



HP TechPulse Reporting Guide

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Introduction

HP TechPulse reports provide insightful analytics on planning, cost optimization and service management capabilities of enrolled devices. The reports are divided into the following categories: Deployment, Hardware, Incidents, Network, Security, Software and Subscription.

Deployment Reports

Includes all reports related to deployment status and health. The following is the list of available deployment reports.

Category Name	Description
Data Health	Provides visualization and details of: <ul style="list-style-type: none">• Installation status of HP TechPulse applications• Health of data reported by HP TechPulse applications
Deployment Status	Provides visualization and details of deployment status of HP TechPulse applications.

Hardware Reports

Includes all reports related to hardware insights. The following is the list of available hardware reports.

Category Name	Description
BIOS Inventory	Provides detailed BIOS information of enrolled devices and out-of-date BIOS versions on HP devices.
Battery Replacement	Provides information on battery replacement recommendation timeframes of enrolled devices.
Battery Usage Optimization	Provides advise on the most optimized approach to use batteries by leveraging the HP Battery Health Manager
Blue Screen Errors	Provides information on devices experiencing blue screen and driver crashes for enrolled devices.
Component Inventory – Display	Provides detailed information about the display inventory, health, and usage.
Device Utilization	Provides information on devices that have high CPU and memory utilization, and the software applications causing high CPU and memory utilization.
Disk Capacity Planning	Forecasts ahead the time duration left prior to the disk space reaching a predetermined threshold. The thresholds are selectable in the report filters and defined as 0-10%, 0-20%, 0-30%, 0-40% and 0-50%.
Disk Replacement	Provides information on disk replacement recommendation timeframes of enrolled devices.
GPU Health/Performance	Provides information on the devices experiencing GPU health/performance issues and the reasons for those issues, and the suggested remediation steps.
Hardware Health	Shows a monthly trend of suboptimal devices as unhealthy and facilitates drilling down to identify devices failing to meet individual performance metrics (i.e. battery health, disk health, thermal health, CPU and memory utilization, graphics health, storage space, and blue screen errors).
Hardware Inventory	Provides detail information on the hardware information of enrolled devices and device enrollment history.
Hardware Replacement	Provides guidance on phased replacement of devices as the current devices reach their end of life.

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Hardware Warranty	Provides an overall summary of warranty and/or care pack status of enrolled devices.
Microsoft Telemetry	Provides aggregated information on the summary key performance indicators of Device Health, Upgrade Readiness and Update Compliance of devices enrolled in Microsoft telemetry.
Mobility Factor	Provides information on the mobility aspects of devices by classifying devices into various mobility factor categories and grouping device mobility factor by hardware health. Unhealthy devices with highest mobility factor may require attention by IT as opposed to unhealthy devices with low mobility factor.
Base Unit with Peripheral Inventory	Provides visualization and breakdown of all enrolled retail base units with peripherals attached to them by category and country.
Peripheral Change	Provides summary and details of change events with retail peripherals being connected or disconnected from retail base units.
Peripheral Inventory	Provides detailed breakdown of all compatible retail peripheral devices connected to enrolled retail base units.
Peripheral Usage Statistics	Provides details of key usage metrics for select retail peripheral categories to view usage trends, most used devices, lifetime usage compared to threshold, and other related analytics.
Peripheral Threshold	Provides an overview of where all the enrolled & supported peripherals are in terms of reaching their lifetime expected thresholds in key usage metrics for Printers, Scanners, & MSRs
Thermal Grading	Provides detailed information of thermal characteristics of enrolled devices.
Thermal Events	Provides detailed information of thermal crashes and hibernate events of enrolled devices
Windows 10 hardware compatibility	Provides information on suitability of devices for upgrade to Windows 10.

Incidents Reports

Includes all reports related to incident management and resolution metrics. The following is the list of available incident management reports.

Category Name	Description
Incident Resolution	The incident Resolution report provides information on: <ul style="list-style-type: none">• Incident Burndown Rate (i.e., the number of open vs. closed incidents).• Average Incident Initial Response Time (i.e., The time taken to respond to an incident, averaged across incident types and subtypes by week).• Average Incident Closure Time on a weekly basis (i.e. the time taken to close an incident, averaged across selected incident types and subtypes by week).

