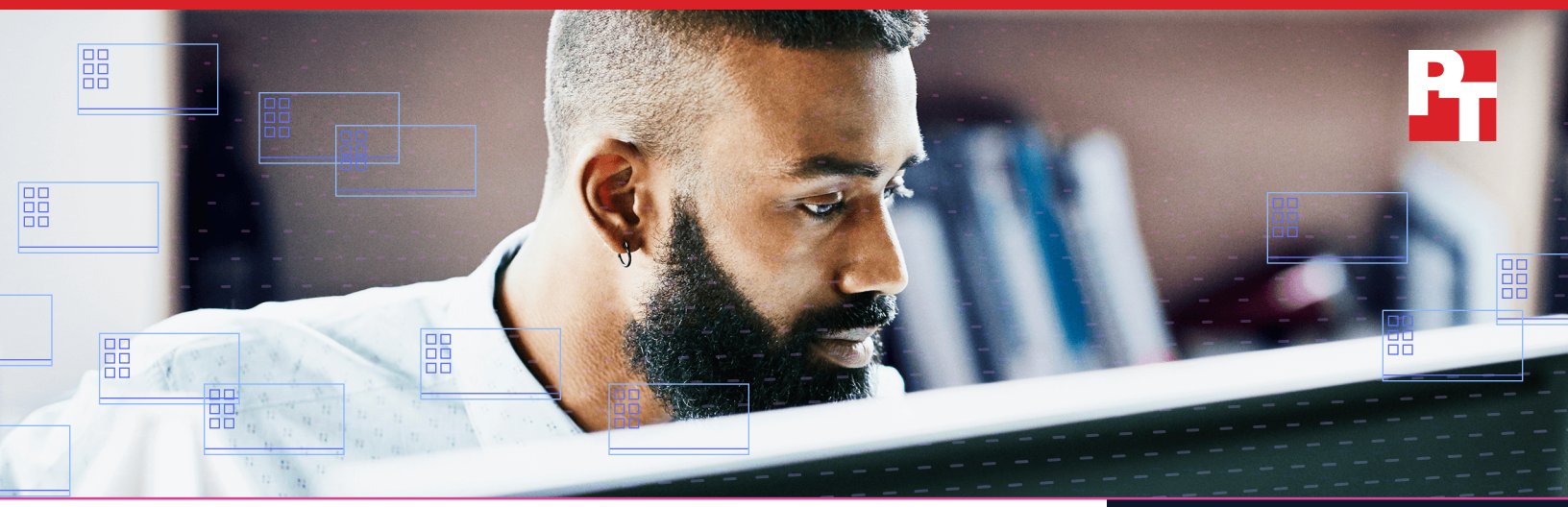
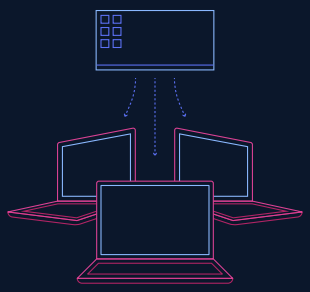


A consistent Windows 10 Pro image deployment experience—regardless of processor

We compared time and steps on AMD Ryzen 5 PRO 4650U and Intel Core i5-10310U vPro processor-based Lenovo ThinkPad T14 laptops

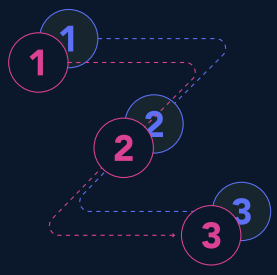
As companies transition to a more distributed workforce model, their IT teams rush to get new tech-driven products and services up and running as quickly as possible. However, even the most experienced IT staff can feel overwhelmed when integrating new laptops based on processors from different vendors, which can make it necessary to alter existing IT processes or develop new ones.

Our admins created and ran the same automated Configuration Manager (formerly SCCM) task sequence to deploy a Microsoft Windows 10 Pro image on two Lenovo® ThinkPad® T14 laptops—one powered by an AMD Ryzen™ 5 PRO 4650U processor and the other by an Intel® Core™ i5-10310U vPro® processor. In our tests, deployment took the same number of steps and a similar amount of time on each device. So, if you're debating between AMD and Intel processor-based laptops, deployment time for a Windows 10 Pro image should not be a factor in your decision.



