

Dell Optimizer



Name
Date

Employee behavior is unique

⚡ Power Requirements

🌐 Connectivity

🖥️ Application Responsiveness

⚙️ Performance

👥 Collaboration



I need snappy application performance.



I need long battery life.



I need reliable connectivity.



I need seamless productivity.

Employees require personalized optimization

⚡ Power Requirements

🌐 Connectivity

📺 Application Responsiveness

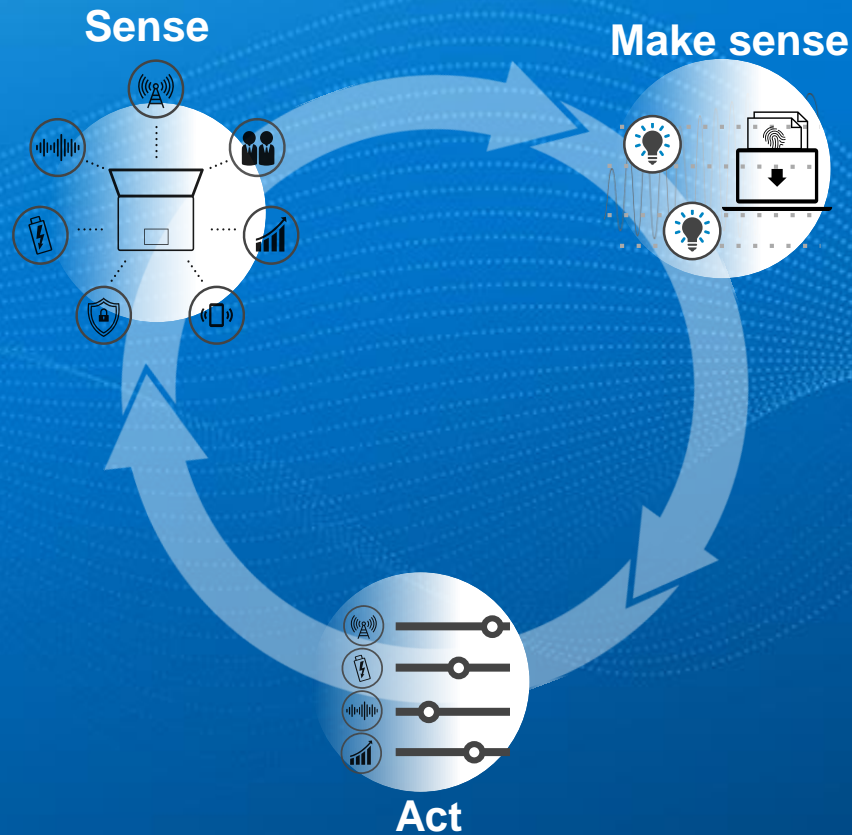
⚙️ Performance

👥 Collaboration



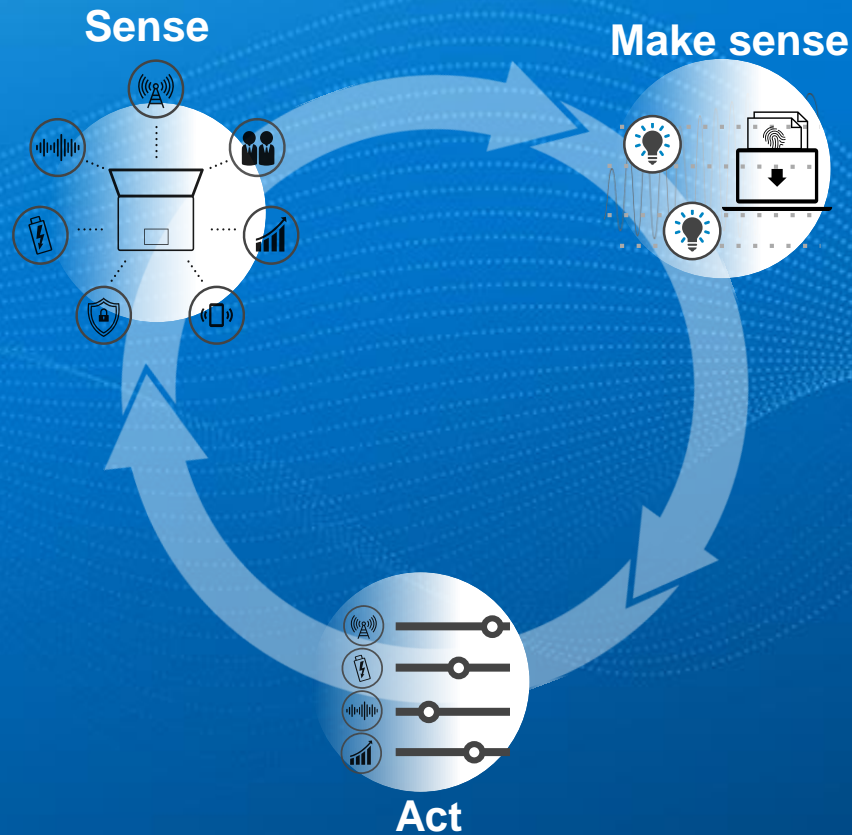
What if our PCs worked at making us more productive by intelligently adjusting our system – in the background, and invisible to us – to make our PC experience as smooth, snappy and seamless as possible?