Network Reports

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Includes reports related to networking. Currently, this category only includes the following report.

Category Name	Description
Wireless Network Card Inventory	Provides detailed physical wireless adapter information of enrolled devices

Security Reports

Includes all reports related to security insights and compliance. The following is the list of available security reports.

Category Name	Description
Company Security Compliance	Provides company-wide monthly trends on the compliance status of anti-virus and firewall endpoint protection across all devices within a company.
Device Compromised	Provides detailed information on the device compromised, device passcode compliance and device encryption status of enrolled devices.
Device Security Compliance	Provides monthly trends on the compliance status of antivirus and firewall endpoint protection for each device within a company.
HP Sure Click Pro Security	Provides detailed information on device protection state and threats detected by HP Sure Click Pro isolation technology software.
HP Sure Recover Activity	Provides unified, companywide visibility on Sure Recover image restore events.
HP Sure Recover Settings	Provides a companywide view of PC image recovery settings to identify gaps in coverage or opportunities to reduce end-user downtime after an OS corruption event.
HP Sure Sense Advanced Security	Provides detailed information on device protection state and threats detected by HP's AI-based endpoint antimalware protection solution, HP Sure Sense Advanced malware prevention technology.
HP Sure Start System Integrity	Enables the IT administrator to view PC BIOS and firmware corruption events detected by HP Sure Start.
Lost Device Protection	Provides information on the device wipe operations initiated on devices.
Non-Reporting Devices	Provides the hardware inventory of devices by last seen status in HP TechPulse.
Windows Defender Endpoint Protection	Displays Windows Defender antivirus protection details and detected threat activity.

Software Reports

Includes all reports related to software insights and compliance. The following is the list of available software reports.

Category Name	Description
Auto Update Expiration	Provides customers a fleet-level report on supported Chrome Enterprise OS devices that are approaching or have passed the auto-update expiration date.

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Driver Inventory	Provides detailed driver information of enrolled devices.
Software Catalog Compliance	Provides information on the compliance status of software applications that are published to the device from the mobile device management software.
Software Errors	Provides information on devices and software applications experiencing software errors.
Software Inventory	Enable the IT administrator to view the operating system version and applications installed on devices, including the following: <ul style="list-style-type: none">• When an application was last updated.• The top applications installed within the fleet. Applications updated/installed within this week, last week, or last month.
Software Updates	Provides information on the Microsoft Windows and Microsoft Office updates that are missing on the devices and the criticality level of those updates.
Software Utilization	Provides information on the top twenty-five software applications that are most used across all devices.
Web Applications	Detailed list of web application utilization on enrolled devices. Supported operating system: Windows. Supported browsers: Google Chrome, Mozilla Firefox
Windows Startup/Shutdown Performance	Provides diagnostic information related to Windows performance issues related to Startup Performance, Shutdown Performance, Wakeup Performance and Reboots.

Subscription Reports

The following is the list of available subscription reports.

Category Name	Description
Seats Entitled by Device Enrollment	Provides information on monthly and weekly subscription seats entitled vs. enrolled devices, adoption rate, and details of subscription expiration and conversion status.
Subscription Expiration	Provides detailed list of subscription status of registered companies.

Reports by Service Plan

The following table describes the reports by service plan.

