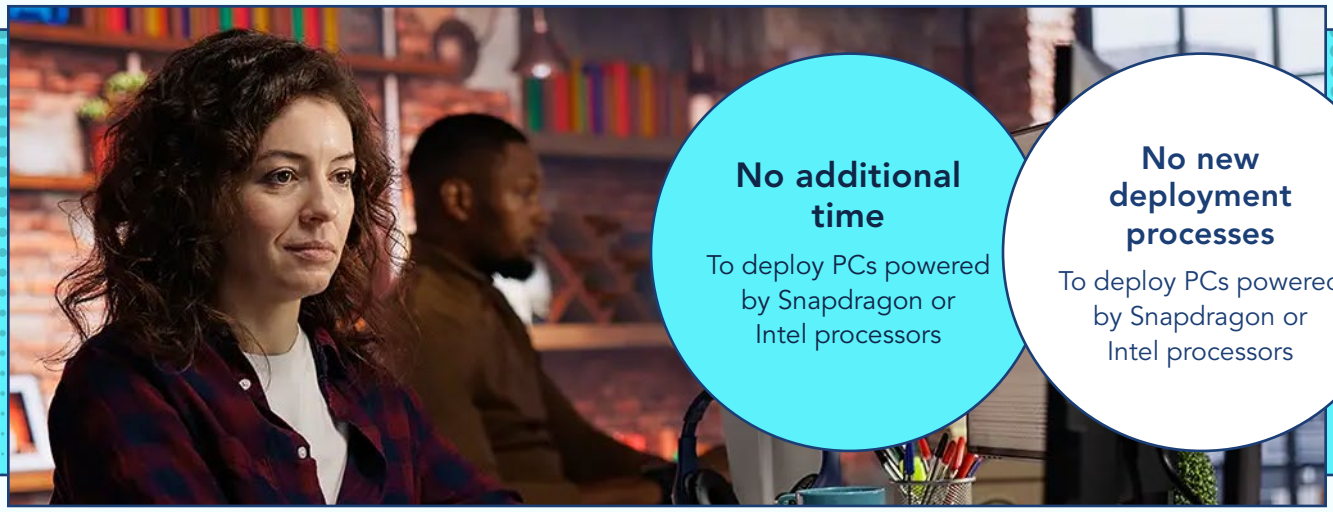
Adding Copilot+ PCs with Snapdragon to your Dell fleet won't require IT deployment changes

We measured the time and steps needed to complete OS deployment on Windows 11 Pro PCs with Snapdragon X Series and Intel Core Ultra processors in two Windows environments



Dell™ Technologies is now offering Copilot+ PCs powered by Snapdragon X® Elite and Snapdragon X Plus processors.[1] Copilot+ PCs run AI tasks on specialized neural processing units (NPUs), which Microsoft requires have at least 40 trillions of operations per second (TOPS) of processing capability.[2] Copilot+ PCs with Snapdragon X Series CPUs "deliver multiple days of battery life, unparalleled performance plus efficiency to accelerate productivity and creativity."[3] But how well will Snapdragon platforms fit into your existing x64 ecosystem?

To help answer this question, we deployed Windows 11 Pro on Dell Latitude AI PCs with Snapdragon X Plus and Intel Core Ultra 5 processors. We completed this testing using both Windows Autopilot with Microsoft Intune and Configuration Manager approaches. In both Windows 11 Pro environments, we found no differences between deploying systems with Snapdragon or Intel processors.

How we tested

We report the average time and steps for OS deployment on these Windows 11 Pro PCs. Both Latitude AI PCs contain CPU, GPU, and NPU architecture, 16 GB of DDR5 memory, and 512 GB of NVMe® SSD storage:

Snapdragon	Intel
Dell Latitude 5455 AI PC	**Dell Latitude 5450 AI PC**
Premium Copilot+ PC with an 8-core Snapdragon X Plus X1P-42-100 processor. The integrated Qualcomm® Hexagon™ NPU delivers 45 TOPS.[4]	Business laptop with a 12-core Intel Core Ultra 5 135U processor. The integrated Intel AI Boost NPU delivers 11 TOPS.[5]

We investigated how OS deployment works for organizations using Windows Autopilot with Microsoft Intune or Microsoft Configuration Manager (formerly Microsoft Endpoint Configuration Manager [MECM] or System Center Configuration Manager [SCCM]).

To simulate an organization using these Microsoft endpoint management tools, we reset the Dell Copilot+ AI PCs to factory settings, added device IDs to Intune, and deployed operating systems via Microsoft Autopilot supported by Microsoft Entra ID and Intune. We configured organizational settings and performed user logins on each Intune-managed system.

