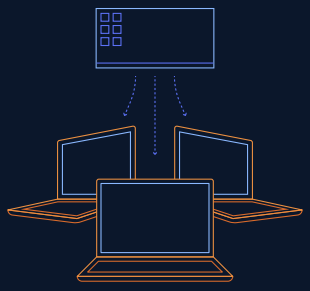
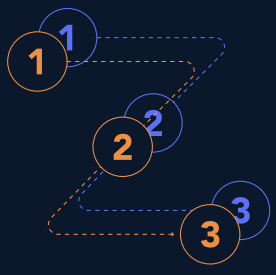


Allocate the same time

It took 18 min. 3 sec. to deploy a Microsoft Windows 10 Pro image on an AMD processor-based HP EliteBook 835 G7 Notebook PC compared to 18 min. 20 sec. on an HP EliteBook 830 G7 Notebook PC with an Intel processor



Use the same procedure

We deployed a Windows 10 Pro image using the same steps for both AMD and Intel processor-based HP EliteBook 800 G7 Series Notebook PCs

Use a single process to deploy a Windows 10 Pro image in a mixed CPU environment

We compared time and steps on AMD Ryzen 5 PRO 4650U and Intel Core i5-10310U vPro processor-based HP EliteBook 800 G7 Series Notebook PCs

You may be reading this because you're exploring new Windows 10 Pro PC options for your business. But what happens if the higher-end options you're considering for your sales force contain a processor from a different manufacturer than the ones other departments are already using? Will your IT team have to alter existing deployment processes or develop new ones to accommodate the new PCs?

To find out, we used Configuration Manager (formerly SCCM) to deploy a Microsoft Windows 10 Pro image on two HP EliteBook 800 G7 Series Notebook PCs: an EliteBook 835 G7 powered by an AMD Ryzen™ 5 PRO 4650U processor and an EliteBook 830 G7 powered by an Intel® Core™ i5-10310U vPro® processor. We found that deployment took the same number of steps and a similar amount of time on each enterprise PC. So, if you're thinking about introducing AMD or Intel processor-based PCs into your environment, deployment time for a Windows 10 Pro image should not worry you.

What we tested

Today's more remote workforce makes no-touch PC management a top priority. Standardizing enterprise PC management tasks, such as OS deployment and driver installation, enables IT teams to focus their time and energy on higher-priority initiatives.

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

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, we 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."[1] 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 enterprise PCs:

AMD

HP EliteBook 835 G7 Notebook PC
13-inch enterprise PC with an AMD Ryzen 5 PRO 4650U processor (8MB cache, 2.1GHz)

Intel

HP EliteBook 830 G7 Notebook PC
13-inch enterprise PC with an Intel Core i5-10310U vPro processor (6MB cache, 1.7GHz)

Deploying the OS

Having a standard deployment process that works smoothly regardless of processor helps ensure that new devices arrive in employees' hands promptly.

In our hands-on tests, we deployed a Windows 10 Pro image to the AMD Ryzen 5 PRO 4650U processor-based HP EliteBook 835 G7 Notebook PC in slightly less time than the same process took on the Intel Core i5-10310U vPro processor-based HP EliteBook 830 G7 Notebook PC. In Figure 1, Admin time is the time it took us to start the installation process on the target PC. 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.

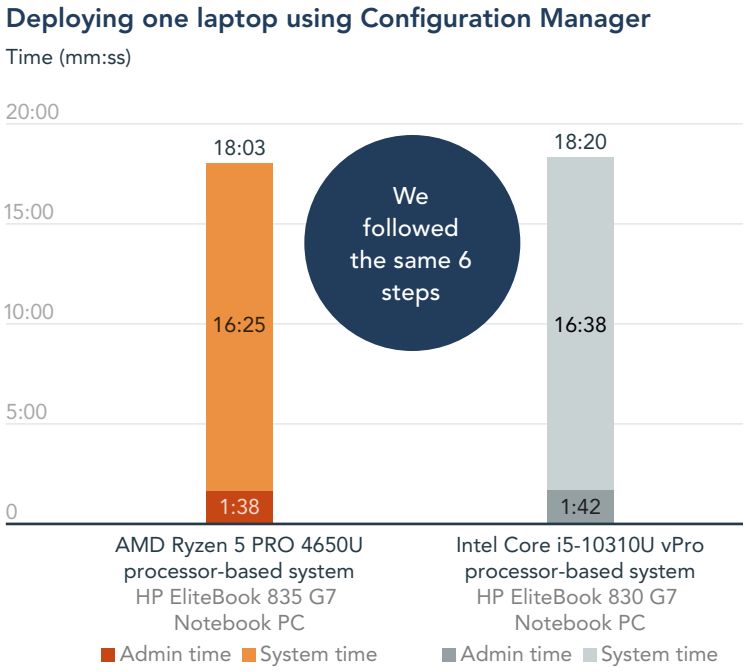


Figure 1: Total time (mm:ss) to deploy one laptop using Configuration Manager. Lower is better. Source: Principled Technologies.

Cloud-based device management in mixed CPU environments

While our evaluation focused on traditional IT deployment processes via Configuration Manager, IT staff can also use cloud-based services such as Windows Autopilot to deploy their devices. Windows Autopilot provides in-factory setup and pre-configuration services for new business PCs—making them ready to use right out of the box.[2] This means mixed-processor environments will not be a problem for these traditional or cloud-based deployment tools.