Category	Reports	HP Proactive Security	HP Proactive Insights	HP Proactive Endpoint Management
Deployment	Data Health		✓	✓
Deployment	Deployment Status		✓	✓
Hardware	BIOS Inventory		✓	✓
Hardware	Battery Replacement ¹		✓	✓
Hardware	Battery Usage Optimization		✓	✓
Hardware	Blue Screen Errors		✓	✓
Hardware	Component Inventory		✓	✓
Hardware	Device Utilization		✓	✓
Hardware	Disk Capacity Planning		✓	✓
Hardware	Disk Replacement		✓	✓
Hardware	GPU Health/Performance		✓	✓
Hardware	Hardware Health ^{2 3 4}		✓	✓
Hardware	Hardware Inventory	✓	✓	✓
Hardware	Hardware Performance Comparison		✓	✓
Hardware	Hardware Replacement		✓	✓
Hardware	Hardware Warranty ¹	✓	✓	✓
Hardware	Microsoft Telemetry			✓
Hardware	Mobility Factor ⁵		✓	✓
Hardware	Retail Device Inventory		✓	✓
Hardware	Thermal		✓	✓
Hardware	Windows 10 Hardware Compatibility		✓	✓
Incidents	Incident Resolution	✓	✓	✓
Network	Wireless Networking Card Inventory		✓	✓

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Security	Company Security Compliance	✓	✓	✓
Security	Device Compromised	✓		✓
Security	Device Security Compliance	✓	✓	✓
Security	HP Sure Click Pro Security ⁷	✓		
Security	HP Sure Recover Activity	✓		✓
Security	HP Sure Recover Settings	✓		✓
Security	HP Sure Sense Advanced Security ⁷	✓		
Security	HP Sure Start System Integrity	✓		✓
Security	Lost device protection ⁶			✓
Security	Non-Reporting Devices	✓	✓	✓
Security	Windows Defender Endpoint Protection	✓		
Software	Chrome Auto Update Expiration		✓	✓
Software	Driver Inventory	✓	✓	✓
Software	Software Catalog Compliance			✓
Software	Software Errors			✓
Software	Software Inventory		✓	✓
Software	Software Updates		✓	✓
Software	Software utilization		✓	✓
Software	Web Applications		✓	✓
Software	Windows Startup/Shutdown Performance		✓	✓
Subscription	Seats Entitled by Device Enrollment		✓	✓
Subscription	Subscription Expiration		✓	✓

¹ Supports HP devices only for devices on Microsoft Windows operating system.

² Only hard disk space monitoring available for iOS devices.

³ Only battery health, disk health, thermal health, and hard disk space monitoring available for MAC devices.

⁴ Only battery health, disk health and hard disk space monitoring available for Android devices.

⁵ Only supported with geo-location tracking enabled.

⁶ Not supported with Microsoft Endpoint Manager.

⁷ Requires separate subscription to HP Proactive Security service. HP TechPulse leverages industry leading, cloud-based unified endpoint management (UEM) / enterprise mobility management (EMM) solutions to seek to manage multi-OS environments effectively and securely at scale. Using EMM, HP TechPulse deploys policies recommended by many industry security experts and designed for companies who want to modernize their workplace using cloud-based technology**

**HP TechPulse supports leading EMM providers and utilizes the EMM technology partner most suitable for the customer's environment and goals. HP can either include and price VMware Workspace ONE licenses as a part of our HP Proactive Management Enhanced and Premium plans or leverage a customer's Microsoft Endpoint Manager licenses (if available as a part of their Windows 10 licensing agreement).



Reports by Operating System Platform

The following describes the reports by operating system (OS) platform.

Category	Reports	Microsoft Windows 10	Android	Apple macOS	Apple iOS	Chrome Enterprise OS
Deployment	Data Health	✓	✓	✓	✓	✓
Deployment	Deployment Status	✓		✓	✓	✓
Hardware	BIOS Inventory	✓				
Hardware	Battery Replacement ¹	✓	✓	✓		✓
Hardware	Battery Usage Optimization	✓				✓
Hardware	Blue Screen Errors	✓				
Hardware	Component Inventory	✓				
Hardware	Device Utilization	✓				✓
Hardware	Disk Capacity Planning	✓	✓	✓	✓	✓
Hardware	Disk Replacement	✓	✓	✓		
Hardware	GPU Health/Performance	✓				
Hardware	Hardware Health ^{2 3 4}	✓	✓	✓	✓	✓
Hardware	Hardware Inventory	✓	✓	✓	✓	✓
Hardware	Device Utilization					
Hardware	Hardware Replacement	✓				
Hardware	Hardware Warranty ¹	✓				✓
Hardware	Microsoft Telemetry	✓				
Hardware	Mobility Factor ⁵	✓	✓	✓		
Hardware	Retail Device Inventory	✓				
Hardware	Thermal	✓		✓		
Hardware	Windows 10 hardware compatibility	✓				
Incidents	Incident Resolution	✓	✓	✓	✓	