Next, we reset the systems to factory default and booted the systems on a local network connected to Microsoft Configuration Manager. We automatically deployed Windows 11 Pro operating systems using Configuration Manager task sequences. Configuration Manager applied organizational settings based on its internal setting and policies. We then performed domain user logins on each Configuration Manager endpoint.

In a corresponding study focused on management, we also completed mission-critical endpoint maintenance tasks on the same Dell AI PCs. Read the management study to see what we found.

Key features of Copilot+ PCs with Snapdragon

According to Qualcomm Technologies, Copilot+ PCs powered by Snapdragon X Series processors include a number of features designed to take end-user productivity, creativity, and communication to the next level:

AI-accelerated user experiences: Copilot+ PCs powered by Snapdragon contain dedicated NPUs for on-device AI features and capabilities.[6]

Performance and efficiency: Copilot+ PCs powered by Snapdragon deliver superior battery life and performance.[7]

Connectivity: Copilot+ PCs powered by Snapdragon include Qualcomm® FastConnect™ Mobile Connectivity System for multi-gigabit Wi-Fi® 6 and 7 performance, expanded efficiency and capability, and ultra-low latency.[8]

Qualcomm Technologies also notes these features of Copilot+ PCs powered by Snapdragon X Series processors bolster the administrator experience:

Microsoft secured-core PCs: Integrated hardware, firmware, and software protections to help protect devices, identities, and data.[9]

Advanced security: Additional silicon-based TPMs (Trusted Platform Modules), Zero Trust sensors, and resiliency features for OS, firmware, and BIOS protection.[10]

App Assure: This Microsoft FastTrack benefit ensures compatibility of business-critical apps following deployment in mixed-CPU environments.[11]

▶ Learn more about Snapdragon X Plus processors

Deploying devices

IT administrators face a variety of challenges in their day-to-day work, and diversifying your Dell PC fleet with ARM-based AI PCs shouldn't add to their burden. If your IT team's established deployment method is straightforward and repeatable across your entire Dell PC fleet regardless of processor, more of their time can go towards addressing urgent requests and problems in their queue. This study looks at Snapdragon vs. Intel OS deployment. However, based on our recent study comparing deployment on AMD and Intel processor-powered systems, you can likely expect similar results against AMD processors.

Approach 1: Autopilot with Intune

We found that deploying both Dell Latitude AI PCs required the same 5 steps through the management tabs in the Intune management hub:

1. Export the hardware hash.
2. Upload the device ID.
3. Power on the device.
4. Register the device.
5. Log into the device.

The only true admin downtime occurred between steps 4 and 5, when we had to wait for Autopilot to create a Microsoft Entra object. This "system" process averaged just over 2 minutes on both Dell Latitude AI PCs.

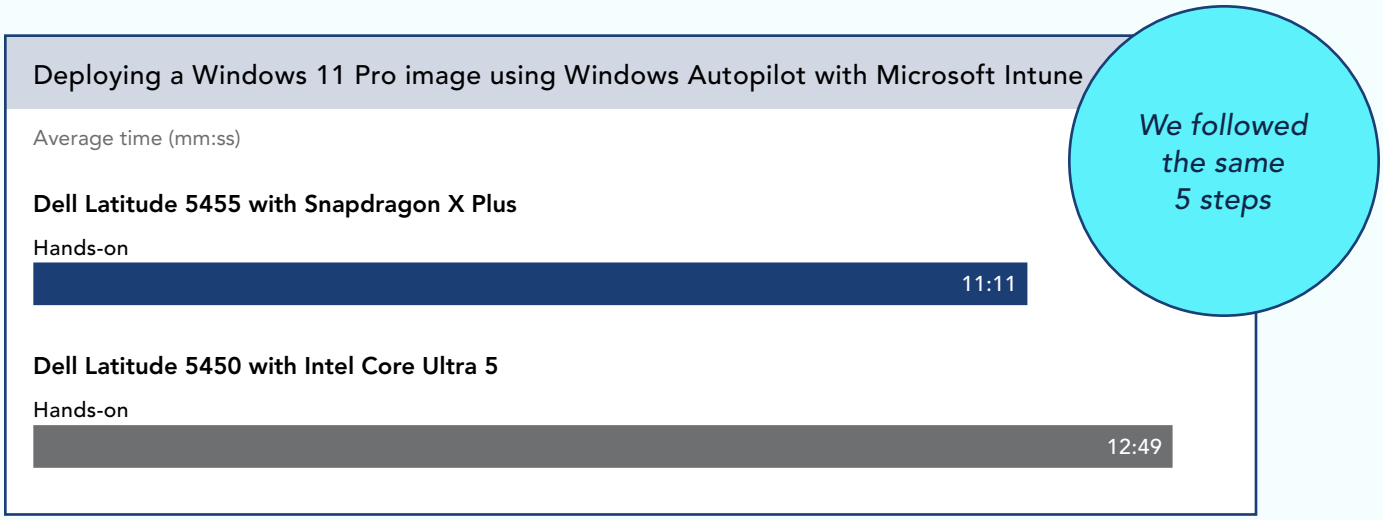


Figure 1: Average total time to deploy a Windows 11 Pro image using Windows Autopilot with Microsoft Intune. Source: PT.