Meet Dell Optimizer



Dell Optimizer uses artificial intelligence to learn your behavior, working in the background to analyze key system data so you can have a seamless and more productivity experience.

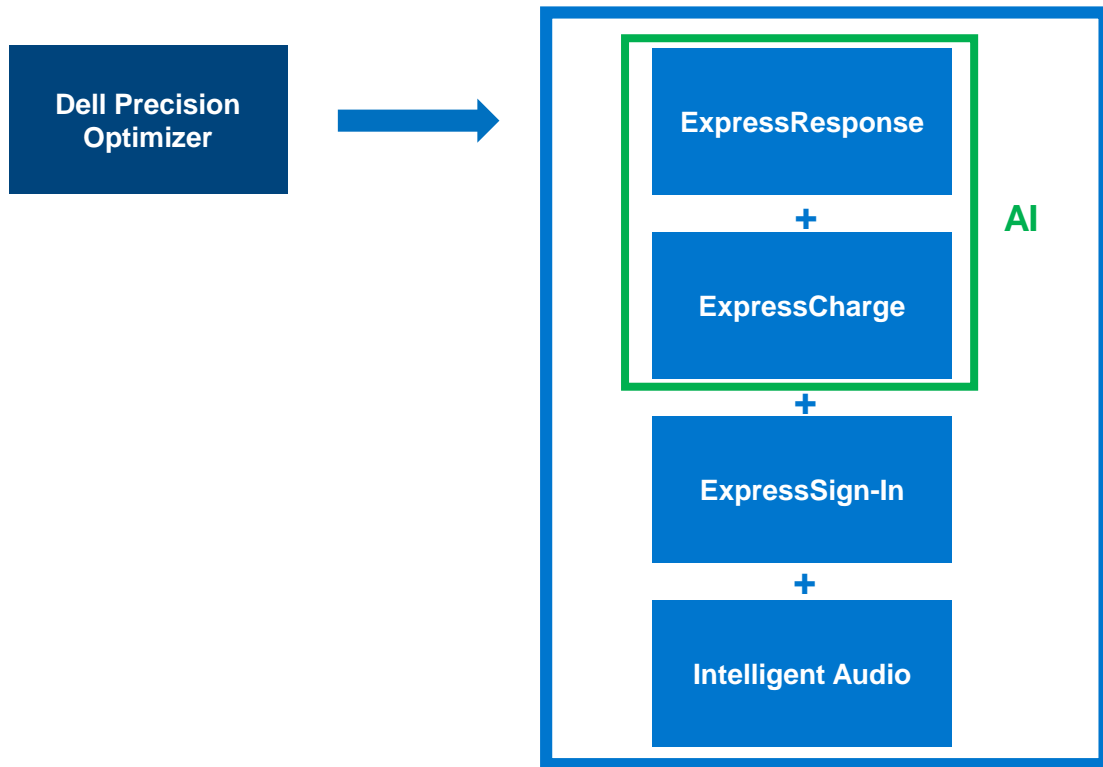
Meet Dell Optimizer



- ✓ Faster application launch
- ✓ Improved application performance
- ✓ Improved battery runtime
- ✓ Reliable network connectivity
- ✓ Enhanced audio & video quality
- ✓ Secure locking and faster sign-in
- ✓ Centralized IT management

Dell Optimizer focuses on Device Optimization

Dell Optimizer builds on Dell Precision Optimizer by including valuable system capabilities within **one simplified user interface**, and includes **AI/ML models** to learn your behavior and **optimize the device experience to you**.



ExpressSign-in immediately welcomes you back to work, detecting your presence and opening your log-on screen

7:45am



8:27am



ExpressResponse intelligently ensures flawless application performance first thing, all based on your application usage style and history

ExpressCharge seamlessly guards against power issues while you work from place to place

Noon



8:00pm



Intelligent Audio automatically eliminates background noise and provides clearer sound and video

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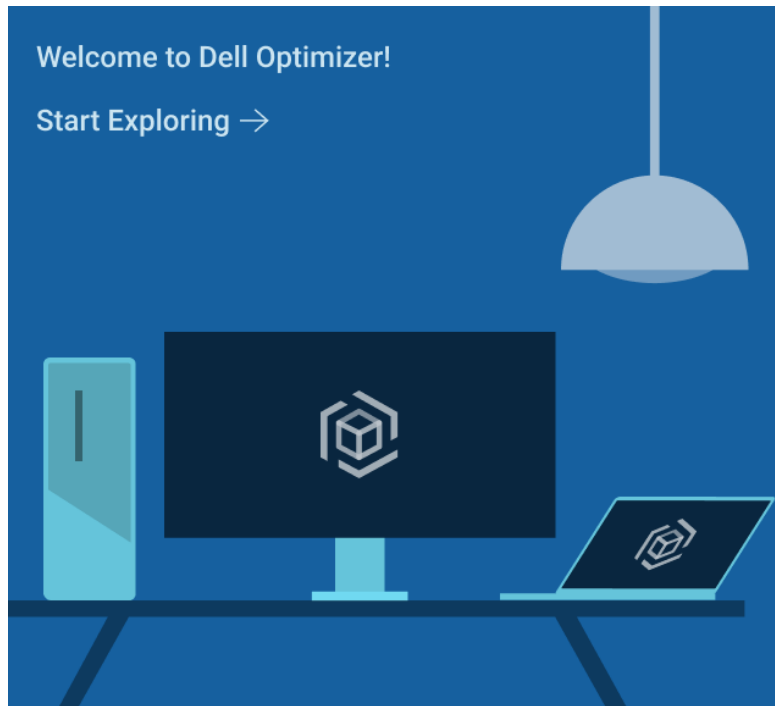
Intelligent Audio automatically eliminates background noise and provides clearer sound and video