Category	Reports	Microsoft Windows 10	Android	Apple macOS	Apple iOS	Chrome Enterprise OS
Network	Wireless Network Card Inventory	✓				
Security	Company Security Compliance	✓				
Security	Device Security Compliance	✓				
Security	Device Compromised	✓	✓	✓	✓	
Security	Lost device protection ⁶	✓	✓	✓	✓	
Security	HP Sure Click Pro Security ⁷	✓				
Security	HP Sure Recover Activity	✓				
Security	HP Sure Recover Settings	✓				
Security	HP Sure Sense Advanced Security	✓				
Security	HP Sure Start System Integrity	✓				
Security	Non-reporting devices	✓	✓	✓		
Security	Windows Defender Endpoint Protection	✓				
Software	Chrome Auto Update Expiration					✓
Software	Driver Inventory	✓				
Software	Software Inventory	✓	✓	✓	✓	
Software	Software Catalog Compliance	✓	✓	✓	✓	
Software	Software Errors	✓				
Software	Software Updates	✓				
Software	Software Utilization	✓	✓	✓		
Software	Web Applications	✓				
Software	Windows Startup/Shutdown Performance	✓				
Subscription	Seats Entitled by Device Enrollment	✓	✓	✓	✓	✓
Subscription	Subscription Expiration	✓	✓	✓	✓	✓

¹ Supports HP devices only.

² Only hard disk space monitoring available for iOS devices.

³ Only battery health, disk health, thermal health, and hard disk space monitoring available for MAC devices.

⁴ Only battery health, disk health and hard disk space monitoring available for Android devices.



⁵ Only supported with geo-location tracking enabled.

⁶ Not supported with Microsoft Endpoint Manager.

HP TechPulse leverages industry leading, cloud-based unified endpoint management (UEM) / enterprise mobility management (EMM) solutions to seek to manage multi-OS environments effectively and securely at scale. Using EMM, HP TechPulse deploys policies recommended by many industry security experts and designed for companies who want to modernize their workplace using cloud-based technology**

**HP TechPulse supports leading EMM providers and utilizes the EMM technology partner most suitable for the customer's environment and goals. HP can either include and price VMWare Workspace ONE licenses as a part of our HP DaaS Enhanced and Premium plans or leverage a customer's Microsoft Endpoint Manager licenses (if available as a part of their Windows 10 licensing agreement).

Report Rules

The following rules apply:

1. The data in HP TechPulse reports is refreshed daily (select reports update more frequently).
2. Devices with null or bad serial numbers are not included in reports.
3. Virtual devices are not included in reports.
4. Devices that are not seen for more than 90 days are not included in reports.

Roles

The reports are available for the following HP TechPulse roles:

- IT Admin. This role is applicable to customers.
- Report Admin. This role is applicable to customers.
- Support Admin. This role is applicable to a HP Service Expert managing customer accounts.
- Support Specialist. This role is applicable to HP Service Expert's managing customer accounts.
- Partner Admin. This role is applicable to partners managing customer accounts.
- Partner Specialist. This role is applicable to partners managing customer accounts.

Report Operations

Report List

HP TechPulse has a dedicated section for reporting that shows all information pertaining to reports.

To access the reporting section:

1. Login to HP TechPulse dashboard and navigate to the Reports tab.
2. The Reports page shows three tabs:
 - Standard. The standard tab contains the reports shipped by HP for each user and contains the main reports applicable for the Microsoft Windows operating system.
 - Custom. The custom tab is empty for a new user and contains all the reports created by the user.
 - History. The history tab contains a list of all historical reports that have been run either manually or automatically scheduled in the past six months.

