PT

Streamline server discovery and profile deployment

with server-initiated discovery*

Remove the middleman for critical alerts and warnings

with Power Manager and OMISNOW*

Proactively identify hardware and software issues

with SAE*

Update firmware in multiple servers

in as little as 46 seconds of admin time*

*vs. a manual approach

Automate high-touch server lifecycle management tasks

with Dell EMC OpenManage Enterprise integrations and plugins

IT admins have a long list of responsibilities. Tasks like manual server management, maintenance, and troubleshooting can consume huge quantities of their time and energy. Dell EMC™ OpenManage™ Enterprise (OME) 3.5 contains features and capabilities designed to lighten their load.

In our hands-on evaluation, we found OME systems management automations shaved valuable time and effort off our manual server discovery and firmware update workflows. Plus, when we used OME in conjunction with Power Manager and OpenManage Integration with ServiceNow® (OMISNOW), event tracking and monitoring was completely automatic after our initial policy creation process. We also found that once our servers under test completed server-initiated discovery (an OME feature where servers automatically notify OME of their presence[1]), discovering and monitoring them for actionable hardware issues through the OME console with the SupportAssist Enterprise (SAE) plugin required zero additional steps and no additional time.

Read on to see how OME automations can dramatically reduce the amount of IT admin time and effort required on high-touch, routine management tasks throughout the server lifecycle.

Automations that scale

By automating high-touch, routine tasks, Dell EMC OME plugins and integrations empower IT admins to deliver effective and efficient systems management from a single console.

For this study, we completed a variety of common sever lifecycle management tasks on three Dell EMC PowerEdge™ R740 servers using the OpenManage Enterprise console, OpenManage Enterprise Power Manager, OMISNOW, and the SAE plugin. Then we compared the time and effort each task required with automation versus with a manual method that utilized Dell iDRAC9. The following sections show how the Dell EMC OpenManage Enterprise portfolio can save considerable admin time and effort with server-initiated discovery, policy-based automation, automatic server onboarding for SupportAssist Enterprise, and one-to-many management.

About Dell EMC OpenManage Enterprise 3.5

Dell EMC OpenManage Enterprise 3.5 is the newest version of the Dell EMC systems management and monitoring console. With it, IT admins get a comprehensive view of Dell EMC PowerEdge servers as well as any network-connected storage and network switches. In addition to the server lifecycle management tasks we tested, Dell EMC notes that IT admins can use this console to:

- View and monitor device health
- Create custom alert policies and perform automated actions
- Detect and rectify configuration anomalies
- Update firmware; Detect and rectify drift[2]

Automatic server-initiated discovery

When customers purchase servers, Dell EMC can provide each server's unique credentials in advance, and IT admins can import them before the servers arrive, setting themselves up for easier deployment. With OpenManage Enterprise server-initiated discovery, all we had to do was upload a file containing the servers' service tags and credentials. Once we uploaded the file, the server announced itself to OME, initiating the discovery process required to manage the server.

With manual, network scan-based discovery, we had to enter the credentials and the known IP addresses of the target systems and wait for the management console to connect with and complete the discovery process. While you can perform bulk discovery jobs within a network segment, each server must use the same management credentials—an impossibility if you've ordered your servers with secured unique credentials. Automatic server-initiated discovery not only saves IT admins time and effort on day zero, but it could also potentially decrease large-scale deployment time and reduce the chance for human error.

Next, we compared using OpenManage Enterprise profile deployment, which is template-based and assigned to individual servers, to the time and effort needed to capture a profile from iDRAC, clone it, and redistribute it to the other servers. Not only was the OME automated workflow faster, but we found OME profiles provided portable configuration items and settings, so we could move workloads to another server with ease.

