

Reduce hands-on deployment times to near zero* with iDRAC9 automation

iDRAC9 v6.10 offers automated OS deployment alongside the Zero-Touch provisioning feature

Embedded in each Dell PowerEdge server is the integrated Dell Remote Access Controller 9—more commonly known as iDRAC9. The move towards fully automating routine systems management tasks continues with the latest version of iDRAC9 v6.10.05.00 (or simply v6.10, as we'll refer to it from now on), which offers Zero-Touch OS-level deployment in addition to system provisioning automation. Zero Touch provisioning automates all hardware configuration, certificate installation, repository firmware updates, and OS deployment. This helps IT admins reduce error, ensure uniform server images, and spend more time on strategic initiatives that help promote business growth.

Our experts tested Zero-Touch automated system provisioning including OS deployment on a new, 16th generation Dell™ PowerEdge™ R760 server. After initial setup of the first server, Zero-Touch automation reduced hands-on (or administrator-attended) provisioning time for additional servers to almost nothing, and dropped administrator steps from 39 to just 4 compared to doing the same tasks manually. But many data centers have dozens of servers, and that's where the real savings come in. When provisioning 10 servers, we extrapolate that organizations could save over 4 hours of administrator-attended time after the first server. For a 50-server deployment, administrators would save nearly three 8-hour work days (22 hours and 8 minutes) on provisioning tasks.

Enterprise and Datacenter licenses for iDRAC9 v6.10 include not only these Zero-Touch provisioning features, but also include CA certificates in the server configuration profile to easily ensure secure servers by automatically establishing encrypted connections. Check out all of these features to see how much time iDRAC9 v6.10 can save your organization.

*When you order new Dell PowerEdge servers with Zero-Touch provisioning enabled, hands-on deployment time drops to nothing.



Save deployment time with automated provisioning

Reduce admin-attended time by 97.9% per server

after initial setup vs. manual deployment



Bigger deployments deliver more meaningful time savings

10-server deployment: Save over 4 hours

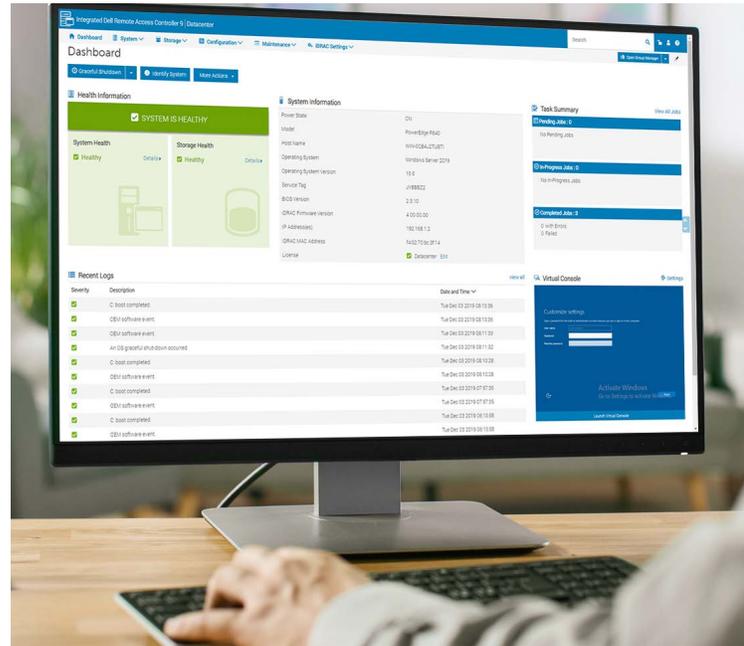
50-server deployment: Save nearly 3 work days

using iDRAC9 vs. manual deployment

Automating RAID configuration, BIOS setting changes, and OS installation with iDRAC9 v6.10

Embedded in each Dell PowerEdge server is the integrated Dell Remote Access Controller 9—more commonly known as iDRAC9. iDRAC9 makes it easier for administrators to deploy and update the PowerEdge servers in their data center. iDRAC9 features that automate server deployment tasks include the BIOS settings deployment package and OS-level features that allow administrators to push a full unattended operating system installation out to a server or group of servers. These Zero-Touch provisioning features require either the Enterprise or Datacenter license.

Using a Dell PowerEdge R760 server located in the Dell data center, we remotely tested Zero-Touch provisioning features to see how much time and effort they could save administrators compared to executing the same tasks manually. To learn the step-by-step details of our testing, see the [science behind the report](#).



