

Update firmware



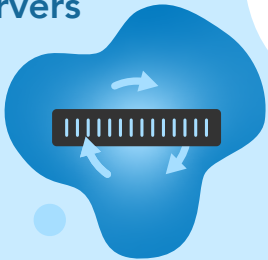
in up to **99.9%** less time* and with **2,996** fewer steps*

Update configurations



in up to **99.7%** less time† and with **1,747** fewer steps†

Repurpose servers



in up to **99.7%** less time† and with **1,741** fewer steps†

*for 1,000 servers based on testing of one, two, and three servers

†for 250 servers based on testing of one, two, and three servers

Boost data center staff productivity with OpenManage Enterprise

In our hands-on tests, the Dell EMC systems management console saves time and effort on data center tasks

Dell EMC™ OpenManage™ Enterprise contains many features that streamline IT administration workflows and increase efficiency. So, how much time and effort do these features save over the processes administrators are already used to?

At Principled Technologies, we put OpenManage Enterprise 3.4 to the test, measuring the hands-on time required to complete a series of common administrative tasks such as updating firmware and repurposing servers. We performed each task on one, two, and three servers, then used these data points to estimate the time it would take to perform each task on up to 1,000 servers. Because of its one-to-many management capability, OpenManage Enterprise required the same amount of time to complete each task no matter the number of servers involved. Performing these tasks manually required increasing amounts of time and effort with each additional server.

We estimate that for each task we tested, Dell EMC OpenManage Enterprise 3.4 would save more than 99 percent of the time it would take to perform the tasks manually on 1,000 servers. These time savings could free up your IT Administrators to take care of more challenging tasks and enable them to accomplish more with each workday.

About Dell EMC OpenManage Enterprise

Dell EMC OpenManage Enterprise is an infrastructure management console that allows IT staff to discover, deploy, update, and monitor Dell EMC PowerEdge™ servers. It also enables IT administrators to view and make changes to data center infrastructure. For more information, visit delltechnologies.com/openmanage-enterprise.

Save time and effort with updated workflows

Sometimes, your administrator's day is full of tasks that are relatively simple but time-consuming. These tasks can distract from other initiatives that are less urgent but more important in the long run. Dell EMC OpenManage Enterprise enables administrators to consolidate their workflows and cut down on hands-on time and effort. We tested four tasks, measured the time and effort required to complete each via OpenManage Enterprise, and compared these results to completing tasks with a manual method that involved using integrated Dell Remote Access Controller (iDRAC).

Figure 1 highlights the findings of our tests on just a single server. (For full test results and a detailed testing methodology, see the [science behind this report](#).) Dell EMC OpenManage Enterprise saved time on each task, and saved steps on three of five of the tasks—though, as we'll show in the next section, the number of steps remains constant for each task, no matter how many servers you have.

**We identified two manual methods for reconfiguring hardware and deploying multiple servers, and display the time and effort required for both. To learn more, see the [science behind this report](#).*

Initial deployment

88% less time
4m 45s time saved
14 fewer steps

Updating firmware

20% less time
8s time saved

Repurposing hardware

42% less time
30s time saved

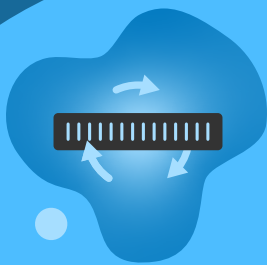
Reconfiguring and deploying hardware*

67% less time
1m 44s time saved
4 fewer steps

Completing urgent data center recovery

77% less time
1m 8s time saved
2 fewer steps

Figure 1: Time and effort our administrator saved by using OpenManage Enterprise 3.4 vs. a manual method for managing a single server.
Source: Principled Technologies.



Get time savings that scale

Because OpenManage Enterprise enables administrators to apply the same workflow to any number of servers, the time and effort required to complete each task would be the same no matter the size of the data center. To test this, we repeated the tasks on two servers and again on three servers. Figure 2 shows highlights from our three-server testing. (For full test results and a detailed methodology, see the [science behind this report](#).) Using Dell EMC OpenManage Enterprise, our administrator required the same amount of time and effort for multiple servers as they did for a single server. By contrast, our administrator required more time and effort with each additional server when using the manual method.

