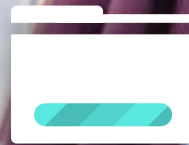# Improve PC app performance, battery charging, and end-user experiences with Dell Optimizer

on Dell Latitude 9430 laptops and OptiPlex 7400 all-in-one desktop PCs

Accelerate routine tasks with up to 28% better system responsiveness*

The application optimization feature boosted Microsoft 365 app performance

Handle demanding tasks better with up to 31% better system responsiveness**

The application optimization feature boosted Adobe® Lightroom® app performance

Transfer data up to 2X faster with Simultaneous Data Transfer***

The network optimization feature boosted network performance

Improve battery charging performance by 32% with ExpressCharge

The power optimization feature reduced battery recharging times

Artificial intelligence (AI) has an image problem—only 9 percent of Americans believe AI will cause more good than harm.[1] This is inconsistent with the reality of AI and machine learning, which is already improving our lives with real-time traffic and weather maps, voice recognition, and recommendation algorithms. Dell Optimizer is AI-based optimization software that, like the AI mentioned above, has the potential to make life better. With the user's permission, a collection of Dell™ Optimizer features learn device behavior patterns and dynamically configure the appropriate system settings to improve the end-user experience.

Our technicians ran industry-standard benchmarks that revealed Dell Optimizer application and network optimization features improved system responsiveness on a Dell Latitude™ 9430 laptop and a Dell OptiPlex™ 7400 all-in-one (AIO) desktop. For the Latitude 9430 laptop, we also determined that the ExpressCharge™ feature reduced battery recharging times, the Intelligent Audio feature reduced background noise during a Zoom call, and the presence detection settings worked like a charm.

Read on for our results and see how enabling Dell Optimizer can improve the end-user experience.

*Based on Procyon® Office Productivity Benchmark results
**Based on Procyon Photo-Editing Benchmark results
***Based on iPerf3 simultaneous transfer rates

How we tested

For a comprehensive look at the end-user benefits of enabling Dell Optimizer on business PCs, we conducted a variety of assessments on these Dell systems running Windows 11 Pro, both with the AI-based optimization software and without it:

- **A Dell Latitude 9430 laptop** powered by a 12th Gen Intel® Core™ i5-1245U processor, Intel Iris® Xe graphics on a 14-inch FHD display, an Intel Wi-Fi 6E (Gig+) Series Bluetooth® wireless card, and a three-cell 60-Whr battery

- **A Dell OptiPlex 7400 AIO desktop** powered by a 12th Gen Intel Core i7-12700 processor, Intel UHD Graphics on a 24-inch FHD display, and an Intel Wi-Fi 6E (Gig+) Series Bluetooth wireless card

To determine each system's baseline system and network responsiveness capabilities, we ran Procyon productivity and content creation benchmarks and iPerf3 speed tests with and without Dell Optimizer 3.1 and recorded the results. The Procyon benchmarks complete real-world tasks on Microsoft 365 and Adobe Lightroom applications to test PC performance.[2] The iPerf3 benchmark determines the maximum achievable network bandwidth.[3] Then, because users typically do more than one thing at a time, we stressed each system by executing a Windows PowerShell script in the background and ran the Procyon and iPerf3 benchmarks again. We found that both business PCs performed better under load with Dell Optimizer than they did without it.

For the Dell Latitude 9430 laptop, we also ran battery-recharging, audio-quality, and presence-detection tests to determine whether Dell Optimizer features improved the end-user experience in these areas. They did. The ExpressCharge feature positively impacted battery recharging capabilities—increasing capacity from 58 percent to 90 percent when the device was plugged in for an hour. The Intelligent Audio feature significantly reduced background noise during a video-conferencing call. And, the presence-detection functions dimmed the laptop screen when our technician looked away for a few seconds, locked Windows when they walked away for several seconds, and quickly logged them back in when they reapproached the laptop. The presence-detection feature even posted a warning notification on the screen when someone other than the authorized user was directly in front of the screen.