Centralized IT Management invisibly provides as much or as little control to the users as is necessary to ensure their systems are performing at their best



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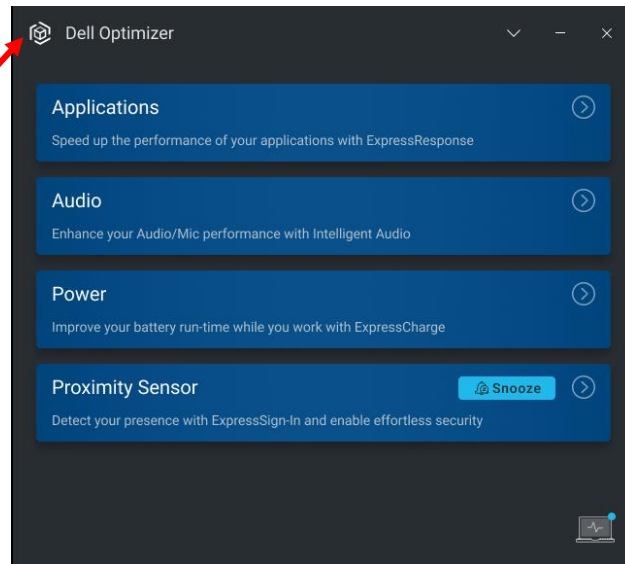
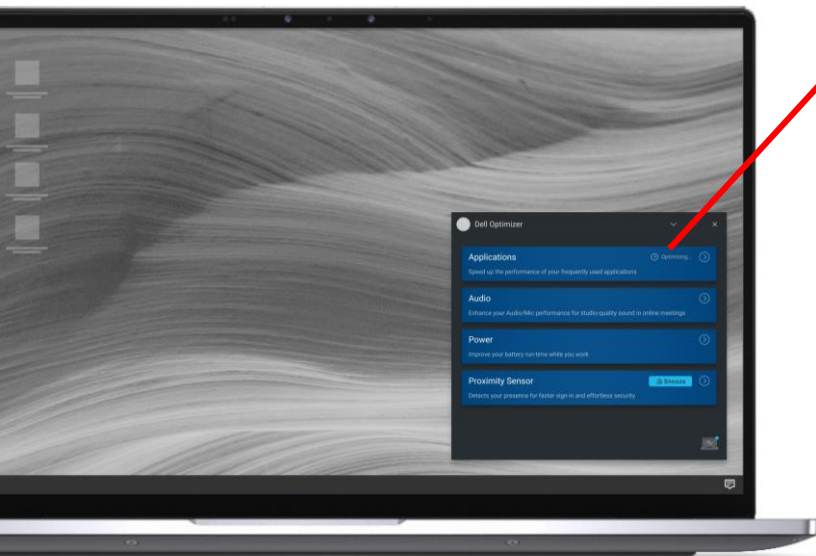
Dell Optimizer Demo



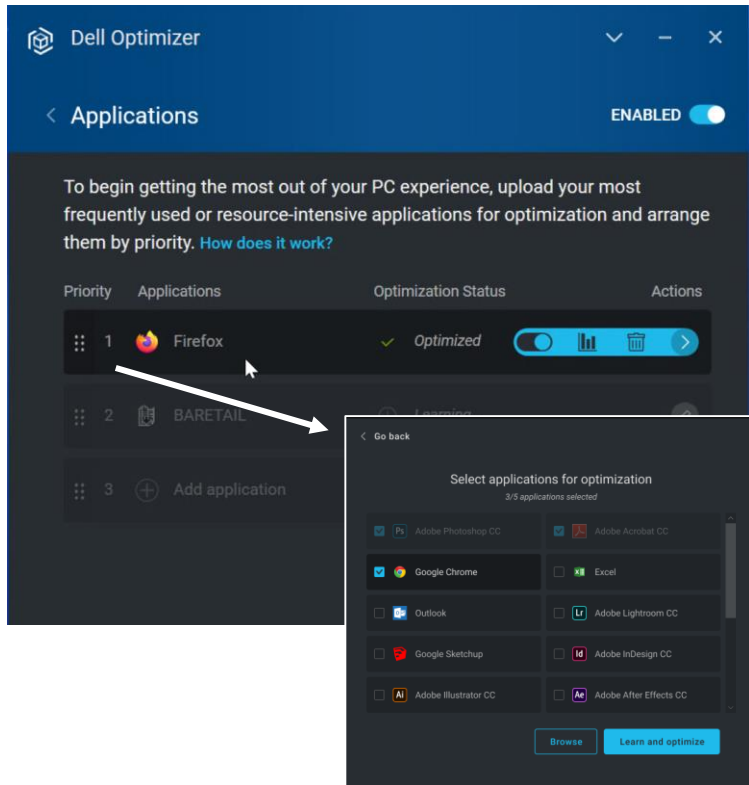
<https://www.figma.com/proto/Dr6mvKdRQncfR9ZiUsiHlnJE/Dell-Optimizer?node-id=4662%3A1962&viewport=814%2C430%2C0.2933178246021271&scaling=min-zoom>

