMSSC), see [delltechcenter.com/omimsscs](http://delltechcenter.com/omimsscs)
- For Dell EMC Repository Manager (DRM) page, see [delltechcenter.com/repositorymanager](http://delltechcenter.com/repositorymanager).
- For Dell EMC System Update (DSU) page, see [delltechcenter.com/dsu](http://delltechcenter.com/dsu).
- For Chassis Management Controller (CMC) page, see [delltechcenter.com/cmc](http://delltechcenter.com/cmc).
- For OpenManage Connections for Partner Consoles page, see [en.community.dell.com/techcenter/systems-management/w/wiki/4105.dell-emc-openmanagem-connections-for-partner-consoles](http://en.community.dell.com/techcenter/systems-management/w/wiki/4105.dell-emc-openmanagem-connections-for-partner-consoles) .
- For OpenManage Power Center page, see [en.community.dell.com/techcenter/power-cooling/w/wiki/3534.dell-openmanage-power-center](http://en.community.dell.com/techcenter/power-cooling/w/wiki/3534.dell-openmanage-power-center).
- For OpenManage Server Administrator page, see [delltechcenter.com/omsa](http://delltechcenter.com/omsa).
- For iDRAC Service Module (iSM) page, see [en.community.dell.com/techcenter/systems-management/w/wiki/11434.idrac-service-module](http://en.community.dell.com/techcenter/systems-management/w/wiki/11434.idrac-service-module).

# Systems Management Product Overview

This section provides an overview for the Dell Systems Management suite of products.

## Dell Hardware Management Tools

### Integrated Dell Remote Access Controller With Lifecycle Controller

The integrated Dell Remote Access Controller 9 (iDRAC9) with Lifecycle Controller delivers advanced, agent-free, local and remote server administration. Embedded in every PowerEdge server, iDRAC9 provides a secure means to automate a multitude of common management tasks. Because iDRAC is embedded in every PowerEdge server, there is no additional software to install; just plug in power and network cables, and iDRAC with Lifecycle Controller is ready to go. Even before installing an operating system (OS) or hypervisor, IT administrators have a complete set of server management features at their fingertips.

With iDRAC9 in place across the Dell EMC PowerEdge portfolio, the same IT administration techniques and tools can be applied throughout. This consistent management platform allows easy scaling of PowerEdge servers as an organization's infrastructure needs to grow. Customers will be able to use the iDRAC RESTful API for the latest in scalable administration methods of PowerEdge servers. With this API, iDRAC enables support for the Redfish standard and enhances it with Dell EMC extensions to optimize at-scale management of PowerEdge servers. By having iDRAC at the core, the entire OpenManage portfolio of Systems Management tools allows every customer to tailor an effective, affordable solution for any size environment.

iDRAC shares Lifecycle Controller features such as firmware update, backup and restore, lifecycle log, and hardware inventory export. For more information, see the iDRAC with Lifecycle Controller documents at [dell.com/idracmanuals](https://dell.com/idracmanuals).

### Chassis Management Controller for servers

The Chassis Management Controller is an embedded systems management hardware and software solution for managing multiple servers, I/O modules, and shared power or cooling using either a web interface or a command line interface.

The CMC uses the iDRAC with Lifecycle Controller technology to update BIOS or component firmware and configure BIOS settings in a one-to-many operation.

CMC is available for the following chassis:

- PowerEdge M1000e—This chassis is Dell's first blade server solution. It provides the infrastructure (industry-leading power and cooling, networking, and blade manageability) for companies who choose to deploy blade-based server solutions. A single Chassis Management Controller interface with multichassis management capability can manage and see up to nine chassis, 288 servers, 54 power supplies, and 81 fans with no additional cabling. The chassis has slots for two, redundant CMC modules, so that administrators can connect to the chassis even if one Chassis Management Controller module is not working.
- PowerEdge VRTX—The chassis is a revolutionary, easy-to-manage, remote, and office-optimized platform that converges servers, storage, and networking into a compact package. One of the key features is that it provides *shared storage across multiple server nodes* and the on-board RAID controller. It can hold up to four server nodes, up to 48 TB of integrated, shared storage, and network switching. The PowerEdge VRTX offers the ability to use the PCIe slots that no other blade server solution provides. By combining the density of blade servers with the flexibility of rack server I/O options with PowerEdge VRTX, Dell gives you the flexibility to use less expensive PCIe cards while still being managed through shared chassis management.

- PowerEdge FX2/FX2s—The FX2 enclosure allows servers and storage to share power, cooling, management, and networking. It includes redundant Power Supply Units (1100 W, 1600 W, 2000W, and 2400 W) and eight cooling fans. With a compact highly flexible design, the FX2 chassis lets you simply and efficiently add resources to your infrastructure when and where you need them, so you can let demand and budget determine your level of investment. The FX2 enclosure also offers I/O modules to several IO aggregators that can simplify cabling, improve East/West traffic within the server, and enable LAN/ SAN convergence—reducing cost and complexity.

For more information about CMC, see [www.dell.com/cmcmmanuals](http://www.dell.com/cmcmmanuals) or [Delltechcenter.com/CMC](http://Delltechcenter.com/CMC).

## iDRAC Service Module

This module complements iDRAC with monitoring and configuration information from the operating system(OS). You can also access a limited version of the iSM interface from the OS. You can enable and disable features on iSM by the iDRAC interfaces to control the CPU and memory consumed on the server's operating system.

The iDRAC Service Module provides the following features:

- View operating system (OS) information.
- Replicate Lifecycle Controller logs to operating system logs.
- Perform automatic system recovery.
- Populate Windows Management Instrumentation (WMI) information.
- Integration with SupportAssist Collection.
- Use the Prepare to Remove option on a NVMe class PCIe SSD.
- Access iDRAC interfaces using host IP.
- Use remote iDRAC hard reset for 13th generation of PowerEdge servers.
- Access iDRAC MIB compatible SNMP traps from the host operating system.