The following pages present our hands-on findings as well as sidebars with a fictional character facing real-world challenges. Both the real results and the fictional storyline showcase how enabling Dell Optimizer on Dell business PCs could improve productivity and the end-user experience.
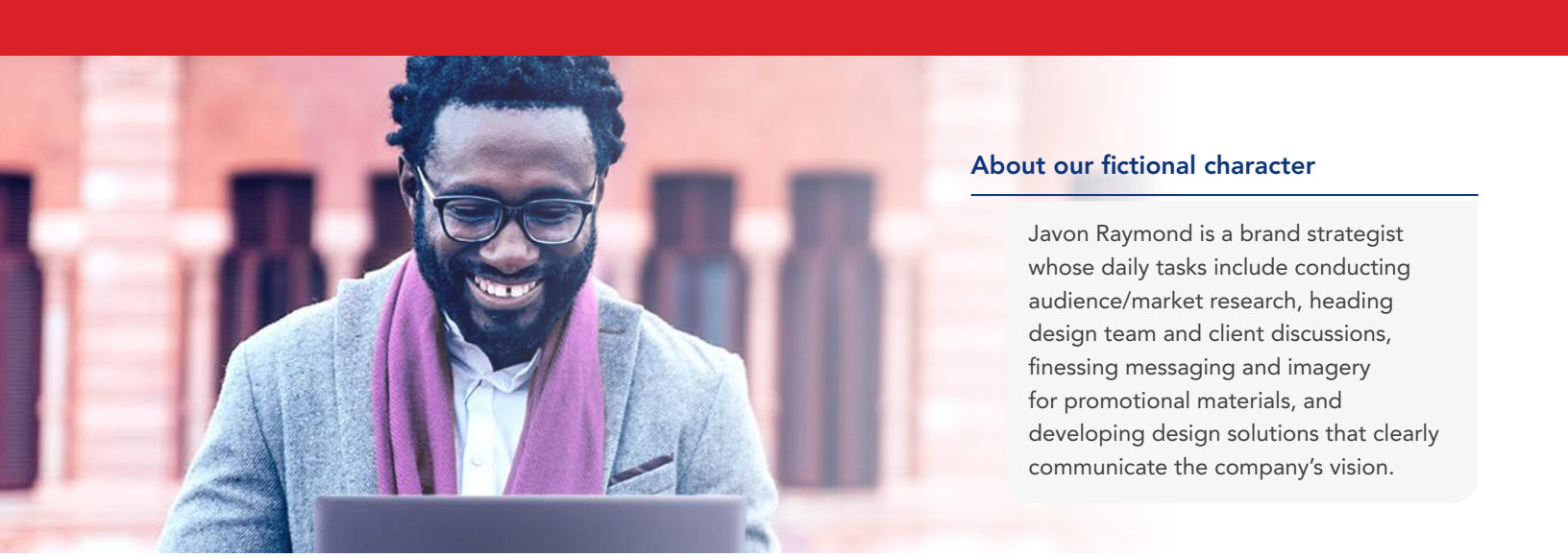

About the Dell Latitude 9430 laptop

This business PC features 12th Gen Intel Core processors, Dell Optimizer, up to 32 GB of memory, up to 1 TB of NVMe™ storage, enterprise-level security, and up to a 60-Whr battery. According to Dell, the Latitude 9430 is the "World's smallest 14" 16:10 business PC, designed to offer the best productivity, collaboration, connectivity."[4]