Please open in Chrome

Dell Optimizer



ExpressResponse (Applications)



Based on user behavior, DO intelligently improves application performance so that applications launch, perform and transition faster.

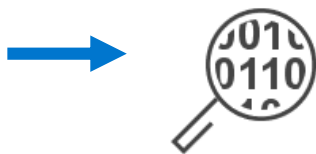
- Applications list is pre-populated with the most-used applications. End user can manually select up to 5 applications to optimize.
- User has to use those applications in order for DO to learn.
- AI/ML models learn the user's behavior, then applies appropriate settings to improve application performance.

How does ExpressResponse (Applications) work?



The user manually selects and prioritizes up to five applications to optimize.

The user will then have to use those applications in order for DO to learn.



Two machine learning models learn the user's application behavior in the background. It looks at:

- Storage and Memory Utilization
- CPU Utilization
- Process threads

This may take a few hours, depending on how often and how long the selected application is used.



Once the learning is complete, the ML models classify the application into various profiles, which have different settings assigned.

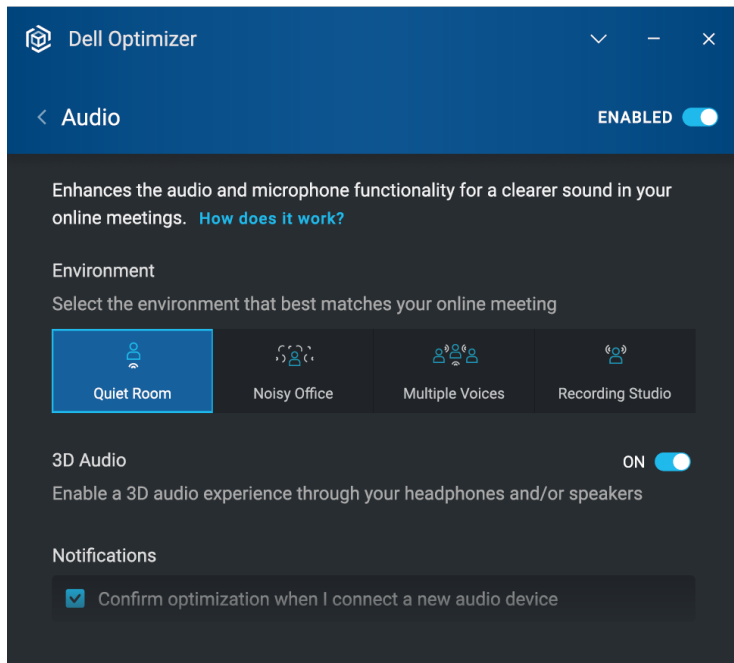


DO/DO-P applies the optimal system settings (memory/storage/CPU) to give maximum performance boost to that application.

Note:

- The end user can run DO on applications as frequently as they choose.
- They may or may not see improvements after each session. It will depend on how the end user uses the selected applications during the learning period.

Intelligent Audio (Audio)



Intelligent Audio adjusts for different environments by adjusting loudness, noise level, equalization and echo elimination

Quiet Room

- Equalizes the quality of your voice
- Employs less aggressive noise cancellation

Noisy Office

- Enhances speaker's voice
- Reduces background noise so you can be heard

Multiple Voices

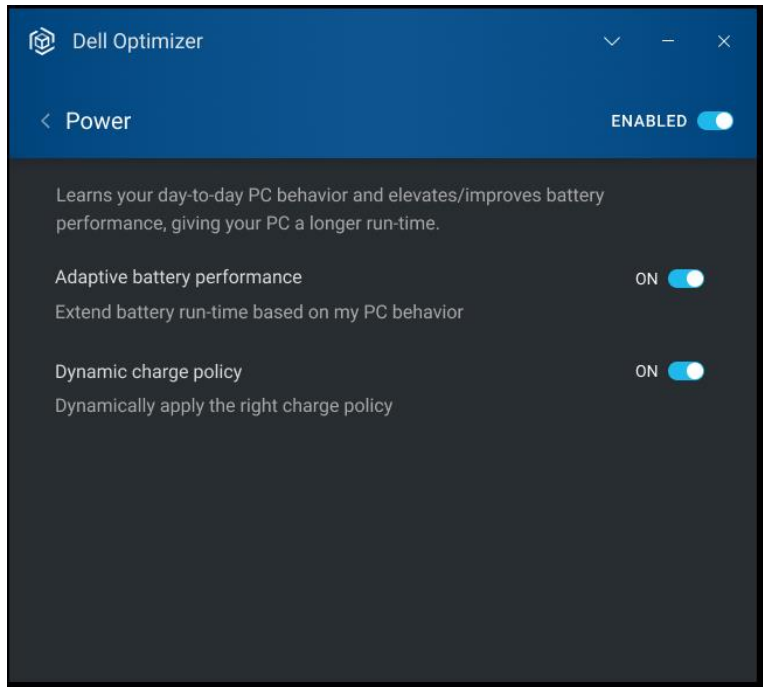
- Suitable for all environments (noise and quiet) with multiple speakers
- Enhances the speakers' voices
- Employs aggressive noise reduction and echo cancellation