Discover three servers and deploy server profiles on them

Time (mm:ss), lower is better

0:56

3:31

Steps, lower is better

13

17

Streamline server setup

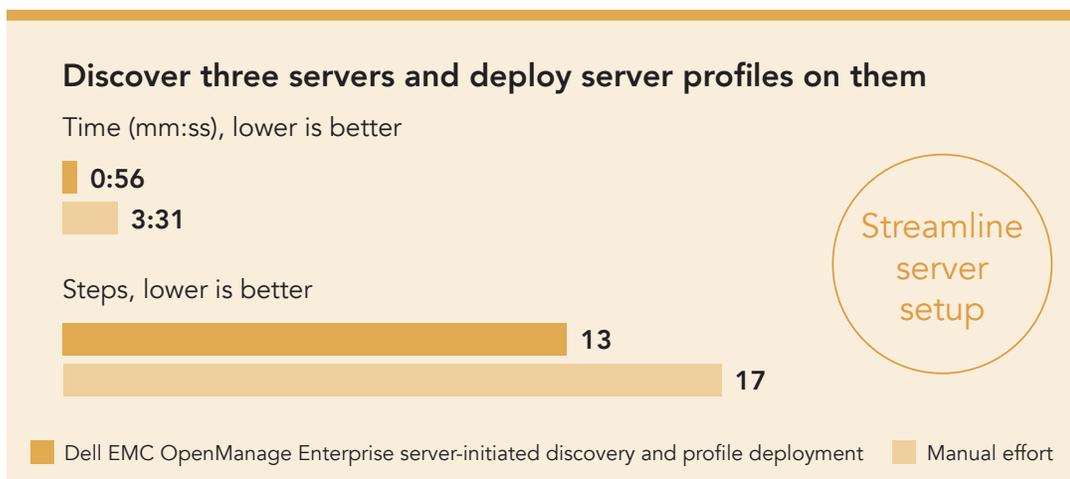Dell EMC OpenManage Enterprise server-initiated discovery and profile deployment   Manual effort

Figure 1: Time and effort required to find three servers with known IP addresses and deploy template-based baseline server profiles. Source: Principled Technologies.

About OMISNOW

OpenManage Integration with ServiceNow (OMISNOW) acts as a go-between for the OpenManage Enterprise console and ServiceNow—transferring data between both platforms and helping IT admins detect issues in less time.[4]

Policy-based automation

For this comparison, we used OpenManage Enterprise Power Manager and OMISNOW to evaluate the OpenManage Enterprise portfolio's automatic event monitoring and service ticket tracking capabilities. There was a one-time setup for the policy-based automation we created, which took 31 seconds and 7 steps. After that, both workflows we discuss below were automated.

In our hands-on evaluation, the Power Manager plugin and ServiceNow integration made it easy to monitor a temperature-based incident as well as proactively throttle power in a temperature-triggered EPR (Emergency Power Reduction) test scenario. In our tests, OME automatically generated incident reports for human follow-up. Once we fixed the problems, alerts on both consoles notified us that the incidents were resolved. By implementing policy-based automations to set limits for power usage or throttle server power and performance based on server temperature, IT admins can reduce the number of incidents they have to manage manually.

Table 1: Admin time and effort needed to monitor a temperature-based incident and create the incident resolution using Power Manager with OMISNOW (after the one-time policy-based automation setup) and a manual event-monitoring and incident creation method. Lower is better. Source: Principled Technologies.

Monitor and create incident resolutions	Time (seconds)	Steps
Power Manager with OMISNOW	0	0
Manual effort per incident	98	19

Automatic server onboarding for SupportAssist Enterprise

For this comparison, we used the SupportAssist Enterprise plugin versus the full, stand-alone version of SupportAssist Enterprise. Both solutions can detect hardware issues and create cases for Dell technical support. In our hands-on testing, the main difference between the two options was server onboarding.

The table below shows the time and steps it took using each approach to onboard a SupportAssist-entitled server. We found that discovering and monitoring the server for actionable hardware issues through the OME console with the SupportAssist plugin required zero additional steps and no additional time when we checked the SupportAssist-entitled box during the automated server-initiated discovery process.

By contrast, an IT admin using OME and the full version of SAE would have to switch over to the SAE console and perform an additional discovery of the target server, which increases the onboarding time for every server.

Table 2: Admin time and effort needed to onboard a SupportAssist-entitled server using the SAE plugin (after server-initiated discovery) and the full version of SAE. Lower is better. Source: Principled Technologies.

Manual effort per server	Time (seconds)	Steps	Single pane for easy management?
SAE plugin	0	0	Yes
SAE – full version	235	8	No

About SAE

Dell SupportAssist Enterprise (SAE) proactively detects hardware and software issues, notifies you about the issue, and automatically generates a support request with server hardware logs to Dell EMC.[5] In a Principled Technologies report from September 2020, we found that ProSupport™ Plus with SupportAssist reduced the amount of IT administrator involvement in drive failure resolution by up to 90 percent compared to Basic Hardware Support (6 minutes vs. 30 minutes and 45 seconds).[6]