About the Dell OptiPlex 7400 all-in-one desktop

This business PC features 12th Gen Intel Core processors with up to 16 cores, Dell Optimizer, a 24-inch FHD display, enhanced connectivity, up to 64 GB of memory, and enterprise-level security.[5]
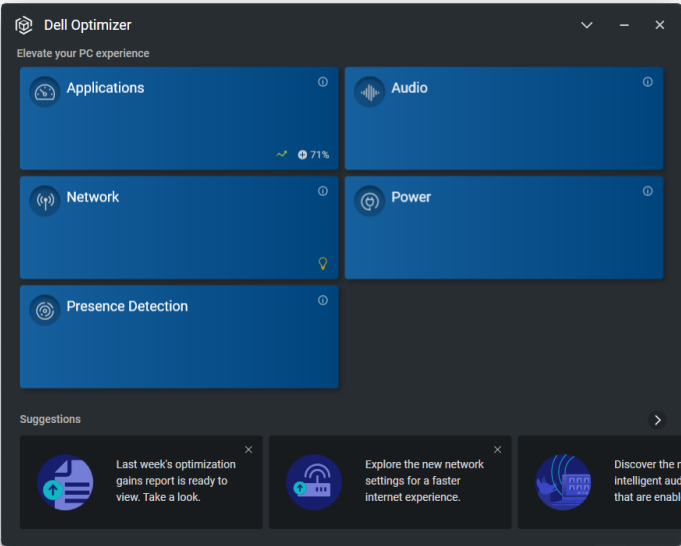
Help workdays run smoother with Dell Optimizer

Past global events forced many businesses to use their technology budgets on company-wide infrastructure upgrades to better support employees suddenly working from home. Now, it's time to invest in a personalized tech experience that can further improve workforce productivity at home, the office, or elsewhere.

About Dell Optimizer

Dell Optimizer learns how you work and continuously adapts to your style to create a more personalized experience on Latitude laptops, OptiPlex desktops, and Precision™ workstations. When users opt-in, this AI-based optimization software uses telemetry data to provide:

- Faster app performance with **application optimization**.
- Maximum bandwidth to video-conferencing apps with **network optimization**.
- Improved video conferencing by managing speech volume and reducing background noise with **Intelligent Audio**.
- Optimized battery life based on your typical consumption and charging patterns with **power optimization**.
- Onscreen privacy and convenience with **Presence Detection**, which uses proximity sensors to enable security measures when you step away or when onlookers are nearby, peeking at your screen.[6]

Speed up routine tasks

The Procyon Office Productivity Benchmark measures system responsiveness by performing real-world productivity tasks using Microsoft Word, Excel, PowerPoint, and Outlook apps.[7] By earning higher scores under load, a device with Dell Optimizer proves its worth day in and day out.

Procyon Office Productivity Benchmark
Overall score | Higher is better

Up to 28% improved Microsoft 365 app performance

Dell Latitude 9430

Dell OptiPlex 7400

4,115

3,212

4,037

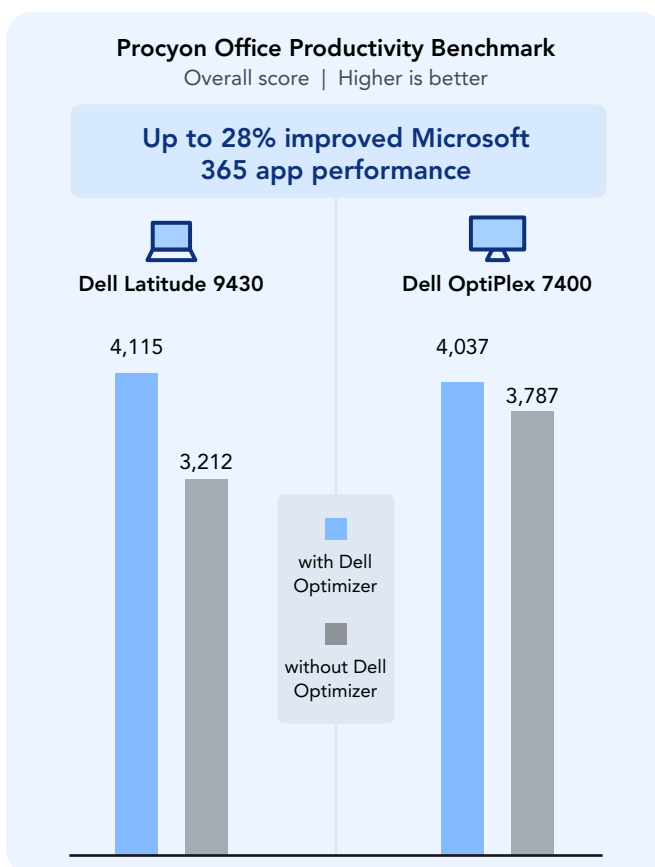3,787

■ with Dell Optimizer

■ without Dell Optimizer

Figure 1: Procyon Office Productivity Benchmark results. Higher scores are better. Source: Principled Technologies.

