Dell iDRAC7 with Lifecycle Controller

Feature Guide

Dell OpenManage Systems Management

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Overview

The Integrated Dell Remote Access Controller 7 (iDRAC7) with Lifecycle Controller technology allows administrators to monitor, manage, update, troubleshoot, and remediate Dell servers from any location—without the use of agents, and regardless of the presence or state of an operating system or hypervisor.

The iDRAC7 options include:

- iDRAC7 Enterprise
- iDRAC7 Express for Blades
- iDRAC7 Express
- Basic Management with IPMI

IDRAC7 at a glance

Table 1 lists some of the high level features of iDRAC7 Enterprise, iDRAC7 Express for Blades, iDRAC7 Express, and Basic Management.

If you are unable to decide on an iDRAC option or you would like to try the features before you buy, it is easy to evaluate iDRAC Express or Enterprise—simply download a 30-day trial license and you are ready to go. There is nothing else to download; the license key unlocks the features. See the section, After point of sale—upgrade options, for more information and limitations regarding the 200-500 series of Dell™ PowerEdge™ servers.

Table 1. iDRAC7 options and features

Option	Feature
iDRAC7 Enterprise *Manage the server as if you were there*	Virtual Console and Media with collaboration
	Dedicated NIC 1Gbps
	PK and Two Factor Authentication
	Directory Services support
	Part replacement
	Remote Syslog
	Crash video playback
	Boot capture
	Millisecond power capping and platform power monitoring
	8GB and 16GB vFlash media card
	Virtual flash partitions
	All the features of iDRAC Express and Basic Management

Option	Feature
iDRAC7 Express for Blades *The features of iDRAC Express with virtual console access to blades*	Single user Virtual Console with remote launch Virtual Media All the features of iDRAC Express and Basic Management
iDRAC7 Express *Including embedded tools, console integration, and simplified remote access*	Web GUI and command-line access Power monitoring (including power budgeting) Diagnostic features such as crash screen capture Local and remote configuration and updates Scripting with remote Racadm Remote OS install All the features of Basic Management
Basic Management (IPMI) *Basic, low-cost server management*	Basic hardware management via IPMI 2.0 Text based console redirection Embedded diagnostics Embedded OS installation tools

The iDRAC7 helps improve an administrator's ability to manage a server without having physical access to the server, even when it is not operational. This assists administrators in the following ways:

1. **Increased availability**—Early notification of potential or actual failures may prevent a server failure or reduce recovery time in the case of a failure.
2. **Improved productivity and lower TCO**—Extending the reach of administrators to larger numbers of distant servers can make IT staff more productive while driving down operational costs such as travel.
3. **Secure environment**—By providing secure-access remote servers, administrators can carry out critical management functions while maintaining server and network security.
4. **Enhanced embedded management with Lifecycle Controller**—Lifecycle Controller provides local deployment and simplified serviceability through the Lifecycle Controller and WSMan interfaces for remote deployment integrated with Dell Management Console and partner consoles.

Dell Lifecycle Controller

Lifecycle Controller is the engine for advanced embedded management delivered through 2 GB of managed and persistent storage, eliminating the media-based delivery of system management tools and utilities. Lifecycle Controller's delivery model simplifies the server lifecycle management experience, from provisioning, to deployment, patching/updates, service, as well as user customization. It also reduces the time taken to accomplish tasks, reduces potential for error, enhances security, and results in more efficient enterprise management.

Embedded management is comprised of the following:

1. Lifecycle Controller provides local 1-to-1 deployment through a graphical user interface (GUI) for operating system installation, updates, configuration, and diagnostics; this eliminates the need for multiple option ROMs for hardware configuration
2. Remote Services that are standards-based interfaces, enabling consoles to integrate with Dell features; bare-metal provisioning and one-to-many OS deployments are two examples
3. Lifecycle Controller serviceability aims at simplifying server provisioning and failed part replacement, thus reducing maintenance downtime

Server and iDRAC7 configuration options

The iDRAC7 Express is offered as an upgrade for 200-500 series PowerEdge servers and is standard with 600-900 series servers. Express for Blades is an option on all blade servers. Enterprise is an upgrade option for all servers 200 series and above. When purchased at point of sale, Enterprise has the option to purchase either an 8GB or 16GB vFlash media card.

The iDRAC7 Express does not support graphical console redirection (such as Virtual Console). Virtual Console is only available with iDRAC7 Enterprise. The only exception is Express for Blades, which allows for a single user Virtual Console with remote launch.

Table 2 describes the possible upgrade paths with respect to the server line: PowerEdge 200–500 series, 600–900 series, and blade servers.

Table 2. Server and iDRAC7 configuration options

Option	200-500 series	600-900 series	Blade servers
Basic Management	✓ Standard	—	—
iDRAC7 Express	☑ Upgrade	✓ Standard	—
iDRAC7 Express for Blades	—	—	☑ Option
iDRAC7 Enterprise	☑ Upgrade	☑ Upgrade	✓ Standard
vFlash media (8 or 16GB card option)	☑ Upgrade	☑ Upgrade	☑ Upgrade

After point of sale—upgrade options

A new feature with Dell PowerEdge 12th generation servers allows you to evaluate and purchase upgrades from Dell—right from your iDRAC web GUI. Depending on the server series, you may need to install hardware to obtain full feature functionality.