Location Filter

When you log in to the TechPulse portal, data on the dashboard, reports, incidents, and devices page is filtered based on the location selected in the global filter provided in the portal. You can find the Location Filter at the very top of the portal window. The location filter selection persists throughout the HP TechPulse portal.

The multi-level location feature is helpful for companies that have offices spanning across the globe. You can effectively manage enrolled devices by grouping them based on the region. You can generate reports and take necessary action based on location and business priorities.

Reports are generated only on the devices that are assigned to the selected location.

For more information about device groupings and assigning a location to devices, see the [HP TechPulse Device Management Guide](#).

All reports include the location information in the **Details** tab.

When a partner or an MSP navigates to the **Reports** page, and no company is selected, the first company in the list is selected by default. You can choose a different company on the list.

Creating Reports

HP TechPulse allows creation of new reports.

To create a new report:

1. Login to HP TechPulse portal and navigate to Reports tab.
2. Click the Custom tab.

Click the Create button.

This will open the Report Details page.

1. Add a report name in the Name edit field.
2. Select a Category, Subcategory and Option from their respective drop-down menu. For example, *Hardware*, *Hardware Inventory* and *Details* in the Category, Subcategory and Option drop-down menu respectively.
3. In the Filter Criteria section add one or multiple filters in Filter Criteria by clicking on the + Add Criteria button.
Filter criteria is optional for report, except in some reports where certain filters are mandatory to resolve browser performance issues while viewing large volumes of data in HTML format.
4. In the Default File Type section, select the Default File Type as either HTML, PDF or XLSX. E.g., select HTML.
 - HTML file type creates the report in a new browser window.

- PDF and XLSX file types result in creation of a PDF and Excel file respectively.
- 5. In the Preferences section:
 - Select Show company details to either show or hide the name of the HP TechPulse company name in the report.
 - Click on the Make this a favorite report to make this a favorite report.
- 6. In the Report Preview section, click RUN REPORT to generate a preview of the report. The preview is generated in a new browser window when generating the report with HTML default file type.
- 7. Click SAVE.
Note: HP TechPulse does not allow changing the Category, Subcategory and Option once the SAVE button is clicked.

The Reports page will show the new report listed.

Editing Reports

HP TechPulse allows editing existing reports that were created previously under the Custom tab. Reports under the Standard tab are not editable.

To edit an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click the Custom tab.
3. Select the Name of the report to edit by either clicking the hyperlink or by clicking the button with three vertical dots and selecting View Details from the drop-down menu.
4. This will open the Report Details page.
Note: HP TechPulse does not allow two reports with the same name within the same company for the same category, subcategory, and options.
5. Change the Name, Filter Criteria, Default File Type, Preferences and click Save.
Note: HP TechPulse does not allow changing Category, Subcategory and Option once the SAVE button is clicked.
6. Click SAVE.
Note: HP TechPulse does not allow changing the Category, Subcategory and Option once the SAVE button is clicked.

The Reports page will show the new report listed.

Deleting Reports

HP TechPulse allows deleting existing reports under the Custom tab that were created previously. Reports under the Standard tab cannot be deleted.

To delete an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab,
2. Click the Custom tab.
3. Select the button with three vertical dots next to the report that is to be deleted and select Delete from the drop down.
4. Click the OK button to delete the reports.
Note: There is no mechanism to retrieve a report once deleted.
Note: There is no mechanism to delete multiple reports in a singular step.
5. This will open the Report Details page.

6. Change the Name, Filter Criteria, Default File Type, Preferences.
7. Click SAVE.

Duplicating Reports

HP TechPulse allows duplicating existing reports under Standard and Custom tab that were created previously.

To duplicate an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click the Standard or Custom tab.
3. Select the button with three vertical dots next to the report that is to be deleted and select Duplicate from the drop-down menu.

Previewing Reports

HP TechPulse allows previewing existing reports under Standard and Custom tab that were created previously.