For more information, see the *iDRAC User's Guide* available at [dell.com/idracmanuals](http://dell.com/idracmanuals).

## Dell Remote Access Controller Administration CLI

The Remote Access Controller Administration (RACADM) command-line utility provides a scriptable interface to perform inventory, configuration, update, and health status check of the PowerEdge servers. RACADM operates in multiple modes:

- Local—supports running RACADM commands from the managed server's operating system.
- SSH or Telnet—known as firmware RACADM; is accessible by logging in to iDRAC using SSH or TELNET
- Remote—supports running RACADM commands from a remote management station such as a laptop or desktop.

RACADM is supported by iDRAC with Lifecycle Controller and by the Chassis Management Controller of the M1000e, VRTX, and FX2 modular systems. Local and remote RACADM is supported on Windows Server, the Windows clients, and on Red Hat, SuSe, and Ubuntu Linux.

Using a text-based interface for all iDRAC with Lifecycle Controller functions, RACADM supports the viewing and changing of all server attributes. This includes BIOS, iDRAC, PERC, NIC, and HBA settings as well as server cooling and power-status and settings. RACADM also supports profile-based server configuration management, detailed hardware and firmware inventory, and access to server logs.

For more information, see the *RACADM command line Reference Guide for iDRAC* and *RACADM command line Reference Guide for CMC* available at [Dell.com/support/manuals](http://Dell.com/support/manuals).

## iDRAC with Lifecycle Controller embedded management APIs

iDRAC with Lifecycle Controller provides a range of standards-based applications programming interfaces (APIs) that enable scalable and automated management of the PowerEdge servers. Standard systems management APIs have been developed by organizations such as

the Institute of Electrical and Electronics Engineers (IEEE) and Distributed Management Task Force (DMTF). These APIs are widely used by commercial systems management products and by custom programs and scripts developed by IT staff to automate management functions such as discovery, inventory, health status checking, configuration, update, and power management. The APIs supported by iDRAC with Lifecycle Controller include:

- **iDRAC RESTful API:** It provides a RESTful interface that expands upon the DMTF Redfish standard with the Dell EMC operations. It includes the RESTful server configuration, modular server feature support, and detailed OS networking inventory and status.
- **iDRAC RESTful API—with Redfish support:** In 2015, the DMTF Scalable platforms Management Forum published iDRAC RESTful API —with Redfish support. It is an open industry-standard specification and schema designed to meet the needs of IT administrators for simple, modern, and secure management of scalable platform hardware. Dell is a key contributor to the iDRAC RESTful API standard, acting as cochair of the SPMF, promoting the benefits of iDRAC RESTful API, and working to deliver those benefits within industry-leading systems management solutions. iDRAC RESTful API is a next generation management standard using a data model representation inside a hypermedia RESTful interface. The data model is defined in terms of a standard, machine-readable schema, with the payload of the messages expressed in JSON and the OData v4 protocol.
- **WSMan:** The Web Services For Management (WSMan) API, first published by the DMTF in 2008, is the most mature and robust API provided by iDRAC with Lifecycle Controller. WSMan uses a Simple Object Access Protocol (SOAP) with data modeled using the Common Information Model. WSMan provides interoperability between management applications and managed resources, and identifies a core set of web service specifications and usage requirements that expose a common set of operations central to all systems management.
- **IPMI:** The Intelligent Platform Management Interface (IPMI) is a message-based, hardware-level interface specification that can operate over both LAN and serial interfaces. IPMI is supported broadly by server vendors, systems management solutions, and open source software.
- **SNMP:** The Simple Network Management Protocol (SNMP) helps in standardizing the management of network devices. SNMP allows commercial management consoles created for monitoring network switches and routers to also monitor X86 servers. SNMP is primarily used to deliver event messages to alert administrators of problems on their systems but can also be used to discover, inventory, and configure servers.

To help in automating system management tasks and simplify API integration, Dell provides the PowerShell and Python libraries and script examples using the iDRAC RESTful API with Redfish and WSMan interfaces. These libraries and examples are available in the Dell GitHub repository at <https://github.com/dell>. The iDRAC with Lifecycle controller pages of Dell Techcenter offers a library of technical white papers detailing the use of the embedded management APIs. For more information, see [Delltechcenter.com/iDRAC](https://delltechcenter.com/iDRAC) and [Delltechcenter.com/LC](https://delltechcenter.com/LC).

## Dell Consoles

The following consoles help in monitoring, managing the infrastructure, and the Lifecycle management of the PowerEdge servers:

## OpenManage Essentials

OpenManage Essentials is the one-to-many management console for monitoring Dell HW infrastructure including server, storage and networking, as well as for lifecycle management of PowerEdge servers. It support Windows, Linux, VMware, and HyperV environments. OME provides a simple and easy interface for system administrators to maximize the uptime and health of Dell systems. It helps to:

- Monitor health status and events for PowerEdge servers, EqualLogic or MD series storage, and PowerConnect and Force 10 switches.
- Provide hardware-level control and management for PowerEdge server, blade system, and internal storage arrays.
- Link and Launch element management interfaces, such as, iDRAC, CMC, EQL group manager, and so on.
- Integrate with the following Dell solutions:
  - Dell Repository Manager : Builds customized server update baselines that OpenManage Essentials can use.
  - OpenManage Power Center : Optimize power consumption in the servers.
  - SupportAssist : Enables automatic hardware failure notification to be sent securely to Dell technical support for intelligent analysis and diagnosis to optimize availability and reduce manual intervention. This solution is available as part of Dell ProSupport and ProSupport Plus at no additional cost.
- Provide REST interface API support for 3<sup>rd</sup> Party Integration.
- Manage Server Configuration - it is a fee-based license available on Dell's 14th generation of PowerEdge servers with iDRAC Enterprise or iDRAC Express licenses. The key features include the following:

- Configure a server or chassis using a template and deploying an operating system on the PowerEdge bare metal servers.
- During a server operation, automatically detect and notify any server or chassis drift from a customer-defined baseline configuration.
- Boot a system from a network-mounted ISO using iDRAC.
- Replicate of FN-IOM and M-IOA configurations within M1000e chassis.
- Support VLAN Management for FN-IOM and M-IOA.

