



Implement cluster-aware firmware updates to save time and effort

Dell OpenManage Enterprise Integration for VMware vCenter 1.0 streamlined firmware updates vs. completing the task manually

In VMware®-based PowerEdge™ environments, sysadmins can use the Dell™ OpenManage™ Enterprise (OME) Integration for VMware vCenter® to leverage OME data in the vCenter administration portal. This allows them to see physical as well as virtual hardware health information in one place—and potentially streamline critical management processes.

We compared the time and steps to complete server firmware updates in a VMware ESXi™ cluster consisting of eight Dell PowerEdge™ servers using two approaches. The automated approach utilized the OpenManage Enterprise Integration for VMware vCenter 1.0, and its ability to schedule and automate the updates across the entire cluster, keeping the cluster online with rolling updates. The manual approach relied on Integrated Dell Remote Access Controller (iDRAC). Not only was updating the server firmware easier with OpenManage Enterprise, the cluster-aware extension completed the task in the same amount of time and steps regardless of server count, whereas the manual approach required more time and steps with each additional server.

By reducing the necessary time and steps to complete routine, time-sensitive tasks, such as updating server firmware, using OpenManage Enterprise Integration for VMware vCenter 1.0 could help sysadmins get more time in their days.



Server
firmware
update

Save 17 minutes
per server, which
could save hours
of admin time*

*Using OpenManage Enterprise Integration for VMware vCenter vs. a traditional method for an eight-server cluster

How we tested

We wanted to see how using the OpenManage Enterprise Integration for VMware vCenter compares to manually updating server firmware using iDRAC with Lifecycle Controller Next. We created a testbed of eight Dell PowerEdge servers and installed VMware ESXi on each. For the OpenManage Enterprise solution, we installed the OpenManage Enterprise Integration for VMware vCenter on an OpenManage Enterprise 3.9 console. Next, we used the two approaches to update the firmware for the cluster within vCenter. We tested our two approaches on four-node and eight-node clusters.

About the OpenManage Enterprise Integration for VMware vCenter

The latest release of the OpenManage Enterprise Integration for VMware vCenter (OMEV) utilizes OpenManage Enterprise data in the vCenter administration portal. The integration can improve vCenter monitoring and management in a VMware software-based PowerEdge environment by offering the following:¹

- Hardware information and alerts pulled into vCenter with controls for notifications
- iDRAC address and service tag details
- Dell warranty information
- Deep-level detail on certified Dell hardware components, including memory and local drives

As we found in testing, OMEV automates server firmware updating. The update runs sequentially on each host in a cluster by putting the host into maintenance mode, executing the update task, and returning each host from maintenance mode one by one. For more information, please visit

<https://www.dell.com/support/kbdoc/en-us/000176981/openmanage-integration-for-vmware-vcenter>.

Apply cluster-aware firmware updates faster and more easily

As Figure 1 shows, using the OpenManage Enterprise Integration for VMware vCenter to apply firmware updates saved significant time compared to our manual process using Lifecycle Controller, a technology that is part of iDRAC. For a cluster of four servers, the integration saved more than an hour, and for a cluster of eight servers, the integration saved more than two and a half hours. Figure 1 also shows the required steps to complete the task using both the OpenManage Enterprise Integration for VMware vCenter and our manual process using Lifecycle Controller. This approach has the additional benefit that it can allow IT to schedule rolling updates in advance, thereby keeping the cluster online.

Time and steps to update firmware on four- and eight-node clusters

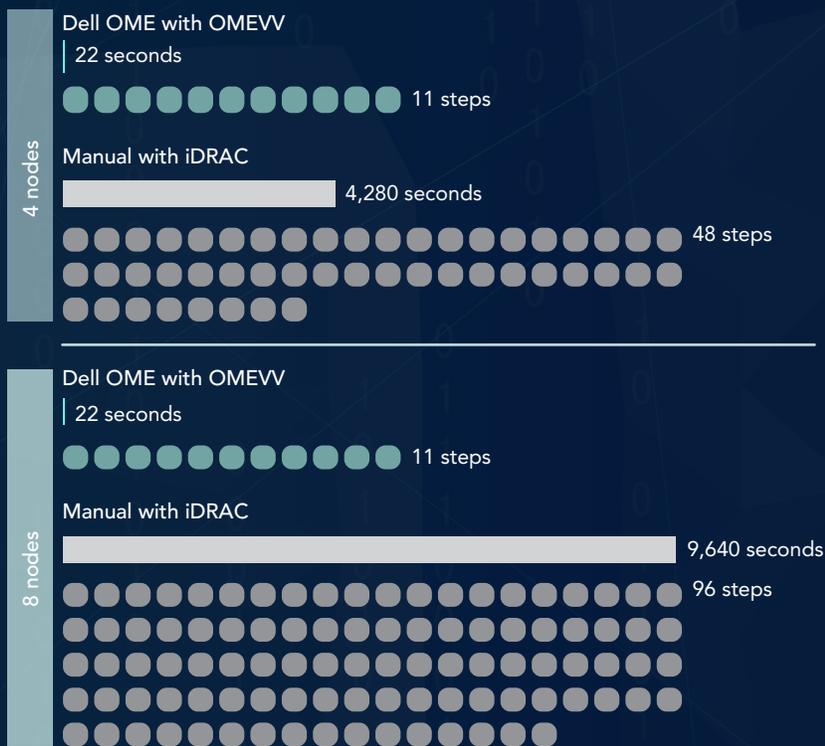


Figure 1: Time, in seconds and minutes, and steps to apply firmware updates for four- and eight-node clusters using our two management approaches. Lower is better. Source: Principled Technologies.

Scale firmware updates with OpenManage Enterprise Integration for VMware vCenter

By using OpenManage Enterprise Integration for VMware vCenter to update firmware, we found that we could choose to apply updates to all nodes at once. Although we tested the capability on only four- and eight-node clusters, Dell demonstrated to us that OpenManage Enterprise Integration for VMware vCenter can allow admins to apply firmware to single clusters up to 96 nodes in size. Using OpenManage Enterprise Integration for VMware vCenter to apply firmware updates can offer scalability that saves time and effort for sysadmins.

Conclusion

If you are using VMware-based Dell PowerEdge servers, the OpenManage Enterprise Integration for VMware vCenter can help you complete firmware updates faster and more easily than using manual processes with iDRAC. This integrated, cluster-aware automation also allowed us to scale out the node count from four to eight clusters without adding time and effort to the task.

1. Dell, "OpenManage Enterprise Integration for VMware vCenter," accessed October 14, 2022, <https://www.dell.com/support/kbdoc/en-us/000176981/openmanage-integration-for-vmware-vcenter>.

Read the science behind this report at <https://facts.pt/3YdXqRJ> ►



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