To preview an existing report:

1. Login to the HP TechPulse portal and navigate to the Reports tab.
2. Click the Standard or Custom tab.
3. Select the Name of the report to edit by either clicking the hyperlink or by selecting the button with three vertical dots and by selecting View Details from the drop down.
This will open the Report Details page.
4. Navigate to Report Preview section and click RUNREPORT.
 - If the Default File Type is selected as HTML, the preview will open in a new browser window and show all the data available in the report.
 - If the Default File Type is selected as PDF or XLSX, the preview will download the PDF or Excel file respectively but will limit the report to only 10,000 rows, since previewing large files results in a HTTPS timeout.
5. Click SAVE or DISCARD to return to the Reports page.

Running Reports

HP TechPulse allows running existing reports under Standard and Custom tab that were created previously.

To run an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click on the Standard or Custom tab.
3. Click the RUN REPORT against the Name of the report.
 - If the Default File Type is selected as HTML, the report will open in a new browser window and show all the data in the report.
 - If the Default File Type is selected as PDF or XLSX, the report will open in a new browser window and show all the data in the report in a PDF or Excel file respectively.
4. If the content of the PDF and Excel file is large, an email will be sent, once the report is generated.
 - Click on Download Report button in the email from HP TechPulse.
 - If already logged in to HP TechPulse portal, the file will automatically open in a new browser window and show all the data in the report in a PDF or Excel file respectively.

Filtering Criteria in Reports

HP TechPulse allows adding multiple filtering criteria to reports to narrow down to specific data.

To add filters to a new or an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click on the Custom tab.
3. Select the Name of the report to edit by either clicking on the hyperlink or by selecting the button with three vertical dots and by selecting View Details from the dropdown.
4. This will open the Report Details page.
5. In the Filter Criteria section add one or multiple filters in Filter Criteria by clicking on the + Add Criteria button.

Filter criteria is optional for report, except in some reports where certain filters are mandatory to resolve browser performance issues while viewing large volumes of data in HTML format.

Each report has its own filtering criteria. Select a field from the left-side dropdown and then select an operator from the middle dropdown, followed by values from the right-side dropdown.

- Single select option: To select multiple values from the right-side drop down, select multiple entries from the right-side drop down one by one
 - Multi-select options: Some reports like Software Inventory Details allow for searching and selection of multiple items at the same time.
6. Click the + Add Criteria button to add additional filters.
Note: Multiple filters are added when reports are generated.
 7. To delete a filter, select the cross mark next to the filter.
 8. Click SAVE.

Scheduling Reports

HP TechPulse allows scheduling PDF and Excel reports to be delivered via email once a day, once a week, once a month, or once a quarter. Additionally, the reports can be password protected to avoid unauthorized access (this is optional).

To schedule a new or an existing report.

1. Login to HP TechPulse portal and navigate to Reports tab
2. Click on the Custom tab.
3. Select the Name of the report to edit by either clicking on the hyperlink or by selecting the button with three vertical dots and by selecting View Details from the dropdown.
This will open the Report Details page.
4. In the Default File Type section, select the Default File Type as either PDF or XLSX.
This will show the Automatic Reports section.
5. Select Schedule periodic reports:
 - For once a day option:
 - Select Recurrence as Once a Day.
 - Select a time from the At drop down.
 - For once a week option:
 - Select Recurrence as Once a Week.

- Select a day from the On drop down.
- Select a time from the At drop down.
- For once a month option:
 - Select Recurrence as Once a Month.
 - Select a Start Date from the calendar.
 - Select a time from the At drop down.
- For once a quarter option:
 - Select Recurrence as Once a Quarter.
 - Select a Start Date from the calendar.
 - Select a time from the At drop down.
- 6. Optionally, to password protect the files from unauthorized access, in the Security section, select Require password to open the document.
- 7. Enter a password.

Note: The rules for password protection include:

 - The length of the password should be between 1 and 10 characters.
 - There's no expiry date for the passwords.
 - Passwords for the previously generated reports can't be updated.
- 8. Click SAVE.

Report Preferences

HP TechPulse allows the following preferences for each report.