For more information, see [delltechcenter.com/OME](http://delltechcenter.com/OME).

## OpenManage Enterprise

OpenManage Enterprise is the next generation of OpenManage Essentials. It simplifies, centralizes, and automates the full span of server lifecycle management activities. It helps in discovery, configuration, deployment, updates, and remediation. These tasks are performed within a single console that unifies management of tower, rack, and modular platforms. OpenManage Enterprise helps in standardizing and supporting IT management policies and practices.

The OpenManage Enterprise console simplifies and strengthens the current capability of OpenManage Essentials in the following areas:

- Reduced time and effort required to manage small and large-scale IT environments using HTML5 GUI
- Simplified GUI workflow to provide a single management layer that unifies the management of PowerEdge tower, rack, and modular platforms
- Packaged and delivered as virtual appliance and supports ESXi, HyperV, and KVM
- Redesigned architecture on CentOS with the PostgreSQL database. Operating system and database license are no longer required
- Centralized user management with role-based access control
- Enabled with customer automation and solution integration using Northbound API
- Enhanced policy-driven management

**Table 1. OpenManage Enterprise feature and benefits**

Feature	Description	Benefits
Packaged as a virtual appliance	OpenManage Enterprise is readily deployable as a virtual appliance in ESXi, Hyper-V, and KVM hypervisors	Enables quick and easy deployment while gaining the benefits of virtualization, including the migration of the application from one physical server to another.
Discovery and Inventory on the IPv4 or IPv6 network	Discovery and inventory data center hardware up to 5500 devices.	Provides data-center visibility for IT administrators. Improves security and provides a management solution for customers no longer using IPv4.
Automatic device onboarding	The "make ready for management" step is automated for iDRAC during the device discovery and inventory process	Minimizes human errors during the process of discovery and setup. Helps in getting the environment ready for on-going management.
Device level role-based access control (RBAC)	The scope of IT administration responsibilities can be assigned to specific groups of devices	Helps ensure IT Admin workload balance and skill-set alignment.
Server single sign-on	Use of credential caching is employed to avoid further password prompts when IT administration perform management tasks or launch the iDRAC virtual console	Delivers fast and seamless management across the PowerEdge server lifecycle while enabling management from a single level.
Monitoring and Event Processing	Monitoring system health for discovered devices and create event policy to dispatch hardware events.	Provides IT admin real time feedback for the health of their environment and enables

Feature	Description	Benefits
Comprehensive API	All product features are accessible from a new RESTful API that is conformant to the new popular Redfish standard	automated responses through automation policy. Enables IT Admins to automate features and functions of OpenManage Enterprise through popular tools such as PowerShell and Python. It also allows them the flexibility of integrating OpenManage Enterprise into their existing IT processes.
Custom reports	IT administrators can use a powerful reporting engine to create customized reports	Provides IT Admins rapid and easy access to specific device information.
Modern UI with elastic search capabilities	OpenManage Enterprise uses the modern HTML5 standard for its UI while enabling an elastic search engine that allows IT administrators to find anything in the console in a single search	Minimizes training time and maximizes efficiency by delivering quick results on searches involving devices, hardware and software inventory, features, functions, and so on. Also provides access from various browsers, and mobile devices.
Firmware compliance policies and updates	Firmware compliance policies allow IT administrators to establish one or more firmware baselines for groups of the PowerEdge servers in their environment. Selectively update firmware that is not compliant with the customer defined baselines.	Provides a simple method of enforcing minimum firmware levels for the PowerEdge servers that eliminates human error and minimizes downtime. Reinforces security by enabling customers to stay current with the firmware recommended by Dell EMC.
Configuration compliance policies	Configuration compliance policies allow IT Administrators to establish one or more configuration baselines for groups of the PowerEdge servers in their environment	Enables a simple method to monitor the PowerEdge servers against an established baseline. Helps in enforcing security standards and ensuring management consistency across server BIOS, RAID, network and the iDRAC settings.
Bare-metal server deployment	Automate server HW configuration deployment to a bare-metal PowerEdge server and kick off unattended OS installation process.	Saves time and relies less on local IT Admins for provisioning and configuring PowerEdge server hardware in a reliable and consistent manner.

For more information, see [Delltechcenter.com/OME](https://Delltechcenter.com/OME).

## OpenManage Power Center

OpenManage Power Center (OMPC) is a console that provides monitoring and management at a one to many levels of server power and thermal. The features of OpenManage Power Center are:

- **Measure and manage power consumption and monitors thermal readings**—OMPC helps in gaining greater insight into a data center's energy usage through detailed measurement of energy consumption throughout a data center. OMPC gives administrator the ability to measure and manage the power consumption of up to 6,000 servers and track both short-term and long-term historical data.
- **Create and implement multiple usage policies**—OMPC simplifies implementation of management policies across a data center. When it is used with the 12<sup>th</sup> generation or later versions of the PowerEdge servers and an iDRAC Enterprise license, administrators can control across physical levels of a data center according to each row, rack, or group of servers. In addition, administrators can create custom logical groups and monitor or report on energy usage and costs on a group-by-group basis.
- **Reduce consumption during low-load hours**—OMPC helps administrators to save power by allowing management of a server room according to business needs. OMPC allows administrators to implement policies that reduce the power consumption when the demand on the systems is lower. It can also assign maximum power to the servers that run the most important applications.

