



Cut server migration times by upgrading to Dell PowerEdge MX from legacy Cisco UCS

Compared to moving to a new Cisco UCS X-Series Modular System

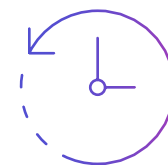
The time has come to update your data center with new servers and get all the benefits the latest technology can offer, but significant migration questions remain. If the infrastructure you have in place comprises older Cisco UCS servers running virtual machines (VMs), you may assume migrating to the latest Cisco UCS X-Series hardware would simplify the process. In our tests in the Principled Technologies data center, we found that wasn't the case.

The modular Dell PowerEdge MX server platform offers an attractive migration target that can simplify the server migration process and save significant administrator time and effort compared to moving to a new Cisco UCS X-Series Modular System. By requiring 246 fewer administrator steps from initial configuration through server migration for a three-node cluster, choosing the Dell PowerEdge MX platform could help reduce human error and potential troubleshooting time as you move your new hardware into production. With PowerEdge MX, administrators save time as well—2 hours and 21 minutes for a three-node cluster—compared to moving to new Cisco UCS hardware. That's time that administrators can spend working on new initiatives to further your business goals.



Cut total migration time by 57.3%

for a three-node cluster migration



Save 2 hours and 21 minutes

for a three-node cluster migration



58.0% fewer steps reduces the chance for error

from configuration through migration

Migration considerations from old hardware to new

A common reason that organizations choose a specific vendor for new data center hardware is familiarity—they expect that upgrading with hardware and software from the same vendor they already use will be a simpler process than switching to a new vendor altogether. But IT managers charged with upgrade planning would be remiss in forging ahead without considering what other platforms might bring to the table—or potential downsides of sticking with their current vendor. For example, customers expecting a seamless integration from older Cisco UCS hardware to the new Cisco UCS X-Series hardware may find themselves disappointed. Because the new Cisco UCS X-Series we tested is cloud-managed, the migration of VMs on older servers to the new platform takes significant time and effort. And if the rationale of easier vendor-specific migration is gone, it only makes sense for administrators to examine what other virtualization platforms on the market can offer.

In our comparison of migrating VMs from an older three-node Cisco UCS cluster onto two new platforms, we found that the Dell PowerEdge MX platform dramatically simplified the deployment process. As Figure 1 shows, it took 57.3 percent less time and 58.0 percent fewer steps to complete cluster migration onto the Dell PowerEdge MX platform compared to moving to the new Cisco UCS X-Series platform.

Total time and steps to complete migration

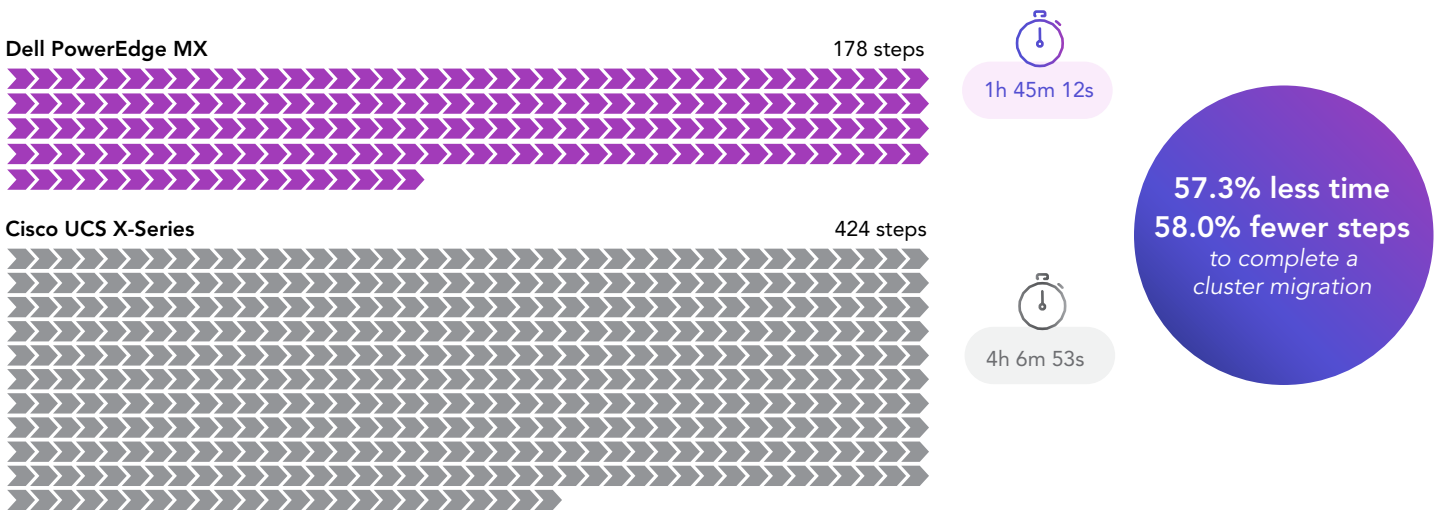


Figure 1: Total time and steps to migrate the VMs on a legacy Cisco UCS cluster to both new platforms, including initial configuration, server profile configuration and deployment, and migration. Less time and fewer steps are better. Source: Principled Technologies.