Recording Studio

- Suitable for quiet environments with one or few people
- Optimizes microphone performance and employs less aggressive noise cancellation

3D Audio emulates a conference room-like experience through your headphones and speakers using Waves Maxx Audio

ExpressCharge (Power)



DO is always learning the end user's usage pattern in the background. Based on user behavior, DO intelligently improves battery performance and dynamically extends run time.

1. AI/ML models learn the users battery and system data to determine when to dynamically extend battery run time
2. AI/ML analyze battery telemetry data and applies appropriate charge policy:
 - **ExpressCharge** charges your battery up to 80% in just an hour / **ExpressCharge Boost** delivers 35% charge in 20 minutes
 - **Standard** Charge Policy
 - **Primarily AC**

How does ExpressCharge (Power) work?



DO learns the user's battery and system data:

- Battery charge/discharge patterns
- Discharge rate
- State of battery health



The end user is categorized into one of four profiles:

- **Marathon Users:** Generally discharges the computer completely
- **Corridor Warrior:** Standard office user, general charge cycle → charge, discharge, charge
- **Performance Users:** CPU heavy apps (autocad, photoshop, etc) → high discharge rate of battery
- **Desktop replacement:** Always connected to power source, rarely uses battery



AI/ML models measure runtime left in the current battery session and determines if battery session needs extension based on user's historical data. Also determines is a certain charge policy should be applied.



Battery settings are automatically applied accordingly.

Extends run time by:

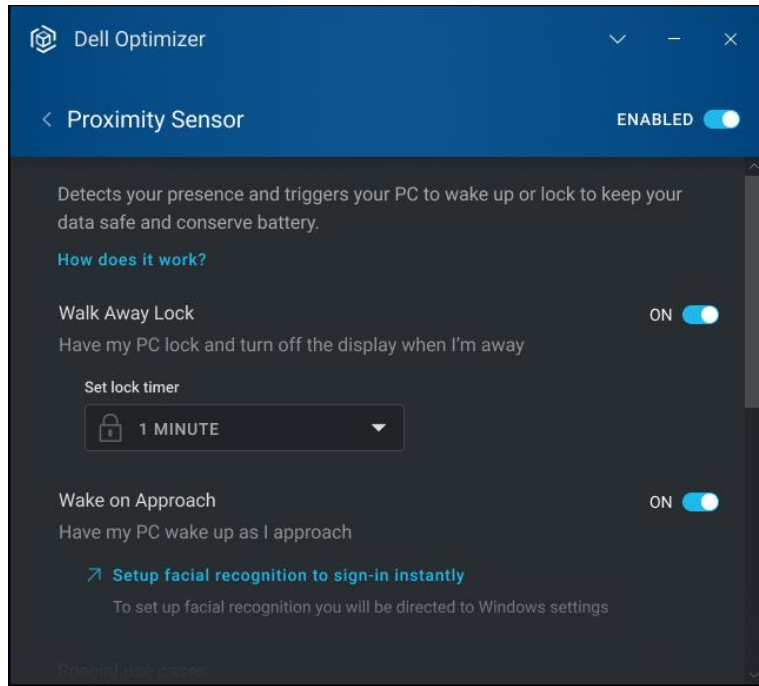
- Dimming the screen
- Disable background data refresh
- Disable background apps not in use
- Dimming keyboard lights
- Power reduction within system
- Initiate Windows Power Save

Applies appropriate charge policy:

- Standard
- ExpressCharge
- Primarily AC

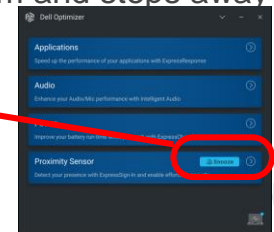
DO is always learning in the background. Every two weeks, it validates if the user is in the correct user profile.

ExpressSign-In (Proximity Sensor)



Detects user presence for faster sign-in, improved security, and better battery runtime. Utilizes User Presence Detection and facial recognition.