Integrated Dell Remote Access Controller (iDRAC)

iDRAC is a remote server management processor that Dell EMC embeds within every PowerEdge server. According to Dell EMC, iDRAC “is designed for secure local and remote server management and helps IT administrators deploy, update, and monitor Dell EMC PowerEdge servers anywhere, anytime.”¹ To learn more, visit delltechnologies.com/idrac.

Updating firmware

73% less time
1m 28s time saved
5 fewer steps

Repurposing hardware

85% less time
4m time saved
12 fewer steps

Reconfiguring and deploying hardware

up to **89%** less time
up to **6m 51s** time saved
up to **42** fewer steps

Completing urgent data center recovery

92% less time
4m 4s time saved
12 fewer steps

Figure 2: Time and effort our administrator saved by using OpenManage Enterprise 3.4 vs. a manual method for managing three servers.
Source: Principled Technologies.



Save time and effort on firmware updates for 1,000 servers

Enterprises typically maintain data centers with hundreds of servers. Without the automated features we outline in this report, administrators would need to spend hours of their time on simple, repetitive, but necessary tasks, leaving little room for work that more directly impacts your critical business objectives.

Because the time required to complete tasks remained constant when using OpenManage Enterprise, and because time scaled linearly when using the manual process, we were able to extrapolate our data to what one would expect for a large data center. Figure 3 highlights the reduction in time and effort we estimate an administrator would see when completing firmware updates for 1,000 servers.

Updating firmware

99% less time
11h 6m 8s time saved
2,996 fewer steps

Figure 3: Time and effort we estimate an administrator would save using OpenManage Enterprise 3.4 vs. a manual method to manage 1,000 servers. Source: Principled Technologies.

Repurposing hardware

99% less time
4h 51m time saved
1,741 fewer steps

Reconfiguring and deploying hardware

up to **99%** less time
up to **4h 52m 14s** time saved
up to **1,747** fewer steps

Completing urgent data center recovery

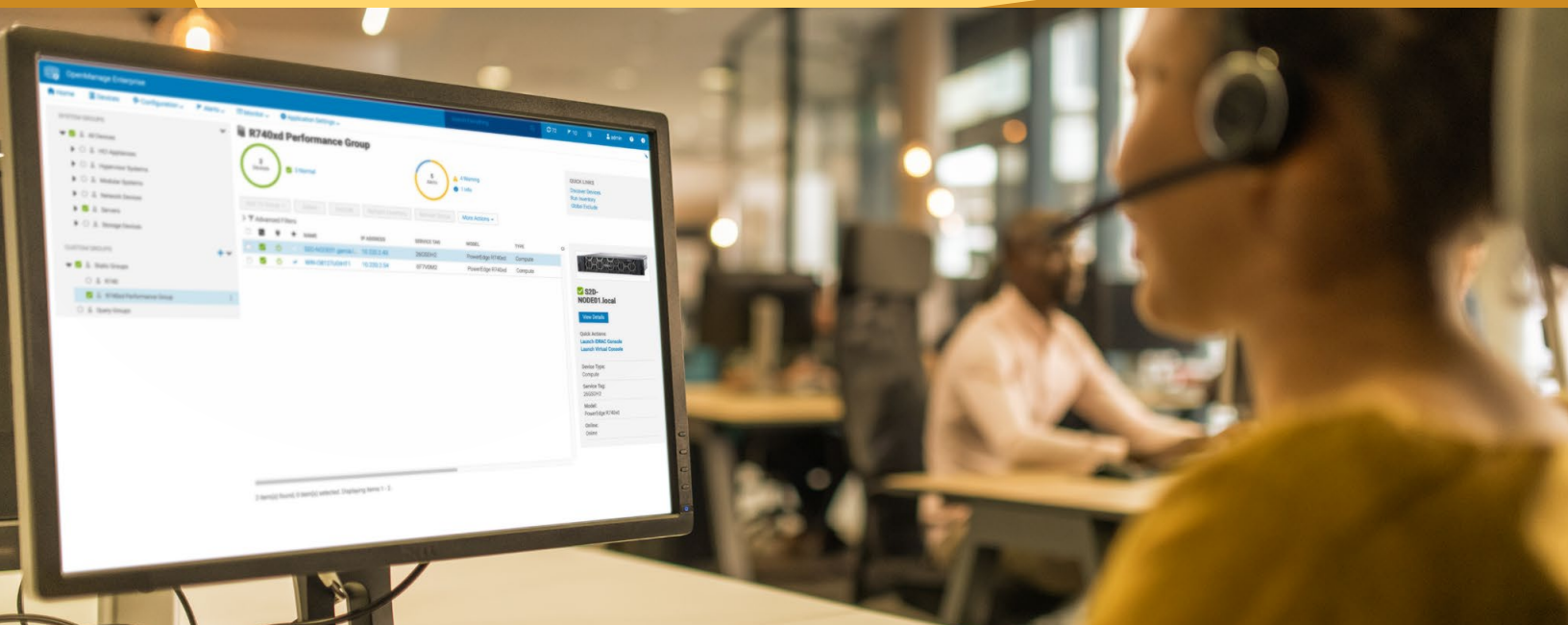
up to **99%** less time
up to **1d 26m 20s** time saved
up to **4,997** fewer steps