Budget the same time

Admins needed 16:41 (mm:ss) to deploy Microsoft Windows 10 Pro images on an AMD processor-based Lenovo ThinkPad T14 laptop compared to 17:24 (mm:ss) on the same laptop with an Intel processor



Follow the same steps

Admins used the same Windows 10 Pro image deployment process for AMD and Intel processor-based devices

What we tested

Shifting to a more remote workforce makes no-touch endpoint management a greater priority. Streamlining endpoint management tasks, such as OS deployment and driver installation, enables IT staff to focus their creative energy on implementing other revenue-boosting strategies.

Our admins created a Configuration Manager task sequence to deploy a Windows 10 Pro image on both laptops. This automated sequence included applying the OS, configuring network settings, installing Office 365 and Slack applications, and adding drivers.

This study is an update to a 2018 study we conducted involving four business-class systems powered by AMD or Intel processors. At that time, our admins found "Windows 10 image deployment to AMD processor-powered laptops and desktops took similar time and the same number of steps as deployment to systems powered by Intel." You can read the 2018 report here.

We used a Configuration Manager task sequence to deploy a Windows 10 Pro image and necessary drivers to the following business-class laptops:

AMD

Lenovo ThinkPad T14 20UD
14-inch laptop featuring an AMD Ryzen 5 PRO 4650U processor (8MB cache, up to 2.10GHz)

Intel

Lenovo ThinkPad T14 20S0
14-inch laptop featuring an Intel Core i5-10310U vPro processor (6MB cache, up to 1.70GHz)

Deploying the OS

Having a single deployment process that works quickly ensures that these new devices arrive in employees' hands as soon as possible. This consistency across processor vendors also removes process-driven roadblocks that can get in the way of needed OS performance and security upgrade rollouts.

In our hands-on tests, we deployed a Windows 10 Pro image to the AMD Ryzen 5 PRO 4650U processor-based Lenovo ThinkPad T14 laptop in slightly less time than the same process took on the Intel Core i5-10310U vPro processor-based model. In the graphs below, "Admin time" refers to the time it took our admin to start the installation process on the target laptop. "System time" is the time it took our Configuration Manager task sequence to install the operating system, install drivers and applications, and configure the system.

Deploying one laptop using Configuration Manager

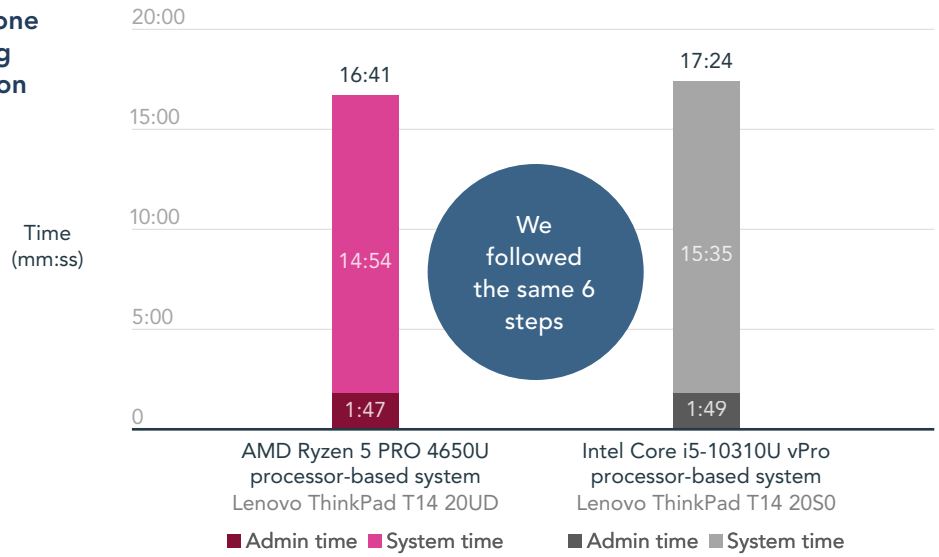
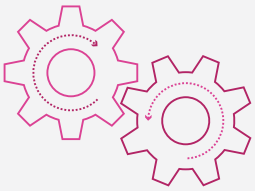


Figure 1: Total time (mm:ss) to deploy one laptop using Configuration Manager. Lower is better. Source: Principled Technologies.