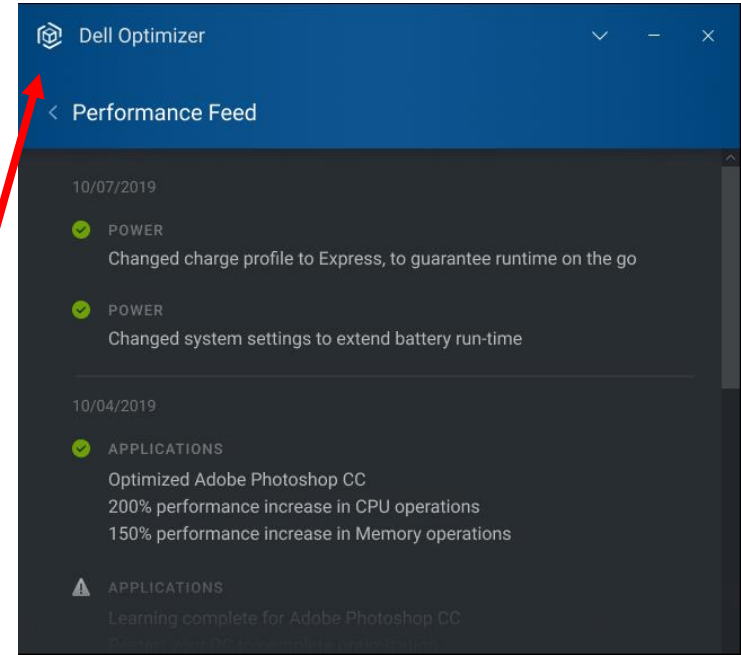
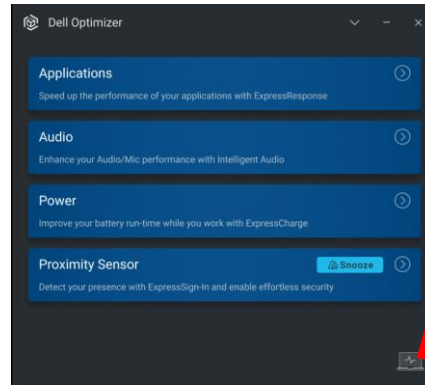
- **Walk-away Lock:** Lock the PC as the user walks away from the system
- **Wake on Approach:** Puts the PC to wake state as user approaches the system
- **Keep Alive:** When the PC is plugged in to a battery source and user is present/engaged, DO prevents the OS from locking the PC, even if he/she may not be interacting (eg. Not touching the mouse or keyboard). For example, user may be reading a long document on the screen.
- **Snooze:** Temporarily disables the walk-away lock feature. Good for when the user is present but not actively engaged. For example, they are in a meeting room and steps away to write on the whiteboard.



Performance Feed

Any actions taken by Dell Optimizer and optimization gains will be listed in the Performance Feed.

Performance gains will vary depending on how the user uses the application. Every user will be different.



*Data shown is for illustration purposes

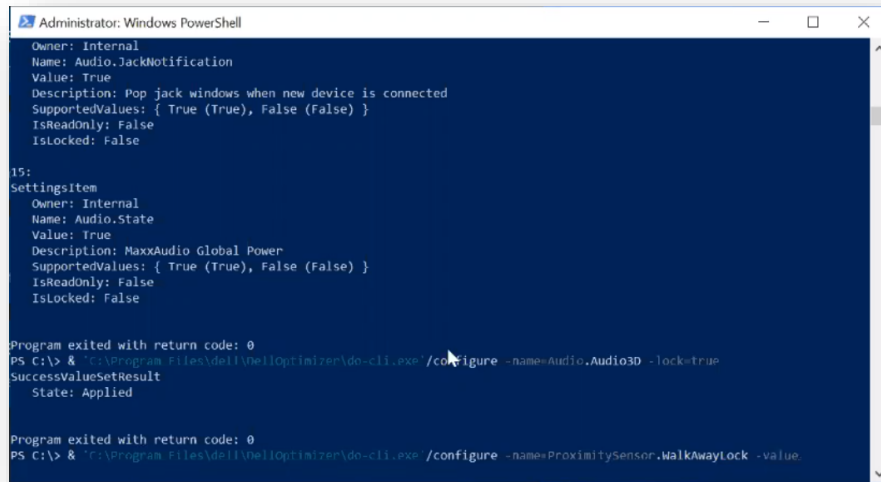
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Centralized Management

Like DPO, Dell Optimizer can be managed in SCCM and WS1 using command line interfaces.

Centralized IT Management provides as much or as little control to the users, addressing issues remotely and proactively

- Remotely deploy
- Remotely optimize multiple systems
- Manage any setting within DO