By reducing the time it takes to upgrade your data center infrastructure, the Dell PowerEdge MX platform can ensure your organization starts reaping the benefits of your new investment sooner. Plus, the faster migration process can give admins back precious time that they could spend tuning applications for optimal performance or focusing on other IT initiatives. Reducing the number of steps administrators must follow also minimizes the chance that an errant click derails the migration process, which could save even more administrator time.

How we tested

In the Principled Technologies data center, we set up an older Cisco UCS infrastructure, consisting of three servers in a chassis running six VMs. We then captured the time and steps it took to complete initial server configuration, server profile configuration and deployment, and server migration of this older hardware to two new platforms:

- Dell PowerEdge MX7000
- Cisco UCS X-Series X9508

To learn more about the systems we migrated and the step-by-step details of our testing, read the [science behind the report](#).

About the Dell PowerEdge MX server platform

Dell calls the PowerEdge MX a “modular, 7U integrated solution designed for enterprise data center density with easy deployment, management, and maximum longevity” and says its no midplane design and scalable fabric architecture allow it to support new processor technologies, storage types, and connectivity options.¹ Learn more at <https://www.dell.com/en-us/dt/servers/modular-infrastructure/poweredge-mx/index.htm#tab0=0&tab1=0&accordion0>.



Save time on initial server configuration with Dell PowerEdge MX

Initial platform configuration tasks are where the Dell PowerEdge MX platform showed the most significant reduction in time and steps compared to the Cisco UCS X-Series platform. As Figure 2 shows, the PowerEdge MX platform cut administrator time by over two hours and reduced steps by 84.8 percent compared to the Cisco UCS X-Series.

Total time and steps to complete initial configuration tasks

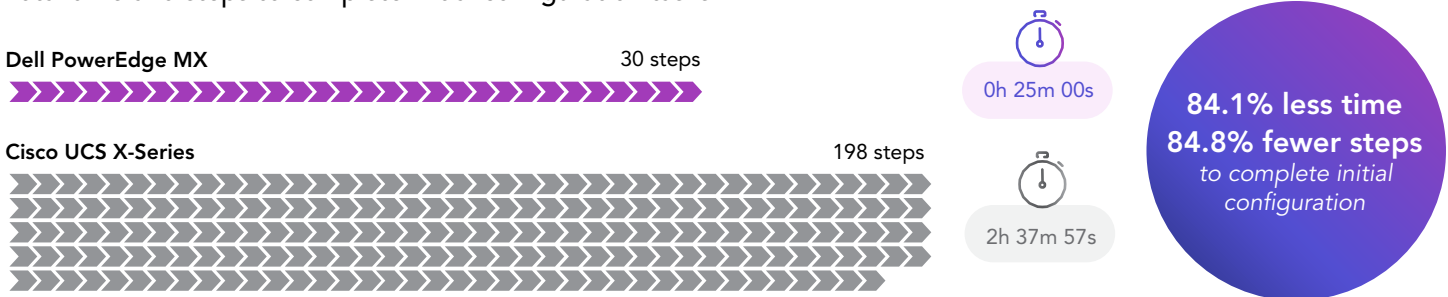


Figure 2: Time and steps it took to complete initial configuration tasks for both platforms. Lower numbers are better. Source: Principled Technologies.

One of the reasons the initial configuration tasks for the Cisco UCS X-Series platform took so much longer to complete is that it shipped with a firmware version that Intersight does not support. This required us to upload and update the firmware just to continue the setup process. We also had to enroll in Cisco Intersight and configure domain and chassis templates. This was a lengthy process with room for user error that could further hinder the deployment process. In contrast, the Dell PowerEdge MX platform required only a brief initial setup and chassis configuration.



Save time on server profile configuration/deployment with Dell PowerEdge MX

Server profile configuration/deployment for the three-node cluster was also simpler using the Dell PowerEdge MX platform. As Figure 3 shows, it took 29 minutes, 45 seconds and 49 steps to complete these tasks using the PowerEdge MX solution, while the Cisco UCS X-Series platform required 124 steps to complete the same tasks.