About cloud-based device management in mixed environments

While this report focuses on traditional IT deployment processes via Configuration Manager, IT staff may consider leveraging cloud-based services such as Windows Autopilot to deploy their devices. Windows Autopilot could simplify device deployment as it provides setup and pre-configuration services for new devices so devices are ready to use right out of the box.[1] Additionally, Microsoft Endpoint Manager and Windows Autopilot processes work on Windows, Apple®, and Android™ devices, meaning mixed processor environments will not be a problem for these traditional or cloud-based deployment tools.[2,3]

Installing drivers

Organizations often have well-established procedures for preparing new devices for end-users, which may include loading a custom image that installs the company-supported OS and deploys its most-used applications.

Before deploying the Windows 10 Pro image, our admins added the required driver packages for each solution to Configuration Manager. This allowed the automated sequence to complete all OS updates and customizations on each laptop. Adding the drivers for both AMD and Intel processor-based systems required the same eleven steps, and installing the drivers took roughly the same amount of time.

Adding drivers to the boot image and driver package

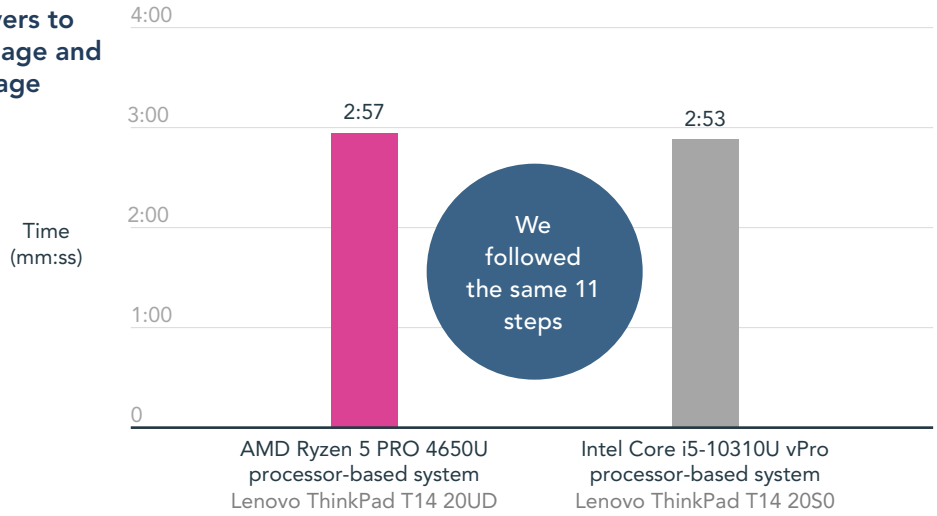


Figure 2: Admin time (mm:ss) to add drivers to the boot image and driver package. Lower is better. Source: Principled Technologies.

Conclusion

We found that deploying a Windows 10 Pro image to a Lenovo ThinkPad T14 laptop powered by an AMD Ryzen 5 PRO 4650U processor was as fast and easy as deploying that same image to a similar laptop equipped with an Intel Core-i5-10310U vPro processor. These results indicate your IT staff should be able to deploy Windows 10 Pro images on AMD Ryzen 5 PRO 4650U processor-based Lenovo ThinkPad T14 laptops without altering existing image deployment processes or developing new ones.

Key takeaways:

- Admins need about the same amount of time to deploy Microsoft Windows 10 Pro images for AMD and Intel processor-based Lenovo ThinkPad T14 laptops
- Admins use the same Windows 10 Pro image deployment process for AMD and Intel processor-based devices

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1 Microsoft, "Overview of Windows Autopilot," accessed October 20, 2020, https://docs.microsoft.com/en-us/mem/autopilot/windows-autopilot.

2 Microsoft, "Microsoft Endpoint Manager," accessed October 20, 2020, https://www.microsoft.com/en-us/microsoft-365/microsoft-endpoint-manager.

3 Microsoft, "In development for Microsoft Intune," accessed October 20, 2020, https://docs.microsoft.com/en-us/mem/intune/fundamentals/in-development#device-enrollment.

Read the science behind this report at http://facts.pt/r13DTvg ▶

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