For more information, see *OpenManage Power Center User's Guide* available at [Dell.com/openmanagemanuals](https://Dell.com/openmanagemanuals).

# OpenManage Mobile

Dell EMC OpenManage Mobile (OMM) is a mobile application for managing servers and related devices from Android and iOS mobile devices. OMM enables IT administrators to perform a subset of server configuration, monitoring, and remediation tasks.

## Advantages of using OpenManage Mobile

- Perform basic server setup like plug in the power cable, connect mobile device to server, assign IP address, change credentials, and update key BIOS attributes.
- Discover any server issues by signing up for proactive notifications from OpenManage Essentials console.
- View the server information on a large screen, and get the equivalent of a large LCD display on the mobile device.
- Reduce the need for cumbersome crash carts by using a mobile device to access system console.
- Scan the iDRAC credentials stored in QR code for ease-of-use and faster first-time login.
- Batch update factory default iDRAC passwords for Dell EMC PowerEdge 14th generation servers.

## Accessing PowerEdge servers from OpenManage Mobile

There are three ways OpenManage Mobile can access and manage the Dell EMC PowerEdge servers:

### Access iDRAC at-the-server

On 14<sup>th</sup> generation of the PowerEdge servers: OMM can access PowerEdge 14<sup>th</sup> generation servers through Quick Sync 2 module. After it gets connected, IT administrators can configure IP addresses and BIOS settings, share Dell EMC SupportAssist reports, view server inventory, health status and logs, or power cycle a server.

Quick Sync 2 is supported of multiple 14<sup>th</sup> generation PowerEdge rack and tower servers.

On 13<sup>th</sup> generation of the PowerEdge servers: OMM can access PowerEdge 13<sup>th</sup> generation servers through the Quick Sync bezel. After connected, IT administrators can configure IP addresses, view server inventory, health status and logs, or power cycle a server.

Quick Sync bezel is supported on PowerEdge R730, R730xd, and R630 servers.

#### **NOTE:**

For **at-the-server** access, you must install the Quick Sync 2 module or the Quick Sync bezel.

### Access iDRAC remotely

OMM can access 12<sup>th</sup>, 13<sup>th</sup>, and 14<sup>th</sup> generation of the PowerEdge servers remotely over a secure, internal network from anywhere. After connected, IT administrators can configure IP addresses and BIOS settings, share Dell EMC SupportAssist reports, view server inventory, health status and logs, or power cycle a server.

**NOTE: Features vary by server, model and generation. To access iDRAC or OpenManage Essentials remotely, there is no additional hardware required other than the Android or iOS devices.**

## Access servers remotely through OpenManage Essentials (OME) console

OMM can connect to the PowerEdge servers through the OpenManage Essentials (OME) Console—v 2.1 and later. IT administrators can monitor all systems managed using OpenManage Essentials including Dell EMC servers, storage, networking, and firewall appliances, and other OME-supported third party hardware. OMM can also receive proactive notifications from OME console.

More information about OpenManage Essentials and a download link is available at [Delltechcenter.com/OME](https://Delltechcenter.com/OME).

## Key features of OpenManage Mobile

Key features of OpenManage Mobile are:

### Access methods

OpenManage Mobile helps you to connect to various devices and perform tasks.

- Connects to multiple OpenManage Essentials consoles from a single mobile device.
- Connects to multiple PowerEdge servers remotely.
- Connects to 14<sup>th</sup> generation of the PowerEdge servers through Quick Sync 2 module using Android and iOS.
- Connects to 13<sup>th</sup> generation of the PowerEdge servers through the Quick Sync bezel using Android only.

### Manage notifications

OpenManage Mobile helps you to manage notifications from your mobile device.

- Receive critical alert notifications from OME.
- Acknowledge, forward and delete alerts.

### Monitor

OpenManage Mobile helps you to monitor systems using your mobile device.

- Browse server details, health status, firmware inventory, system event logs, and LC logs of individual servers. Share or forward details as needed.
- Access and share SupportAssist reports or crash screens and videos.
- Access server warranty information.

## Basic server setup and configuration

OpenManage Mobile allows you to do basic server setup and configuration.

- Configure one server manually or multiple servers simultaneously. You can even update the AutoUpdate flag in server from OMM.
- Run RACADM commands, and get output directly on the mobile device.
- Access system console to view server OS desktops.

 **NOTE: You must download OMM app to use this feature.**

- Perform server management functions such as power-on, power cycle, reboot, or shutdown from the mobile application.

## Demo mode

Learn the features of OpenManage Mobile by accessing the "Demo Mode". OpenManage Mobile users like customers, technicians, sales, and so on, can preview the capabilities of OpenManage Mobile using an offline, prepopulated "demo database" included in the app.

## Batch update

OpenManage Mobile allows you to batch update factory default server passwords for the Dell EMC PowerEdge servers.

**NOTE:** You must have Dell License Manager v1.5 to use this feature. It is available only on 14<sup>th</sup> generation of the PowerEdge servers.

## Dell EMC Update Utilities

The following table lists the update utilities and the supported operating systems.

**Table 2. Dell EMC Update Utilities**

Product	Windows	Linux
Dell EMC Repository Manager	Yes	-
<b>NOTE:</b> Dell EMC Repository Manager can create Windows or Linux-based update tools and it can run on Windows Virtual Machines.		
Dell EMC Update Packages	Yes	Yes
Dell EMC Server Update Utility	Yes	Yes
Dell EMC System Update	Yes	Yes

## Dell EMC Repository Manager

Dell EMC Repository Manager (DRM) is an application that helps you to:

- Identify the updates that are relevant to the systems in your data center
- Identify and notify when updates are available
- Package the updates into different deployment format.