Figure 4: Time and effort we estimate an administrator would save using OpenManage Enterprise 3.4 vs. a manual method for managing 250 servers. Source: Principled Technologies.

Take care of urgent data center tasks more efficiently

Figure 4 highlights the reduction in time and effort we estimate an administrator would see by using OpenManage Enterprise to complete administrative tasks on 250 servers. We extrapolated these calculations from our hands-on results. Dell EMC OpenManage Enterprise would save 4 hours, 51 minutes on repurposing hardware, 4 hours, 52 minutes on completing urgent data center recovery, and 4 hours, 52 minutes on reconfiguring and deploying hardware—depending on which manual method an administrator would otherwise employ.

Saving time on these large-scale tasks could not only give your administrators hours of time they could use to tackle more challenging problems; it also helps to cut down on human error that could otherwise result in larger time sinks down the road.



Increase your management capabilities

OpenManage Enterprise contains features that enable administrators to perform tasks that aren't possible to do with some earlier versions of the software. We tested these features and verified that they function as we describe below.

With **multi-homing**, administrators can connect OpenManage Enterprise to public and out-of-band networks simultaneously, enabling them to concurrently manage test and production servers without needing to switch networks. This feature is available only for OpenManage Enterprise versions 3.3 and higher.

New to OpenManage Enterprise 3.4 is **server-initiated discovery**. Dell EMC provides the option for new servers to ship with unique login credentials for enhanced security. Server-initiated discovery in OpenManage Enterprise 3.4 provides a method to discover these servers without needing to scan the network for each new server using complex, unique management credentials. This could potentially decrease deployment time and prevent human error.

OpenManage Enterprise also has **thermal event detection** capabilities, and allowed us to set power policies for thermal budgeting. Every 15 minutes, OpenManage Enterprise checks each target server in the thermal-managed group. If it detects servers running an abnormally high temperature, it can use event-triggering to place those servers in a low-power state to cool them down, which could prevent damage to critical internal components.

We measured the time and effort required to complete each of these tasks and show our findings below (Table 1).

Table 1: Time and steps required to complete each task.
Source: Principled Technologies.

OpenManage Enterprise 3.4	
Setting up multi-homing	
Time	4 min 5 sec
Effort	18 steps
Setting up server-initiated discovery	
Time	0 min 15 sec
Effort	5 steps
Setting up thermal event management (one time setup)	
Time	1 min 37 sec
Effort	16 steps



Conclusion

The latest version of Dell EMC OpenManage Enterprise introduced new features and workflows that could greatly reduce the time and effort your data center administrators would normally spend on several common tasks. Compared to completing these tasks manually, Dell EMC OpenManage Enterprise saved our administrator time for the following tasks:

- Deploying servers
- Updating firmware
- Repurposing server hardware
- Reconfiguring hardware and deploying servers
- Completing urgent data center recovery

Because OpenManage Enterprise allows administrators to apply changes to all servers at once, the time savings scale with more servers. In large data centers, we estimate that OpenManage Enterprise would save hours of time for each task, freeing up administrators for more complex tasks and cutting down on the potential for human error.



1 “Integrated Dell Remote Access Controller (iDRAC),” accessed April 2, 2020, <https://www.delltechnologies.com/en-us/solutions/openmanage/idrac.htm>.

Read the science behind this report at <http://facts.pt/8pw2x3w> ►



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