Approach 2: Configuration Manager task sequence

We found that deploying both Dell Latitude AI PCs required the same 5 steps when using architecture-specific Configuration Manager task sequences:

1. Press the power button on the target device.
2. To bring up the boot menu, press F12 during boot.
3. Select PXE BOOT from the boot menu and press Enter.
4. When prompted, enter the password for the MCM shares.
5. When prompted, select the installation option presented for your system (Windows 11 ARM or Windows 11 x64) and press OK.

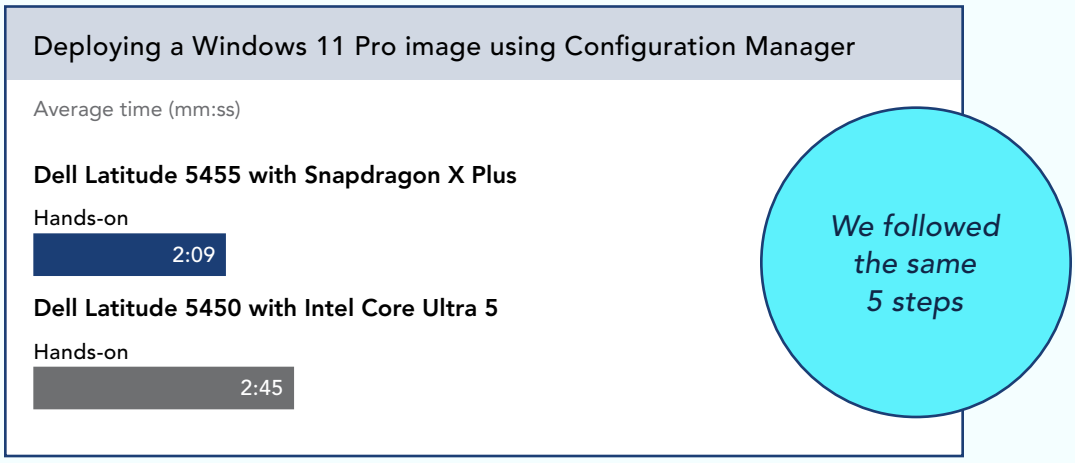
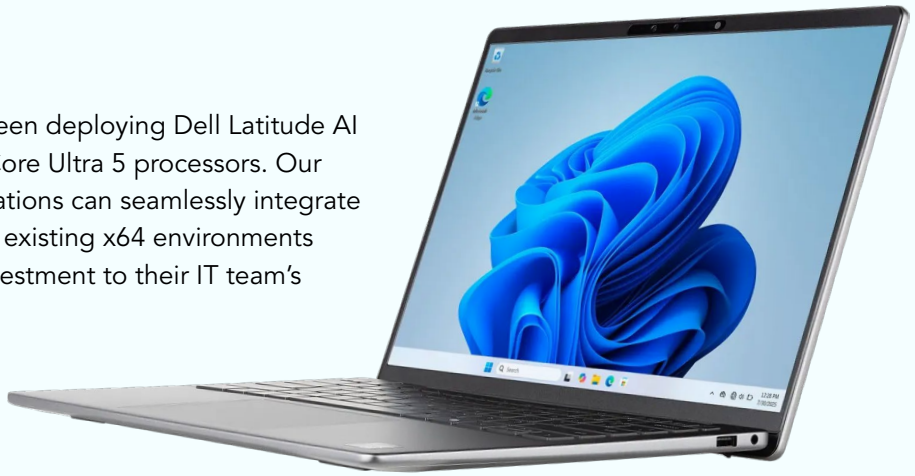


Figure 2: Average total time to deploy a Windows 11 Pro image using Configuration Manager. Source: PT.

Conclusion

We found there were no difference between deploying Dell Latitude AI PCs with an Snapdragon X Plus or Intel Core Ultra 5 processors. Our hands-on tests demonstrate that organizations can seamlessly integrate Copilot+ PCs with Snapdragon into their existing x64 environments without additional complexity or time investment to their IT team's existing workload.



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Read the science behind this report ►

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