To automate the creation of baseline repositories, DRM provides advanced integration capabilities with iDRAC/LC, OpenManage Essentials, Chassis Management Controller, OpenManage Integration for VMware vCenter and OpenManage Integration for Microsoft System Center (OMIMSSC). Also, DRM packages updates into custom catalogs that can be used for deployment.

Dell EMC Repository Manager can create the following deployment tools:

- Custom catalogs
- Lightweight deployment pack
- Bootable Linux ISO
- Custom Server Update Utility (SUU)

For more information, see *Dell EMC Repository Manager User's Guide* available at [dell.com/support/manuals](http://dell.com/support/manuals).

# Dell EMC Update Packages

Dell EMC Update Packages (DUP) is a self-contained executable supported by Microsoft Windows or Linux that updates a component on a server and applications like OMSA and iSM.

DUPs can be executed in GUI or in CLI mode.

For more information, see *Dell EMC Update Packages User's Guide* available at [www.dell.com/support/manuals](http://www.dell.com/support/manuals).

# Dell EMC Server Update Utility

Dell EMC Server Update Utility (SUU) is an application that contains a collection of updates, inventory collector, and update applicator. When you run SUU on a target system, it determines which updates are appropriate and applies the ones that are applicable.

SUU can be downloaded from [www.dell.com/support](http://www.dell.com/support) or a custom SUU can be created using Dell EMC Repository Manager (DRM). The SUU available on [www.dell.com/support](http://www.dell.com/support) includes all the updates for all currently supported PowerEdge platforms. With DRM you can create a custom SUU with only the updates for systems in your data center.

For more information, see *Dell EMC Update Utility User's Guide* available at [www.dell.com/support](http://www.dell.com/support).

# Dell EMC System Update

Dell EMC System Update (DSU) is CLI optimized application used to distribute the Dell EMC PowerEdge server updates for Linux and Microsoft Windows operating systems. DSU is a script optimized tool, that provides enhanced ease of use, automation and flexibility. DSU works on a wide range of operating systems, including RHEL, SLES, Ubuntu, and Windows Server.

**NOTE:** DSU v1.4 and higher has been enhanced to facilitate the creation of Smart bootable ISO.

For more information, see [Delltechcenter.com/dsu](http://Delltechcenter.com/dsu)

# Integration With Third-Party Consoles

The Dell plug-ins are:

- Dell EMC Management Pack Suite for Microsoft System Center Operations Manager
- Dell EMC Deployment Pack for Microsoft System Center Configuration Manager
- Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Configuration Manager.
- Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Virtual Machine Manager.
- Dell EMC PRO Management Pack for Microsoft System Center Virtual Machine Manager (Hyper-V)
- OpenManage Integration for VMware vCenter
- BMC Software

## Dell EMC Server Management Pack Suite for Microsoft System Center Operations Manager

Dell EMC server Management Pack offers both in-band and out-of-band (agent-free) options that enable System Center Operations Manager to discover, monitor, and accurately depict the status of the following systems on a defined network segment:

- PowerEdge servers
- Converged platforms
- iDRAC
- CMC

For more information, see *Microsoft System Center Operations Manager Server Management Pack User's Guide* available at [dell.com/manuals](http://dell.com/manuals).

## Dell EMC OpenManage Integration for Microsoft System Center for System Center Configuration Manager

Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Configuration Manager provides agent-free, operating system and hypervisor agnostic configuration, OS deployment, and firmware updates for PowerEdge servers. Automated processes reduce the steps, time, and cost in configuring servers from a bare-metal state and also in preparing remote one-to-many operating system deployments within multivendor operating system and hypervisor environments.

For more information, see *Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Configuration Manager User's Guide* available at [dell.com/manuals](http://dell.com/manuals).

## Dell EMC Server Deployment Pack for Microsoft System Center Configuration Manager

Dell EMC server Deployment Pack uses OpenManage Deployment Toolkit (DTK) and PXE-based OS deployment to automate bare-metal configuration and deployment of various Microsoft operating systems on PowerEdge servers across your network.

For more information, see the *Dell EMC Server Deployment Pack for Microsoft System Center Configuration Manager User's Guide* available at [dell.com/manuals](http://dell.com/manuals).

## Dell EMC OpenManage Integration for Microsoft System Center for System Center Virtual Machine Manager

Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Virtual Machine Manager helps to automate and simplify hardware configuration and OS deployment.

Advantages of using OpenManage Integration for Microsoft System Center (OMIMSSC) are as follows:

- Reduces amount of time and effort required for one-to-many OS deployments.
- Agent-free and out-of-band hardware configuration, patching and deployment through the System Center Virtual Machine Manager console, by using iDRAC/LC.

By using OpenManage Integration for Microsoft System Center (OMIMSSC), you can do the following:

- Use the Update Centre for a simplified, and enhanced experience to achieve multi-step workflow in a single window.
- Automatically group rack and modular servers into virtual groups based on cluster, chassis, hosts, and unassigned server groups at discovery phase.
- Managing hosts by synchronizing SCVMM hosts with OpenManage Integration for Microsoft System Center (OMIMSSC) appliance.
- Providing credentials for integrated Dell Remote Access Controller (iDRAC), Chassis Management Controller (CMC), and Proxy servers that are used for multiple workflows.
- Accessing Microsoft System Center Virtual Machine Manager.
- Installing as a Virtual Appliance (software model) for a simplified implementation and initial configuration with SCVMM.
- Checking the PowerEdge server compliance to ensure that the required firmware revision is installed.
- Performing auto-discovery and handshake to enable iDRAC with LC on bare-metal servers. This helps to locate the SCVMM console through the OpenManage Integration for Microsoft System Center (OMIMSSC) appliance.
- Discovering unassigned PowerEdge servers manually while using static IP for the iDRAC with LC network.
- Viewing key inventory details of discovered servers, which helps IT Administrators to select appropriate servers to deploy in the datacenter.
- Preparing an ideal server configuration, also known as a Golden Configuration, based on the IT Administrator defined standards to enable rapid and consistent replication of the same configuration on servers targeted for deployment into the virtual environment.
- Enabling IT Administrators in developing and maintaining policy and profile-based configuration templates to reduce repetitive management tasks and time consumption.
- Deploying OS and hypervisor by using the following options:
  - iDRAC with LC, which contains driver packs for all supported operating systems for OS deployments.
  - Prepare customized Microsoft Windows Pre-installation Environment (WinPE) images with OS drivers optionally available from the Dell Deployment Toolkit (DTK).
  - Replicate hypervisor deployments with or without utilizing the LC driver packs based on the selected Golden Configuration and also replicate BIOS, RAID, and Boot Order settings.
- Installing server operating systems remotely.
- Viewing the inventory information and performing troubleshooting tasks by launching to the iDRAC and LC user interface.
- Viewing data logs of jobs and tasks performed within the DLCI appliance.
- Using Active Directory credentials for authentication and access to iDRAC/LC.

For more information, see *Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) for System Center Virtual Machine Manager User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## Dell EMC Server PRO System Center Management Pack for Microsoft System Center Virtual Machine Manager

Dell EMC server PRO Management Pack integrates PowerEdge server knowledge on temperature, memory, and power supplies with Microsoft System Center Virtual Machine Manager (SCVMM) and Operations Manager (SCOM) to efficiently manage servers that host virtual workloads running on Microsoft Hyper-V. Remedial actions can be quickly implemented if a system is compromised.

For more information, see *Dell EMC server PRO Management Pack for Microsoft System Center Virtual Machine Manager User's Guide* available at [dell.com/manuals](https://dell.com/manuals).

## OpenManage Integration for VMware vCenter

The OpenManage Integration for VMware vCenter allows you to monitor, provision, and manage PowerEdge server hardware and firmware. You can perform these tasks through a dedicated Dell EMC menu that can be accessed directly through the VMware vCenter console. OMIVV also allows granular control and reporting for the hardware environment using the same role-based access control model as

vCenter. The OpenManage Management Pack for vRealize Operations Manager is available with OMIVV v4.0 onwards. This helps in checking hardware health and alerting into vRealize operations, which also includes dashboard and reporting on the server environment.

**NOTE: The Dell EMC Repository Manager integrates with OpenManage Integration for VMware vCenter. The Dell EMC Repository Manager provides advanced functionality, simplifies the discovery, and deployment of new updates.**

You can manage and monitor Dell EMC hardware within the virtualized environment

- Alerting and monitoring environment for servers and chassis
- Monitoring and reporting for servers and chassis
- Updating firmware on servers
- Deploying enhanced options

For more information, see [delltechcenter.com/omivv](http://delltechcenter.com/omivv).

## BMC Software

Dell, along with BMC Software, servers, storage and network management functionality with the BMC Software's process and datacenter automation products. Dell and BMC Software's partnership helps to ensure that Dell and BMC Software-based IT infrastructure and services provide the highest level of datacenter and business services manageability. The integration between Dell and BMC Software products is highlighted by Dell's own IT organization; BMC Software helps Dell IT automate key processes and accelerate responsiveness by deploying multiple BMC Software solutions.


For more information, see *The combined power of BMC and Dell* available at [http://i.dell.com/sites/docontent/shared-content/data-sheets/en/Documents/The\\_Combined\\_Power\\_of\\_BMC\\_and\\_Dell.pdf](http://i.dell.com/sites/docontent/shared-content/data-sheets/en/Documents/The_Combined_Power_of_BMC_and_Dell.pdf)

## Connections For Third-Party Systems Management Consoles

The following table lists the connections products and the management station operating systems they are supported on.

**Table 3. Connections For Third-Party Consoles**

Vendor	Product	OpenManage Connection for Third-Party console	Windows	Linux	ESXi
Hewlett Packard Enterprise (HPE)	Operations Manager (OM) for Windows	OpenManage Smart Plug-in (SPI) for HPE Operations Manager for Windows	Yes	-	Yes
		<b>NOTE: Use Dell Connections License Manager for managing licenses and licensable features available with Smart Plug-in.</b>			
	Operations Manager i (OMi) for Windows	Dell EMC OpenManage HPE OMi Operations Connector	Yes	-	Yes
IBM	Tivoli Netcool / OMNIbus	OpenManage Connection for IBM Tivoli Netcool/OMNIbus (ITNO)	Yes	Yes	Yes
Nagios Oracle	Tivoli Network Manager IP Edition	OpenManage Connection for IBM Tivoli Network Manager (ITNM) IP Edition	Yes	Yes	Yes

Vendor	Product	OpenManage Connection for Third-Party console	Windows	Linux	ESXi
		 <b>NOTE: Use Dell Connections License Manager for managing licenses and licensable features available with OpenManage Connection for ITNM IP Edition.</b>			
	Nagios-Core	OpenManage Plug-in for Nagios Core	-	Yes	Yes
	Nagios-XI	OpenManage Plug-in for Nagios XI	-	Yes	Yes
	Enterprise Manager	OpenManage Plug-in for Oracle Enterprise Manager (OEM)	Yes	Yes	Yes
CA Technologies	Network and System Management (NSM)	OpenManage Connection for CA NSM	Yes	-	-

## Dell EMC OpenManage HPE OMi Operations Connector

The Dell EMC OpenManage HPE OMi Operations Connector provides capabilities to integrate the Dell EMC OpenManage Essential (OME) with HPE Operations Manager i (OMi). The Operations Connector for OME helps system and IT administrators to get a comprehensive view of Dell EMC devices in a data center by collecting the systems management data about the events and topology from OME, and transferring it to OMi. It also supports web console launch of OME directly from the HPE OMi environment to perform further troubleshooting, configuration, and management activities for Dell EMC devices.