- Show company details allows showing or hiding the name of the HP TechPulse company name in the report.
 - Advance Months automatically, if checked, allows the reports to advance to the latest month(s) and this preference is selected by default. For example,
 - A report is created in the month of April 2020, and a Month filter is chosen to show data for the last three months, i.e., April, March, and February 2020.
 - As the report is generated in April 2020, the data for April, March and February 2020 is shown in reports when the report is generated.
 - If the same report is generated in May 2020, and if the Advance Months automatically is checked, the data for May, April and March 2020 is shown in reports.
- Note: This preference is available only when a Month filter is available and selected in the Filter Criteria section.
- Make this a favorite report allows user to designate a report as a "favorite".

To add preferences to a new report or update the preferences of an existing report.

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click the Custom tab.
3. Select the Name of the report to edit by either clicking on the hyperlink or by selecting the button with three vertical dots and by selecting View Details from the drop down.
4. This will open the Report Details page.



In the Preferences section, update the Show company details, Advance Months automatically and/or Make this a favorite report.

Click SAVE.

Finding, Filtering and Sorting Reports

HP TechPulse allows various filtering and sorting options to quickly find the reports under the Standard and Custom tab that were created previously.

To find or filter to an existing report:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click on the Standard or Custom tab.
3. Select the inverted funnel icon.
 - By default, all reports are shown as unselected (i.e. all the report category and subcategories are unselected) and hence displays all reports in the Reports page
 - Select one or multiple report categories or subcategories under any category to see the reports belonging to the subcategory in the Reports page.
 - If there are no reports created in a category or subcategory, the category or subcategory is greyed out.

To sort existing reports in the Reports page:

1. Login to HP TechPulse portal and navigate to the Reports tab.
2. Click the Standard or Custom tab.
3. Select the sort by options from the Sort by drop down.
 - Recent: Reports are shown sorted in descending order by last time the reports were edited.
 - Favorites. Favorite reports are shown first followed by non-favorite reports
 - Format. Reports are shown sorted by file types. HTML reports are shown first, followed by PDF, followed by XLSX.
 - Category. Reports are shown sorted by category names in ascending order.
 - All (Alphabetical). Reports are shown sorted by report names in ascending order.

Reporting Layout and Navigation

HP TechPulse follows a common standard for all the generated reports and it only varies based on Default File Type (i.e. HTML, PDF, XLSX)

HTML Reports

Report Name and Description

All HTML generated reports have a report name and report description section which shows:

- Report Name
- Default report description by HP.

Report Header

All HTML generated reports have a header section that shows:

- Company Name
- Category
- Subcategory
- Option
- Created by
- Created on
- Filter Criteria

Click MORE DETAILS to show the report header section. Click LESS DETAILS to hide the report header section.

Visualizations and Drilldowns

HTML generated reports typically have multiple visualizations (charts) and a tabular grid format.

HTML generated reports have two types of drill downs:

1. Visualization to Details. Clicking on a visualization section (bar, column etc.) automatically brings the Details tab filtered to only show the data pertaining to the section clicked.
2. Visualization Drilldowns. Clicking on a visualization section (bar, column etc.) drills down the clicked visualization to the next level to show additional break down. Clicking on the last level of drill down automatically brings the Details tab filtered to only show the data pertaining to the section clicked.

Visualization Options

Each visualization has options to:

1. Print Chart
2. Print PNG image
3. Print JPEG image
4. Print PDF document
5. Print SVG Vector image

PDF Reports

Report Name and Description

All PDF generated reports have a report name and report description section that shows:

- Report Name
- Default report description by HP.

Report Header

All PDF generated reports have a header section that shows:

- Company Name
- Category
- Subcategory
- Option
- Created by
- Created on
- Filter Criteria

Visualizations and Drilldowns

PDF generated reports typically have multiple visualizations (charts) and a tabular grid format. PDF reports don't support any drilldowns.

Excel Reports

Report Name and Description

All Excel generated reports have a report name and report description section that shows:

- Report Name
- Default report description by HP.

Report Header

All Excel generated reports have a header section that shows the following and it is provided in the first excel tab:

- Company Name
- Category
- Subcategory
- Option
- Created by
- Created on
- Filter Criteria

Visualizations and Drilldowns

Excel generated reports don't have any visualizations (charts). All data is provided in a tabular grid format.