Automating provisioning of servers saves admin-attended time

iDRAC has had hardware-level Zero-Touch deployment features since the 12th generation of Dell PowerEdge servers, and iDRAC9 v4.0 introduced Zero-Touch automation at the OS level for even greater time savings. Once administrators deploy the initial server and set up iDRAC9 auto-provisioning features—a one-time task that took us 18 minutes and 21 seconds—Zero-Touch provisioning including OS deployment dramatically cut the admin-attended time and steps to deploy an additional server compared to a manual approach. As Figure 1 shows, it reduced 39 steps to 4 steps and 27 minutes to 33 seconds.



Number of steps to provision a server after initial deployment and setup

Fewer steps is better

iDRAC9 v6.10

✓✓✓✓ 4 steps

Manual

39 steps

Hands-on admin time

Less time is better

33s

27m 7s

Figure 1: Time (in minutes and second) and steps required to provision a server after deploying the initial server and setting up iDRAC9 auto-provisioning features vs. using a manual approach. Lower is better.

Source: Principled Technologies.

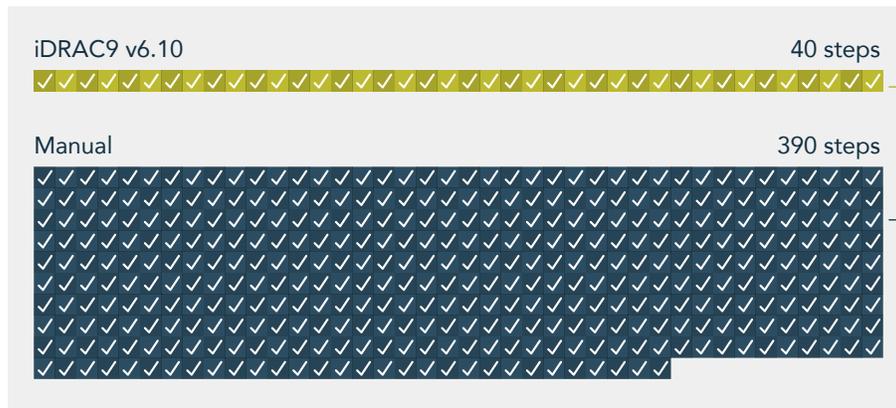
How much admin time can your organization save?

If your data center is expanding rapidly, iDRAC9 Zero-Touch provisioning has the potential to save a significant amount of administrator time and hassle—time that administrators can then spend on other critical initiatives. Though we tested only a single server, multiplying the time savings as we do below can give you an idea of how much time you could save deploying various numbers of servers. If you deploy 10 servers, your administrators could save over 4 hours of attended time. By shrinking the number of steps from 390 to just 40, automating with iDRAC9 v6.10 also reduces the chance of human error while provisioning systems.



Extrapolated number of steps to provision 10 servers after initial deployment and setup

Fewer steps is better



Hands-on admin time

Less time is better



That's more than half of one eight-hour work day.

Figure 2: Extrapolated time (in hours, minutes, and seconds) and steps required to provision 10 servers after deploying the initial server and setting up iDRAC9 auto-provisioning features vs. using a manual approach. Lower is better. Source: Principled Technologies.

About the Dell PowerEdge R760 server

Dell offers a wide-ranging portfolio of servers to meet a variety of business needs. Part of the 16th generation of PowerEdge servers, the PowerEdge R760 is a 2U two-socket server that features 4th Generation Intel® Xeon® Scalable processors. iDRAC9 v6.10 comes embedded in the PowerEdge R760 server to offer management functionality out of the box with no need for additional hardware. According to Dell, compared to the previous generation, the PowerEdge R760 can increase performance for demanding workloads including AI inferencing, virtual desktop infrastructure, SAP sales and distribution, and more.¹

➤ To learn more about the Dell PowerEdge R760, visit <https://www.dell.com/en-us/dt/corporate/newsroom/announcements/detailpage.press-releases~usa~2023~01~2023-01-17-next-generation-dell-poweredge-servers-deliver-advanced-performance-and-energy-efficient-design.htm>.