Get up to 28% improved productivity app performance with Dell Optimizer*

Javon and his team rely on Microsoft 365 productivity tools. Our tests show that if Javon enabled Dell Optimizer on a Dell Latitude 9430 laptop or an OptiPlex 7400 AIO desktop PC, the application optimization feature significantly improves Microsoft 365 application response times. This lowering of productivity tool response times can translate to:

- Faster task completion
- A better user experience
- More time for other to-do-list items

Based on Procyon® Office Productivity Benchmark results

Handle demanding tasks better

While it may feel like these Procyon Photo-Editing Benchmark results are important only to creatives, that's not the case. Running this benchmark on devices under load also gives insight into how well PCs handle all kinds of demanding workloads. For example, higher scores here can translate to speedier response times when using demanding software such as financial analysis tools, product development and design software, and 3D modeling and rendering programs.
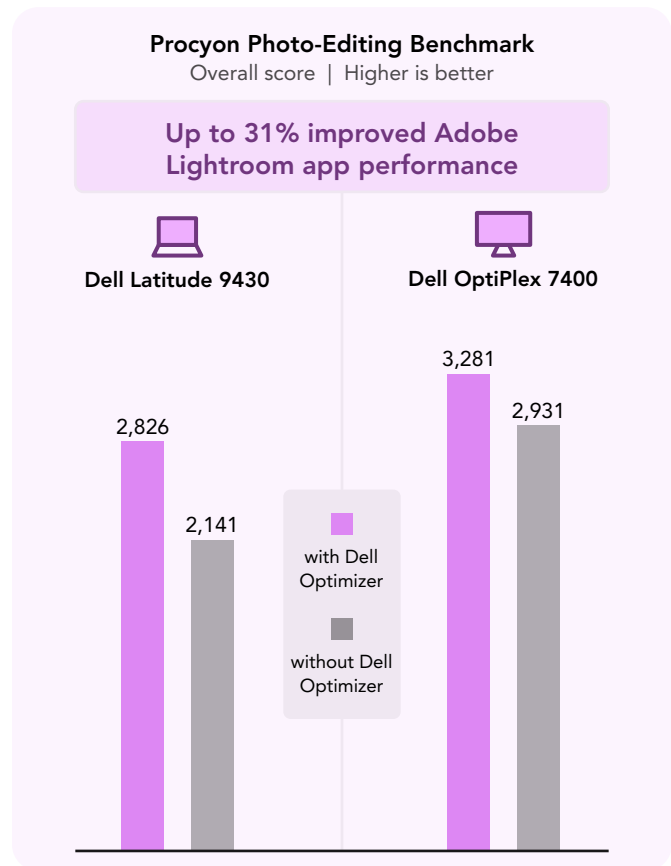

Procyon Photo-Editing Benchmark
Overall score | Higher is better

Up to 31% improved Adobe Lightroom app performance

Dell Latitude 9430   Dell OptiPlex 7400

2,826
2,141
3,281
2,931

with Dell Optimizer

without Dell Optimizer

Figure 2: Procyon Photo-Editing Benchmark results. Higher scores are better. Source: Principled Technologies.

Get up to 31% improved content creation app performance with Dell Optimizer[**]

Javon and his team rely on Adobe Creative Cloud® content creation tools. Our tests show that if Javon enabled Dell Optimizer on a Dell Latitude 9430 laptop or an OptiPlex 7400 AIO desktop PC, the application optimization feature significantly improves Adobe Lightroom application response times. Faster response times for content creation apps can:

- Speed up project workflows
- Provide a better user experience
- Free up time for brainstorming and/or research