Centralized one-to-many management

For this comparison, we performed firmware updates on the three servers in our monitored group. By using the OpenManage Enterprise one-to-many management capabilities on these important yet monotonous tasks, the likelihood of human error decreases, and the likelihood of firmware updates happening on schedule increases.
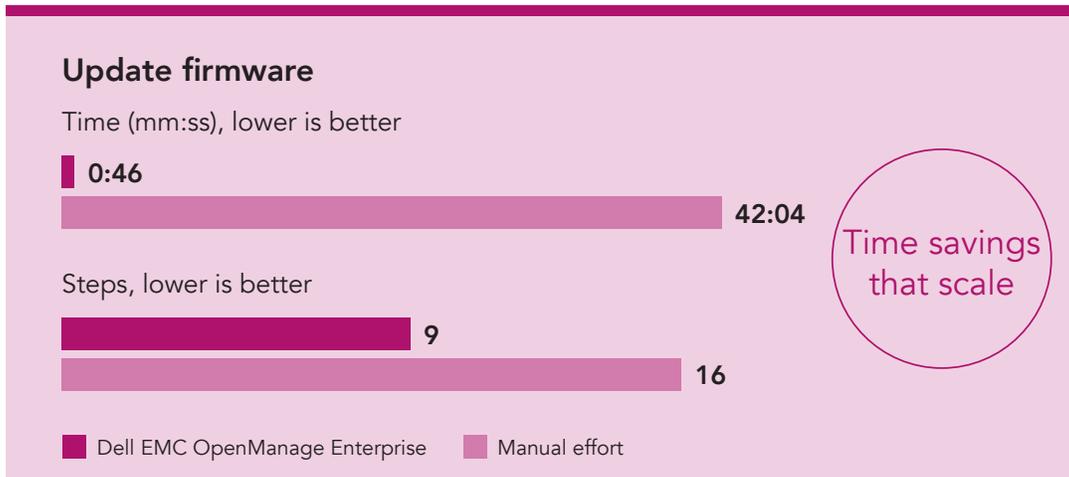
Update firmware

Time (mm:ss), lower is better

0:46

42:04

Steps, lower is better

9

16

Time savings that scale

■ Dell EMC OpenManage Enterprise ■ Manual effort

Figure 2: Time and effort required to update firmware on three Dell EMC PowerEdge R740 servers. Source: Principled Technologies.

Conclusion

We found that Dell EMC OpenManage Enterprise automations can free up costly admin time for other urgent data center matters. Consider an organization that leverages the server-initiated discovery feature, template-based server profile deployment, and one-to-many server firmware updating capabilities we tested alongside single console event management and hardware incident support that OMISNOW and SupportAssist plugins enable. Based on our results, for a single server that receives monthly firmware updates and has at least three events during a three-year period, our fictional organization would free up approximately 25 hours and 26 minutes in IT admins time in a single server lifecycle, which could translate to over $1,234 in server management cost savings if a Senior Systems Admin is the one doing the manual labor.[7]

1 Dell Technologies, "Server-Initiated Discovery with OpenManage Enterprise 3.4," accessed March 3, 2021, https://downloads.dell.com/manuals/all-products/esuprt_software_int/esuprt_software_ent_systems_mgmt/dell-openmanage-enterprise_white-papers15_en-us.pdf.

2 Dell Technologies, "Dell EMC OpenManage Enterprise Version 3.5 User's Guide," accessed February 9, 2021, https://www.dell.com/support/manuals/en-us/dell-openmanage-enterprise/ome_3.5_ug/about-dell-emc-openmanage-enterprise?guid=guid-72dc4319-05e8-4b62-902b-1b49a7a61488.

3 Dell, Support for Dell EMC OpenManage Enterprise Power Manager," accessed February 10, 2021, https://www.dell.com/support/kbdoc/en-us/000176254/support-for-dell-emc-openmanage-enterprise-power-manager-and-power-center.

4 Dell, "Support for Dell EMC OpenManage Integration with ServiceNow," accessed February 10, 2021, https://www.dell.com/support/kbdoc/en-us/000177827/support-for-dell-emc-openmanage-integration-with-servicenow.

5 Dell Technologies, "Dell EMC SupportAssist Enterprise 2.x – Guide and Download," accessed March 1, 2021, https://www.dell.com/support/kbdoc/en-us/000179530/dell-emc-supportassist-enterprise-2-x-guide-and-download#how.

6 Principled Technologies, "Minimize server support hassle using Dell EMC ProSupport Plus for Enterprise with Dell EMC SupportAssist," accessed March 2, 2021, https://www.principledtechnologies.com/Dell/ProSupport-Plus-SupportAssist-vs-Basic-Hardware-Support-0920.pdf.

7 On March 3, 2021, the average pay for a Senior Systems Administrator in the U.S. was $48.54 per hour. ZipRecruiter, "Senior Systems Administrator Salary," accessed March 3, 2021, https://www.ziprecruiter.com/Salaries/Senior-Systems-Administrator-Salary.

Read the science behind this report at http://facts.pt/G0i5yNZ ▶

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