Total time and steps to complete server profile configuration and deployment tasks

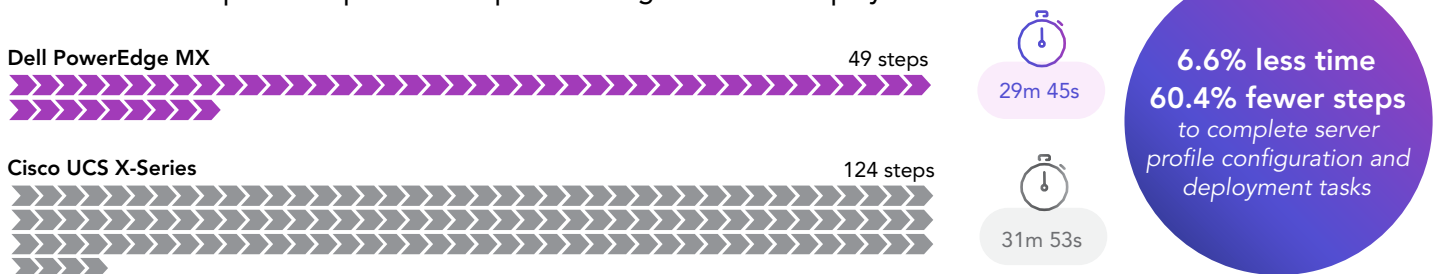


Figure 3: Time and steps it took to complete server profile configuration and deployment tasks for both platforms. Lower numbers are better. Source: Principled Technologies.

While the profile deployment processes were similar in time and steps, the server template creation process was significantly easier for the Dell PowerEdge MX platform. With the Cisco platform, creating the server profile took 115 steps, while Dell server template creation took only 31 steps and saved over 10 minutes.

Save time on server migration with Dell PowerEdge MX

While most of the time and steps savings for the migration process came over the setup and configuration tasks we have already covered, the actual cluster migration was also short and simple with the Dell PowerEdge MX platform, taking 11.5 percent less time and three fewer steps than the Cisco UCS X-Series platform (see Figure 4).

Total time and steps to complete server migration tasks

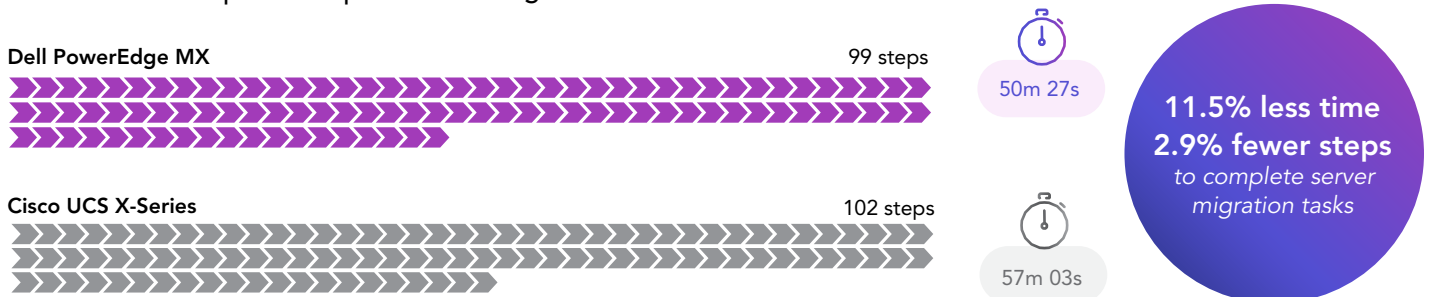


Figure 4: Time and steps it took to complete server migration tasks for both platforms. Lower numbers are better. Source: Principled Technologies.



Conclusion

If your organization currently runs VMs on a legacy Cisco UCS cluster, we found that migrating to a new Dell PowerEdge MX platform can save significant administrator time and steps compared to moving to new Cisco UCS X-Series hardware. By cutting total migration preparation and time by 57.3 percent and reducing administrator steps by over 200 clicks, the Dell PowerEdge MX platform can simplify the entire upgrade process. With the Dell PowerEdge MX platform, your business can attain the performance benefits of your new hardware faster, reduce the chance of user error, and ensure that administrators can move onto strategic tasks in less time.

1. Dell PowerEdge MX, accessed February 5, 2023, <https://www.dell.com/en-us/dt/servers/modular-infrastructure/poweredge-mx/index.htm#tab0=0&tab1=0&accordion0>.

Read the science behind this report at <https://facts.pt/Dar4Pyd> ►



Facts matter.®