PowerEdge 200-500 series

If you are evaluating iDRAC Enterprise, certain features will not be available, as they require a hardware component to enable, such as a dedicated NIC and vFlash media for partitions. All other features can be enabled with a software license key. No server reboot is required. When purchasing an upgrade, there are several options available, depending on if you need the features that require the hardware card. If you do, you have the option to order the card without the vFlash media, or order with either the 8GB or 16GB version. Installing the iDRAC Ports card requires you to turn off the server.

PowerEdge 600 series and above

You have a choice of ordering just the software license or you can order the license with either size of SD card. Both the dedicated NIC port and the SD slot for the vFlash media are present on the system, but neither is active until the license key has been activated. You may purchase an SD card locally of any size (such as 16GB, 32GB, or higher), but partition size is limited to 4GB.

Detailed feature comparison

Table 3 compares the features available for the options of Basic Management, iDRAC7 Express, iDRAC7 Express for Blades, and iDRAC7 Enterprise.

Table 3. Detailed feature comparison

Feature	Basic Management	iDRAC7 Express	iDRAC7 Express for Blades	iDRAC7 Enterprise
Interface and Standards Support				
IPMI 2.0	✓	✓	✓	✓
Web-based GUI		✓	✓	✓
SNMP and IPMI Discovery		✓	✓	✓
WSMAN		✓	✓	✓
SMASH-CLP (SSH)		✓	✓	✓
Racadm command-line (SSH and local)		✓	✓	✓
Racadm command-line (remote)		✓	✓	✓
Connectivity				
Shared/failover network modes (rack and tower only)	✓	✓		✓
DNS	✓	✓	✓	✓
VLAN tagging	✓	✓	✓	✓
IPv4	✓	✓	✓	✓
IPv6		✓	✓	✓
Dynamic DNS		✓	✓	✓
Dedicated NIC 1Gbps			✓[6]	✓[6]

Feature	Basic Management	iDRAC7 Express	iDRAC7 Express for Blades	iDRAC7 Enterprise
Security and Authentication				
Role-based authority	✓	✓	✓	✓
Local users	✓	✓	✓	✓
SSL Encryption	✓	✓	✓	✓
Active Directory				✓
"Generic" LDAP support				✓
Two-factor authentication[3]				✓
Single sign-on				✓
PK Authentication (for SSH)				✓
Remote Management and Remediation				
Embedded Diagnostics	✓	✓	✓	✓
Remote firmware update	✓[1]	✓	✓	✓
Server power control	✓[1]	✓	✓	✓
Serial-over-LAN (with proxy)	✓	✓	✓	✓
Serial-over-LAN (no proxy)		✓	✓	✓
Last crash screen capture		✓	✓	✓
Last crash video capture/ playback				✓
Boot video capture/ playback				✓
Virtual Media[2]			✓	✓
Virtual Console[2]			✓[5]	✓
Virtual Console sharing[2]				✓
Remote Virtual Console Launch				✓
Virtual Folders				✓
Virtual Console Chat				✓
Remote File Share				✓
Virtual Flash				✓
Virtual Flash Partitions				✓

Feature	Basic Management	iDRAC7 Express	iDRAC7 Express for Blades	iDRAC7 Enterprise
Monitoring and Power				
Sensor monitoring and alerting	✓[1]	✓	✓	✓
SNMP Alerts		✓	✓	✓
Email Alerts		✓	✓	✓
Historical power counters		✓	✓	✓
Power budgeting		✓	✓	✓
Real-time power monitoring		✓	✓	✓
Real-time power graphing		✓	✓	✓
Real-time power capping				✓
Enterprise Group Power Management				✓
Logging				
System Event Log	✓[7]	✓	✓	✓
RAC Log	✓[7]	✓	✓	✓
Trace Log	✓[7]	✓	✓	✓
Lifecycle Controller Log	✓[7]	✓	✓	✓
Lifecycle Controller				
Local Configuration	✓[4]	✓	✓	✓
Local updates	✓	✓	✓	✓
Driver Packs	✓	✓	✓	✓
Remote Services (through WSMAN)		✓	✓	✓
Backup and Restore				✓
Part Replacement				✓

[1]Feature available only through IPMI, not a web GUI

[2]Virtual Console and Virtual Media available with both Java and Microsoft® Active-X® plug-ins

[3]Two-factor authentication available through Active-X; only supports Microsoft® Internet Explorer®

[4]Lifecycle Controller available through the BMC is limited to operating system installation and diagnostics only

[5]Single User Virtual Console with remote launch

[6]Blade servers connect with a 10/100 as per blades-to-chassis specifications

[7]Requires use of OMSA, WS-MAN, IPMI Tool, or Lifecycle Controller to view

Learn more

For additional information regarding Dell's iDRAC7 products, please see the following:

- Overview: Dell.com/learnmore/iDRAClicenses
- iDRAC on Dell TechCenter
- Lifecycle Controller on Dell TechCenter
- iDRAC manuals on Dell Support