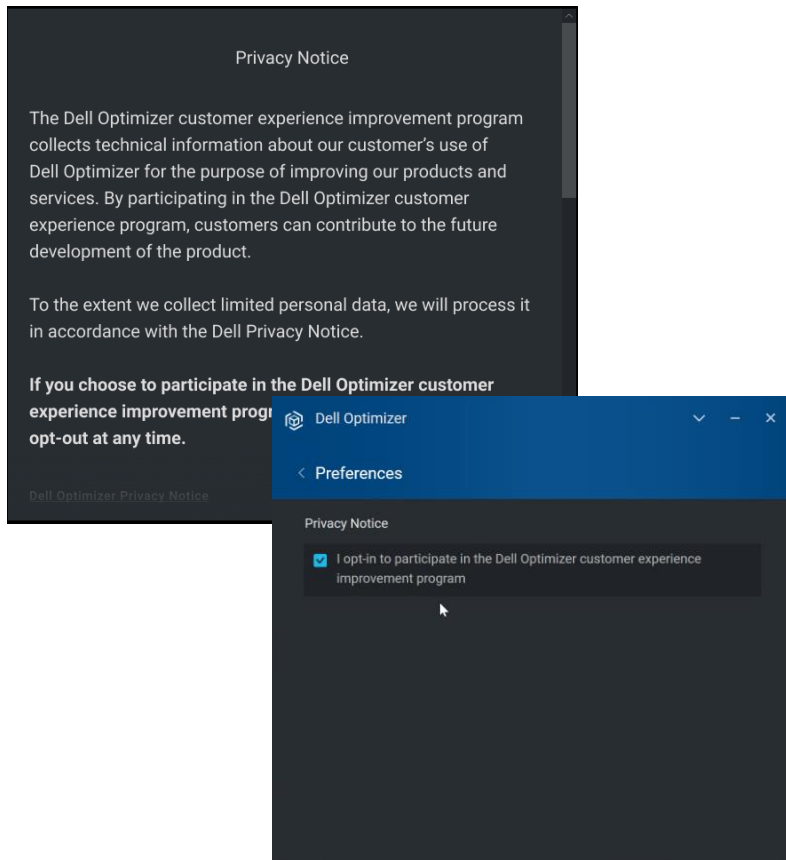
```
Administrator: Windows PowerShell
Owner: Internal
Name: Audio.JackNotification
Value: True
Description: Pop jack windows when new device is connected
SupportedValues: { True (True), False (False) }
IsReadOnly: False
IsLocked: False

15:
SettingsItem
Owner: Internal
Name: Audio.State
Value: True
Description: MaxxAudio Global Power
SupportedValues: { True (True), False (False) }
IsReadOnly: False
IsLocked: False

Program exited with return code: 0
PS C:\> & "C:\Program Files\Dell\Optimizer\do-cli.exe" /configure -name=Audio.Audio3D -lock=true
SuccessValueSetResult
State: Applied

Program exited with return code: 0
PS C:\> & "C:\Program Files\Dell\Optimizer\do-cli.exe" /configure -name=ProximitySensor.WalkAwayLock -value.
```

What about Privacy?



- Dell Optimizer gathers and analyzes data **locally** on the system.
- Event data, such as the application UI launch, and service heartbeat are sent to Dell to help understand if the app is working like it should be.
- Dell will only collect resource utilization data (anonymously) if the end user/IT Admin provides consent by opting in to the Customer Experience Improvement Program. **No data is sent to Dell without explicit consent.**
- End User/IT Admin must either select Opt-in or Opt-out of the Customer Experience Improvement Program.

Product differentiation

Dell Optimizer feature availability across LOBs

Features		Current DPO	Latitude	OptiPlex	Precision
Dell Optimizer 1.0	ExpressResponse				
	Smart Response Time				
	AI-based App Optimization (CPU based)				
	AI-based App Optimization (storage heavy apps)				
	Intelligent Audio				
	ExpressCharge (select mobile devices only)				
	Express Sign-in (select mobile devices only)				
	Centralized Management (CLI in SCCM, WS1)				

Remarks:

- Applies to select Comet Lake platforms only

DO 1.0 = April 2020

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Latitude differentiation

Dell Optimizer: Feature availability for Latitude

Features		Lati 9510 Olympic	Lati 9410 2-in-1 Spyglass MLK	Lati 7x10 Riverside 13/14 (and 2- in-1)	Lati 7210 2-in-1 Augusta MLK	Lati 5x10 North Bay MLK 13/14/15	Lati5x11 Brook Hollow MLK 14/15	Lati 5310 2-in-1 Bandon MLK	Lati 3x10 Mockingbir d L 14/15	Lati 3311 Wasp L MLK
Dell Optimizer 1.0	ExpressResponse									
	Smart Response Time									
	AI-based App Optimization (CPU based)									
	AI-based App Optimization (storage heavy apps)									
	Intelligent Audio									
	ExpressCharge (select mobile devices only)									
	Express Sign-in (select mobile devices only)									
	Centralized Management (CLI in SCCM, WS1)									