For more information, see the *Dell EMC HPE Operations Manager i (OMi) Operations Connector User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## Dell Smart Plug-in for HPE Operations Manager for Windows

Dell Smart Plug-in (SPI) for HPE Operations Manager provides both agent-free (out-of-band) and agent-based (in-band) options for discovery, classification, and monitoring of the following Dell devices in the datacenter environments managed by the HPE Operations Manager:

- PowerEdge servers
- iDRAC
- Dell EMC Modular infrastructure
- Dell EMC Storage arrays
- Dell Networking devices
- Dell Workstation

You can also launch one-to-one Dell device consoles (such as iDRAC web console) as well as one-to-many Dell tools (such as OpenManage Essentials) from within the HPEOM console to perform configuration, troubleshooting, and other system management activities on Dell devices.

For more information, see *Dell Smart Plug-in For HP Operations Manager For Microsoft Windows User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Connection for IBM Tivoli Netcool OMNIbus

OpenManage Connection for IBM Tivoli Netcool/OMNIbus provides agent-free (out-of-band) monitoring of PowerEdge servers, iDRAC, modular infrastructure, workstation, storage arrays, and networking devices. It includes event or alert autocorrelation from within the IBM

Tivoli Netcool/OMNIBus console. It also supports launching of one-to-one device consoles such as iDRAC web console and one-to-many Dell tools such as OpenManage Essentials from within the Netcool/OMNIBus console. It helps to perform configuration, troubleshooting, and other system management activities on Dell devices

For more information, see the *OpenManage Connection for IBM Tivoli Netcool/OMNIBus User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Connection for IBM Tivoli Network Manager IP Edition

OpenManage Connection for IBM Tivoli Network Manager (ITNM) IP edition provides both agent-free (out-of-band) and agent-based (in-band) options for discovery, classification and monitoring of the systems in the datacenter environment.

- PowerEdge servers
- iDRAC
- Dell EMC Modular Infrastructure
- Dell EMC Storage Arrays
- Dell Networking

Along with the OpenManage Connection for IBM Tivoli Netcool/OMNIBus, it can also provide event monitoring and auto-correlation for quicker fault detection and solution. You can also launch One-to-One device consoles (such as iDRAC web console) and One-to-Many Dell tools (such as OpenManage Essentials) from within the ITNM console to perform configuration, troubleshooting and other system management activities on Dell devices.

For more information, see the *OpenManage Connection for IBM Tivoli Network Manager IP Edition User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Plug-in for Nagios Core

OpenManage Plug-in for Nagios Core uses agent-free (out-of-band) method to discover inventory and monitor the following Dell devices in the datacenter environments managed by Nagios Core:

- PowerEdge Servers
- iDRAC
- Dell EMC Modular Infrastructure
- Dell EMC Storage Arrays

With this plug-in, you have comprehensive hardware-level visibility and health monitoring information of the Dell devices including both overall and component-level health monitoring for quicker fault detection and resolution.

For more information, see the *OpenManage Plug-in for Nagios Core User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Plug-in for Nagios XI

OpenManage Plug-in for Nagios XI uses agent-free (out-of-band) method to discover inventory and monitor the following Dell devices in the datacenter environments managed by Nagios XI:

- PowerEdge Servers
- iDRAC
- Dell EMC Modular Infrastructure

- Dell EMC Storage Arrays

With this plug-in, you have comprehensive hardware-level visibility and health monitoring information of the Dell devices including both overall and component-level health monitoring for quicker fault detection and resolution.

For more information, see the *OpenManage Plug-in for Nagios XI User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Plug-in for Oracle Enterprise Manager

OpenManage Plug-in for Oracle Enterprise Manager (OEM) enables customers who manage their data centers using OpenManage Essentials (OME) to integrate with Enterprise Manager. It helps them to discover inventory and monitor the following Dell devices directly from within the Enterprise manage console:

- PowerEdge servers
- iDRAC
- Dell EMC Modular Infrastructure
- Dell EMC Storage Arrays
- Dell Networking

It also provides features for automatic and manual mapping of the Oracle database workload to underlying Dell infrastructure. You can also launch the one-to-one device consoles (such as the iDRAC web console) and one-to-many Dell tools (such as OpenManage Essentials) from within the Enterprise Manager console to perform configuration, troubleshooting, and other system management activities on the Dell devices.

For more information, see the *OpenManage Plug-in for Oracle Enterprise Manager User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## OpenManage Connection for CA Network and Systems Management

The OpenManage Connection for CA Network and Systems Management (NSM) provides integrated monitoring of PowerEdge servers and PowerVault storage arrays. It helps in real-time health and alert monitoring, from within CA NSM console.

For more information, see *OpenManage Connection for CA NSM User's Guide* available at [dell.com/manuals](https://dell.com/manuals).

## CA Spectrum and CA Unified Infrastructure Management

Dell partners with CA technologies to enable native monitoring of Dell EMC and network switches using the CA Spectrum and CA Unified Infrastructure Management (Native Integration).

CA Spectrum supports monitoring of PowerEdge servers and network switches, whereas CA UIM (formerly CA Nimsoft Monitor) supports monitoring of PowerEdge servers. Dell's partnership with CA Technologies provides highest level of datacenter and business services manageability to our joint customers and helps in optimizing their Total Cost of Ownership (TCO).