The more servers you deploy, the more time and effort you save through automation with iDRAC9. Administrators could save nearly three 8-hour work days (over 22 hours) using automated provisioning for 50-server deployments compared to doing those tasks manually. By minimizing deployment windows for new systems, organizations can extend their business capabilities faster and free up administrators to focus on other strategic tasks. Again, the number of servers multiplies the number of steps administrators must take to provision the systems, and each step is a chance to make a small error that disrupts the deployment and causes delays. By using iDRAC9 v6.10 to ensure that systems have identical imaging and reducing the chance for error through fewer steps, your organization can make server deployment a smoother process from start to finish.



Extrapolated number of steps to provision 50 servers after initial deployment and setup

Fewer steps is better

Hands-on admin time

Less time is better

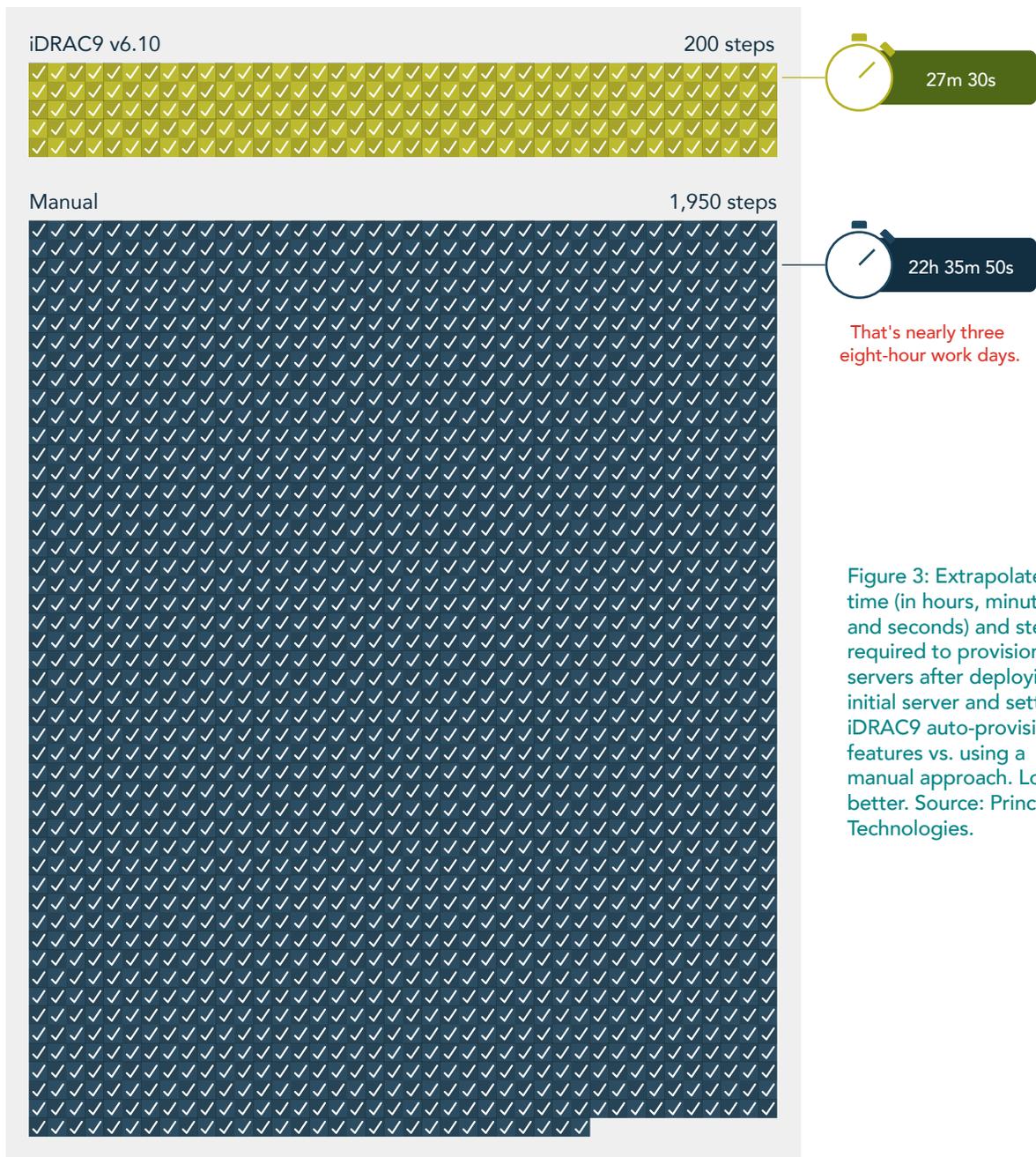


Figure 3: Extrapolated time (in hours, minutes, and seconds) and steps required to provision 50 servers after deploying the initial server and setting up iDRAC9 auto-provisioning features vs. using a manual approach. Lower is better. Source: Principled Technologies.