**Based on Procyon Photo-Editing Benchmark results

Deliver large files more effectively

High-speed data transfer rates are essential for smooth online streaming and large file transfers. We attribute the following megabits per second (Mbps) improvements to the Simultaneous Data Transfer feature. To see all our results, read the science behind the report.
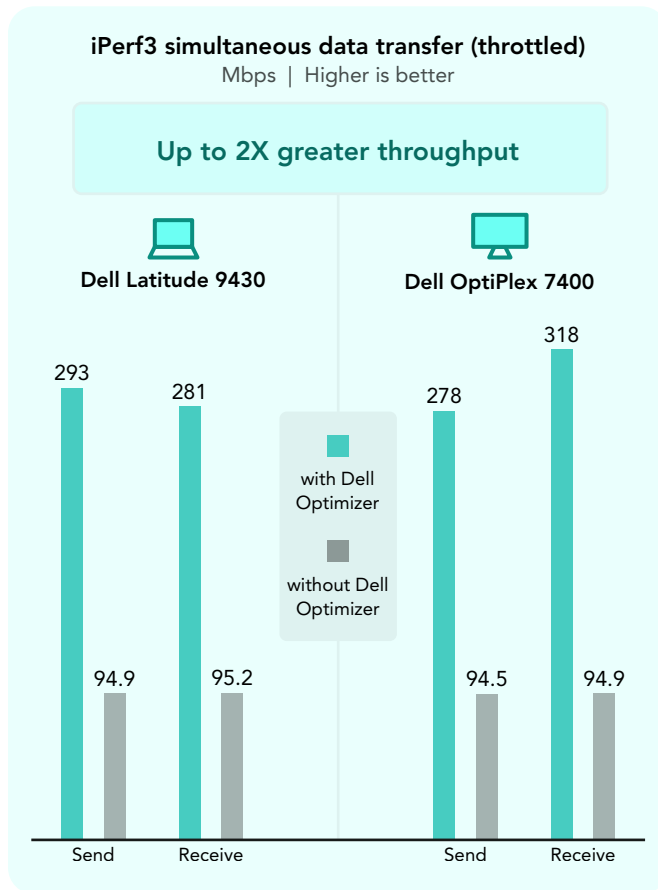

iPerf3 simultaneous data transfer (throttled)
Mbps | Higher is better

Up to 2X greater throughput

Dell Latitude 9430   Dell OptiPlex 7400

with Dell Optimizer

without Dell Optimizer

	Dell Latitude 9430		Dell OptiPlex 7400	
	Send	Receive	Send	Receive
with Dell Optimizer	293	281	278	318
without Dell Optimizer	94.9	95.2	94.5	94.9

Figure 3: iPerf3 benchmark upload and download speeds for 10 streams in 30 minutes. More Mbps are better. Source: Principled Technologies.

Get up 2X greater download throughput with Dell Optimizer***

Javon and his team rely on cloud-based file and document storage for group collaboration. Our tests show that if Javon enabled Dell Optimizer on a Dell Latitude 9430 laptop or an OptiPlex 7400 AIO desktop PC, the Simultaneous Data Transfer feature speeds up the data transfer process. Better data transfer capabilities can:

- Improve the collaboration process
- Help get collateral in front of its audience faster