For more information, see the <http://en.community.dell.com/techcenter/systems-management/w/wiki/4105.dell-openmanage-connections-for-partner-consoles> available at [delltechcenter.com](https://delltechcenter.com).

## Integration with DevOps and Automation Tools

- OpenManage Ansible Modules (Beta)

## OpenManage Ansible Modules (Beta)

Dell EMC OpenManage Ansible Modules (Beta) allow data center and IT administrators to use Red Hat Ansible to automate and orchestrate the provisioning, configuration, deployment, and update of PowerEdge Servers by using the management automation capabilities in-built into the iDRAC. Ansible is an automation tool that can configure systems, deploy software, and perform more advanced IT tasks such as continuous deployments or zero downtime rolling updates. With OpenManage Ansible Modules for PowerEdge servers, data center and IT administrators can rapidly deploy their infrastructure, change server configurations, and manage configuration drift against a known baseline

For more information, see <http://en.community.dell.com/techcenter/systems-management/w/wiki/12422.dell-emc-openmanage-ansible-modules-beta> at **delltechcenter.com**

# Legacy — Dell Hardware Management Tools

Topics:

- [OpenManage Server Administrator](#)
- [Baseboard Management Controller Management Utilities](#)
- [Dell Remote Access Configuration Tool](#)
- [OpenManage Deployment Toolkit](#)
- [Dell IPMI Tool](#)

## OpenManage Server Administrator

The OpenManage Server Administrator provides a comprehensive one-to-one systems management solution for both local and remote servers and their storage controllers and Direct Attached Storage (DAS). It can communicate using following interfaces - GUI, WMI, SNMP and CLView system configuration, health, and performance. Use Server Administrator to:

- View system configuration, health, inventory and Asset information of the system and provide functions to shut down the server remotely from OMSA GUI console
- Perform monitoring and configuration functions for all the supported RAID and non-RAID controllers and enclosures without using the Option ROM utilities.

For more information, see the *OpenManage Server Administrator Storage Management User's Guide* available at [dell.com/openmanagemanuals](http://dell.com/openmanagemanuals).

## Baseboard Management Controller Management Utilities

The Baseboard Management monitors the system for critical events by communicating with various sensors on the system board and sends alerts and logs events when certain parameters exceed their preset thresholds. The Baseboard Management Controller supports the industry-standard Intelligent Platform Management Interface (IPMI) specification, enabling you to remotely configure, monitor, and recover systems.

For complete information, see the *Dell Baseboard Management Controller Management Utilities User's Guide* available at [dell.com/esmmanuals](http://dell.com/esmmanuals).

## Dell Remote Access Configuration Tool

Dell Remote Access Configuration Tool is a one-to-many application that discovers and configures iDRAC from a single console. It helps to:

- Discover or import the iDRAC IP addresses on the network.
- Update firmware for the selected iDRAC.
- Configure standard or extended schema-based Active Directory settings for selected iDRAC.
- Create the iDRAC objects on the Active Directory server for extended schema-based Active Directory.

For complete information, see *Dell Remote Access Configuration Tool User's Guide* available at [dell.com/esmmanuals](https://dell.com/esmmanuals).

## OpenManage Deployment Toolkit

**NOTE:** This feature is deprecated.

The OpenManage Deployment Toolkit includes a set of utilities for configuring and deploying PowerEdge systems. It is designed for customers who want to build scripted installations to deploy large numbers of servers without making many changes to their current deployment process.

In addition to the command-line utilities used to configure various system features, the Deployment Toolkit also provides sample scripts and configuration files to perform common deployment tasks. These files and scripts describe the use of Deployment Toolkit in Microsoft Windows Preinstallation Environment (Windows PE), and embedded Linux environments

The OpenManage Deployment Toolkit (DTK) along with the associated tools and capabilities will be deprecated for version 6.0.1 and later:

- Redundant Array of Independent Disks Configuration (RAIDCFG) Utility
- System Configuration (SYSCFG) Utility
- ELI tool
- Utility Partition (UPINIT)

It is recommended to use the RACADM Command Line (CLI) as a replacement for the RAIDCFG and SYSCFG utilities. For more information on downloading RACADM, see [support.dell.com](https://support.dell.com).

**NOTE:** DTK will continue to support any new hardware or operating system for the 14<sup>th</sup> generation of PowerEdge servers. However, support for later generations of PowerEdge servers are deprecated. For more information about features supported by DTK, see the latest User's Guide available at [dell.com/openmanagemanuals](https://dell.com/openmanagemanuals).

For more information, see the *Dell Deployment Toolkit User's Guide* available at [dell.com/support/manuals](https://dell.com/support/manuals).

## Dell IPMI Tool

The Dell IPMI Tool are scriptable-console-application programs used to control and manage remote systems using the IPMI version 2.0 protocol.

For complete information, see the *Dell Baseboard Management Controller Management Utilities User's Guide* available at [dell.com/esmmanuals](https://dell.com/esmmanuals).

# 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](https://www.dell.com/support/manuals)
- For Dell EMC OpenManage documents — [Dell.com/OpenManageManuals](https://www.dell.com/support/manuals)
- For Dell EMC Remote Enterprise Systems Management documents — [Dell.com/esmanuals](https://www.dell.com/support/manuals)
- For iDRAC and Dell EMC Lifecycle Controller documents — [Dell.com/idracmanuals](https://www.dell.com/support/manuals)
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — [Dell.com/OMConnectionsEnterpriseSystemsManagement](https://www.dell.com/support/manuals)
- For Dell EMC Serviceability Tools documents — [Dell.com/ServiceabilityTools](https://www.dell.com/support/manuals)
- a Go to [Dell.com/Support/Home](https://www.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.

# Contacting Dell

**NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues, go to <https://www.dell.com/contactdell>.