Adding iDRAC SSL certificates to server configuration profiles

SSL certificates keep systems safe by validating that security measures are up to date, but they require renewal to maintain validity. For Datacenter and Enterprise license customers, iDRAC9 v6.10 offers Automatic Certificate Enrollment, which eliminates the time and effort for planning and tracking renewal cycles and removes the risk of servers becoming vulnerable due to a certificate expiring. Unburdening administrators from having to spend time renewing SSL certificates is another way that iDRAC9 v6.10 simplifies admin duties and lets them put their valuable time to better use.

To simplify deployment and ensure secure connections, administrators can add CA certificates directly to server configuration profiles. According to Dell, available SSL certificate types included in server configuration profiles are:

- KMS_SERVER_CA
- SEKM_SSL_CERT
- RSYSLOG_1
- RSYSLOG_2
- DEL_AUTH_HTTPS_1
- DEL_AUTH_HTTPS_2

Additional certificates now supported for importing in iDRAC9 version 6.00.02.00 include:

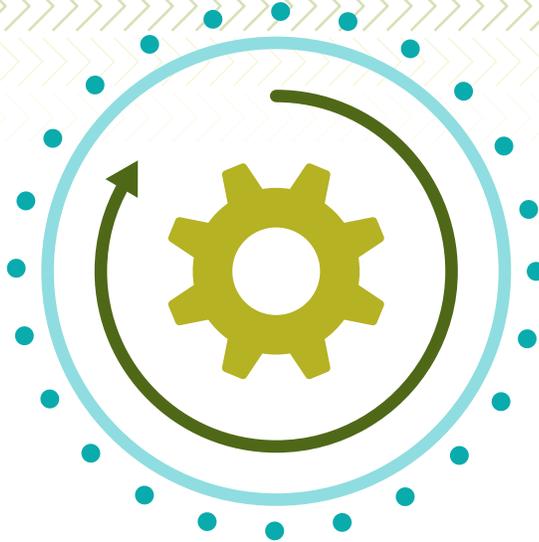
- LDAP_CA
- SCEP_CA
- RSA_CA
- WEBSERVER_SSL
- BIOS_HTTPS_BOOT_CERT

We did not test the adding CA certificates to system configuration profiles or the iDRAC9 Automatic Certificate Enrollment feature on the Dell PowerEdge R760 servers in this study, but a 2020 Principled Technologies study tested this feature on previous-generation Dell PowerEdge servers.²

For more information about these features, see the links below:

- [Server configuration profiles: reference guide](#)
- [SCP "How to" video](#)





Conclusion

Maximizing the value of administrator time and deploying new systems quickly is critical to business success. iDRAC9 v6.10 provides administrators with Zero-Touch system provisioning features that include OS deployment, allowing them to automate these routine tasks and reduce the time to deploy servers by 97.9 percent compared to doing the same tasks manually. It also lets administrators avoid the hassle of scheduling, tracking, and maintaining iDRAC9 SSL certificate renewals. Using iDRAC9 v6.10 to automate or even eliminate routine tasks can give administrators time back to innovate and help your business grow. It can also help ensure a smoother deployment by reducing the chance for errors that lead to lengthy troubleshooting.

-
- 1 Dell, "Next-Generation Dell PowerEdge Servers Deliver Advanced Performance and Energy Efficient Design," accessed February 3, 2023, <https://www.dell.com/en-us/dt/corporate/newsroom/announcements/detailpage.press-releases~usa~2023~01~2023-01-17-next-generation-dell-powerededge-servers-deliver-advanced-performance-and-energy-efficient-design.htm>.
 - 2 Principled Technologies, "Eliminate the need to schedule, track, and maintain iDRAC SSL certificate renewals with a new feature in iDRAC9 v4.0," accessed February 3, 2023, <https://www.principledtechnologies.com/Dell/iDRAC9-SSL-renewal-0220.pdf>.

Read the science behind this report at <https://facts.pt/XcQ5En> ►



Facts matter.®

Principled Technologies is a registered trademark of Principled Technologies, Inc. All other product names are the trademarks of their respective owners. For additional information, review the science behind this report.

This project was commissioned by Dell Technologies.