OptiPlex differentiation

Dell Optimizer: Feature availability for OptiPlex

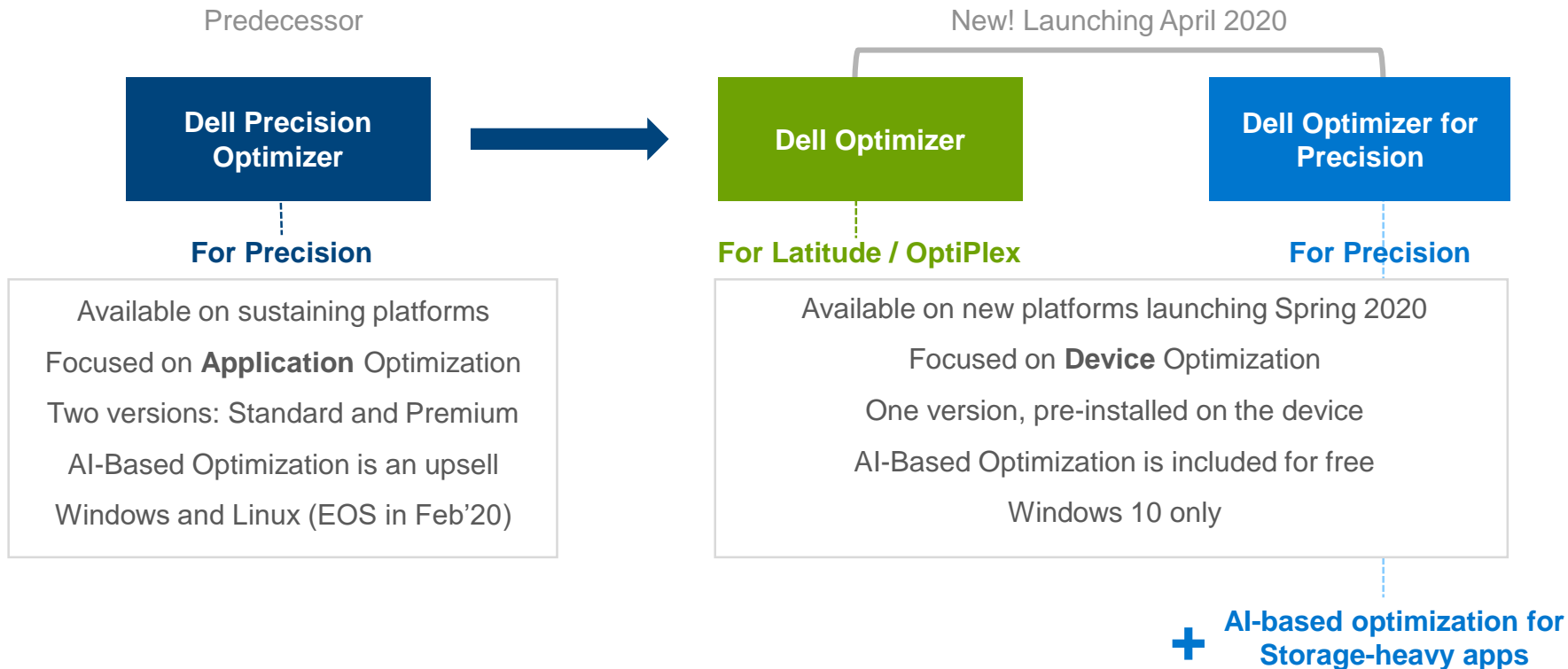
Features		OptiPlex 7480 Gazelle 24	Opti 7780 Gazelle 27	Opti 5480 AIO Gazelle Entry	Opti 5080 Zebra MT/SFF/MFF	Opti 7080 Rhino MTP/SFF/MFF	Opti 7080 Rhino MFF XE
Dell Optimizer 1.0	ExpressResponse						
	Smart Response Time						
	AI-based App Optimization (CPU based)						
	AI-based App Optimization (storage heavy apps)						
	Intelligent Audio						
	ExpressCharge (select mobile devices only)						
	Express Sign-in (select mobile devices only)						
	Centralized Management (CLI in SCCM, WS1)						

Precision Differentiation

Dell Optimizer for Precision: Feature availability for Precision

Features		Precision 7750 Rialto 17	Precision 7550 Rialto 15	Precision 5750 Stradale P	Precision 5550 Fiorano P	Precision 3551 Brook Hollow P MLK	Precision 3550 North Bay P MLK	Precision 3640 Ralatea MT	Precision 3440 Tahaa SFF	Precision 3640 Ralatea XE MT	Precision 3440 Tahaa XE SFF	Precision 3240 Montara
Dell Optimizer 1.0	ExpressResponse											
	Smart Response Time											
	AI-based App Optimization (CPU based)											
	AI-based App Optimization (storage heavy apps)											
	Intelligent Audio											
	ExpressCharge (mobile devices only)											
	Express Sign-in (mobile devices only)											
	Centralized Management (CLI in SCCM, WS1)											

How do we differentiate between DPO, DO and DO-P?



DPO vs DO-P Feature Comparison

Features		DPO	DO-P	Reason for Feature Gap
Dell Optimizer 1.0	ExpressResponse			
	<i>Smart Response Time</i>			
	<i>Profile-based (static) Optimization</i>			Not needed, with AI-based optimization
	<i>AI-based App Optimization (CPU based)</i>			
	<i>AI-based App Optimization (storage heavy apps)</i>			
	Intelligent Audio			
	ExpressCharge (select mobile devices only)			
	Express Sign-in (select mobile devices only)			
	Centralized Management (CLI in SCCM, WS1)			

9 Languages Available

- English
- French
- German
- Spanish
- Brazilian Portuguese
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

What language will be displayed on my app?

- UI language will match the OS displayed language
- Language is not user selectable in the App and it is tied to OS. Default is English if OS language is not one of the supported languages

The logo for Dell Technologies, featuring the word "DELL" in a bold, sans-serif font, followed by the word "Technologies" in a lighter, sans-serif font. The "E" in "DELL" is stylized with three diagonal lines extending from its right side.