*****Based on iPerf3 simultaneous transfer rates*

On-the-go productivity

According to a ComPsych report, 42 percent of North American employees across all industries lose between 15 and 30 minutes per day in productivity due to stress.[8] And, while a high-performing laptop isn't going to eradicate all workplace stress, having one that also makes it easier to communicate and collaborate with others is a step in the right direction. The Dell Latitude 9430 laptop we evaluated came equipped with a full HD camera + infrared camera with an electromagnetic shutter and proximity sensors, stereo speakers with Realtek Waves MaxxAudio® Pro, and quad-array microphones.[9]
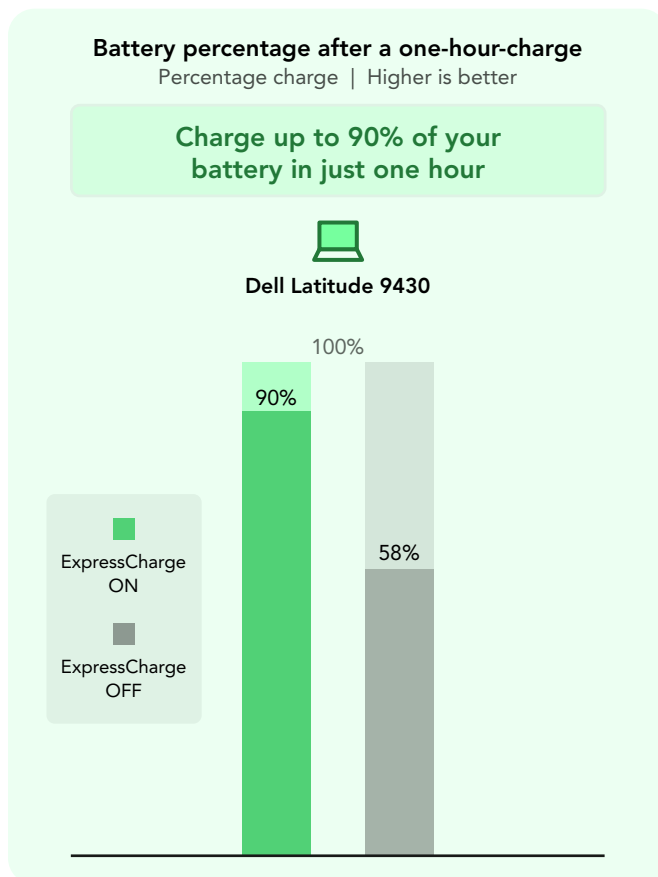
ExpressCharge

Battery percentage after a one-hour-charge
Percentage charge | Higher is better

Charge up to 90% of your battery in just one hour

Dell Latitude 9430

100%

90%

58%

ExpressCharge ON

ExpressCharge OFF

Figure 4: Battery capacity after a one-hour charge. Higher is better. Source: Principled Technologies.

Presence Detection

Look Away Detect dimmed the screen when the authorized user looked away for a few seconds and returned the screen to default brightness when the authorized user looked back.

Walk Away Lock locked Windows when the authorized user walked away from the system for several seconds.

Wake on Approach woke the device up when the authorized user returned to the system and used face detection to quickly log the user back into Windows.

Onlooker Detection detected an onlooker, made the screen unreadable, and posted an alert on the screen when someone else was directly in front of the screen with the authorized user.

Intelligent Audio

Remove My Background Noise reduced background noise during a video-conferencing call.

Recharge depleted batteries more effectively

It's no fun looking for an available outlet—especially when you're on a deadline or rushing to a meeting. In our tests, the ExpressCharge feature dramatically increased charging capabilities.

Safeguard sensitive information

Dell Optimizer uses proximity sensors to make default users feel like VIPs, improve privacy, and enhance security. In addition to touch-less entry, we found the screen dimming and onlooker detection functions made it harder for others to snoop.

Conclusion

Whether your company is purchasing new PCs to improve productivity, to better meet end-user needs, or to gain a competitive edge, in our hands-on tests, speedy performance and adjustments from the AI-based Dell Optimizer had a positive impact. We found that enabling Dell Optimizer 3.1 on two different Dell business PCs running Windows 11 Pro improved system responsiveness:

- The Dell Optimizer application optimization feature **improved productivity app performance by up to 28%** and **content creation app performance by up to 31%***

- The Dell Optimizer Simultaneous Data Transfer function **boosted network optimization by up to 2X****

On the Latitude 9430 laptop, we also found that enabling Dell Optimizer provided these benefits:

- The Dell Optimizer ExpressCharge power optimization feature **improved battery recharging performance by 32%**

- The Dell Optimizer Intelligent Audio feature **reduced background noise during a video-conferencing call**

- Dell Optimizer Presence Detection **recognized the difference between an authorized user and an onlooker**

These are all areas that enhance the end-user experience.

*Based on Procyon® Office Productivity Benchmark and Procyon Photo-Editing Benchmark results
**Based on iPerf3 simultaneous transfer rates

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Read the science behind this report at https://facts.pt/fjjrLMi ▶

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