Installing drivers

Enterprises often have well-established procedures for preparing new devices for end-users. These procedures may include loading a custom image that installs the company-supported OS and deploys company-approved applications.

We added the driver packages for each solution to Configuration Manager before we deployed the Windows 10 Pro image. This enabled the automated sequence to complete all OS updates and customizations on each PC. Adding the drivers for both AMD and Intel processor-based enterprise PCs required the same eleven steps. The difference between driver installation times was a second.

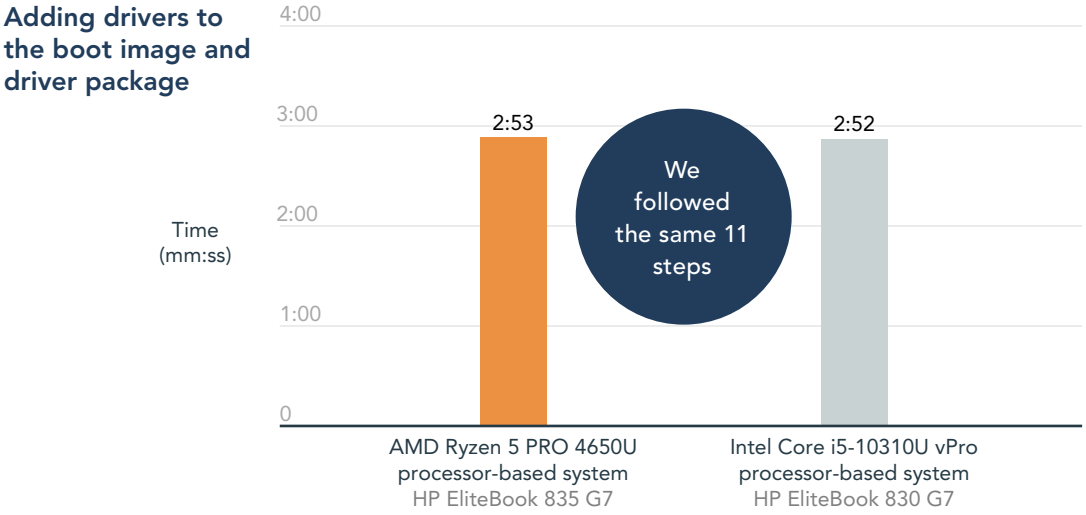
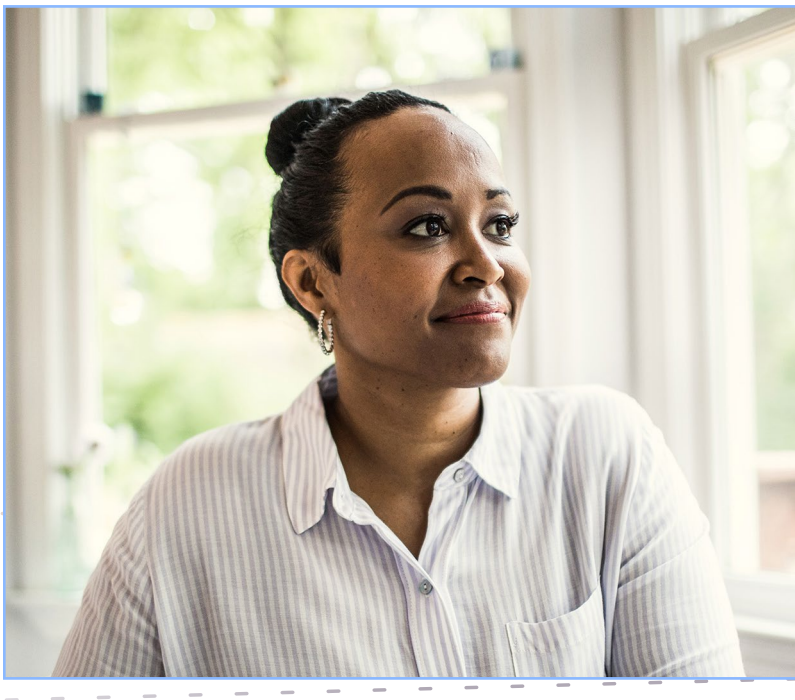


Figure 2: Admin time (mm:ss) to add drivers to the boot image and driver package. Lower is better. Source: Principled Technologies.

Conclusion

When we used Configuration Manager, deploying a Windows 10 Pro image to an HP EliteBook 835 G7 Notebook PC powered by an AMD Ryzen 5 PRO 4650U processor was as fast and easy as deploying that same image to an HP EliteBook 830 G7 Notebook PC powered by an Intel Core i5-10310U vPro processor. This means there's no need to develop or alter existing Windows 10 Pro image deployment processes when introducing AMD or Intel processor-based PCs into your homogeneous CPU environment.



Key takeaways:

- Admins can allocate the same amount of time to deploy Microsoft Windows 10 Pro images for AMD and Intel processor-based HP EliteBook 800 G7 Series Notebook PCs
- Admins can use the same Windows 10 Pro image deployment process for AMD and Intel processor-based HP EliteBook 800 G7 Series notebook PCs

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1 Principled Technologies, "Deploy a Microsoft Windows 10 image to AMD Processor-based systems without altering existing processes," accessed January 29, 2021, https://www.principledtechnologies.com/AMD/PRO_processors_image_deployment_competitive_0518.pdf .

2 Microsoft, "Overview of Windows Autopilot," accessed January 29, 2021, https://docs.microsoft.com/en-us/mem/autopilot/windows-autopilot.

Read the science behind this report at http://facts.pt/dxnv42z ►

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