Dashboard

The Dashboard page lets you monitor and manage the overall health and security status of enrolled devices in your organization in a visual and interactive way. You can track hardware and software inventory and monitor device health, as well as anticipate, understand, and respond to security threats.

HP TechPulse comes with a default dashboard that you can customize by adding, deleting, editing filter criteria, and moving the widgets. You can also create custom dashboard views to meet the specific needs of your organization.

Dashboard widgets

The widgets provide KPIs (Key Performance Indicators) and detailed charts that report on KPI details and more. The charts with a legend key let you change the view by clicking on and off a legend key. Clicking on any section on the chart directs you to the details page.

You can perform the following tasks from the Dashboard page:

- Select companies (for Partners only)
- Select time duration up to 6 months
- Add, edit, delete, and share custom dashboards
- Reset dashboard to default settings
- Add, edit, delete, and move widgets
- Save chart as an image
- View full report (for select widgets only)

To edit, delete, save chart as an image, or view full report, click ellipsis (...) on the widget.

Adding a custom dashboard

1. Login to HP TechPulse portal and navigate to the **Dashboards** page.
2. Click the **EDIT > Add Custom Dashboard**.
3. Provide a dashboard name.
4. Click **ADD**.
5. You can now add widgets to it.

Adding a widget

1. Login to HP TechPulse portal and navigate to **Dashboards** page.
2. Select a dashboard you want to add the widget to.
3. Click the **ADD WIDGET** button.
4. Select a **Category**, **Subcategory** and **Option** from their respective drop-down menu. For example, *Hardware*, *Hardware Inventory* and *Details* in the Category, Subcategory and Option drop-down menu respectively.
5. Select a visualization model.
6. (Optional) In the Filter Criteria section, add one or multiple filters by clicking **ADD CRITERIA**.
7. Provide a widget title.
8. Click **ADD**.

The dashboards page will show the new widget.



Sharing Custom Dashboards

You can share your custom dashboards with other HP TechPulse users within your company, eliminating the need for other users to recreate the dashboards. You can share the dashboards with users who have the same level of HP TechPulse security access.

To share a dashboard, click **Edit > Share With**. When you share a dashboard, a notification is displayed if the dashboard was successfully sent or not.

Users will receive a notification with the option to add or discard the custom dashboard. They can choose to rename the dashboard.

Report Descriptions

Deployment - Data Health Report

The Data Health report:

- Provides information on:
 - Installation status of TechPulse and Touchpoint Analytics applications.
 - Health of data reported by TechPulse and Touchpoint Analytics.
- Is only collected on weekdays.
- Includes the following tabs: Summary and Details.

Summary tab

The Summary tab includes Installation Status and Data Health visualizations.

Installation Status

This doughnut visualization shows deployment status for all enrolled devices. The visualization includes:

- Enrolled devices where both HP TechPulse and HP Touchpoint Analytics are successfully installed and upgraded.
- Enrolled devices where HP TechPulse is successfully installed and upgraded, but HP Touchpoint Analytics has failed to install or upgrade.
- Enrolled devices where HP TechPulse has failed to successfully install or upgrade, but HP Touchpoint Analytics is successfully installed and upgraded.
- Enrolled devices where both HP TechPulse and HP Touchpoint Analytics have failed to install or upgrade.

Data Health

This bar chart visualization displays data health of various KPIs:

- X-axis: Number of Devices
- Y-axis: Data Collection Category
- Color by: Data Collection Health

Data collected from the date the device is enrolled is:

100%: Excellent

75% - 100%: Very Good

50% - 75%: Good

25% - 50%: Fair

0% - 25%: Poor

Clicking any section of the bar will drill down to the details for that data collection category and data health status. For example: If you click on Operating System and Good (green), all devices with operating system as Good is listed.

Details tab

The Details tab provides additional information on the device and the various device component's health status.

- Last Signed-In User: Last user logged into the device
- [Device Details](#)
- Enrolled Date



- Operating System Data Health
- Thermal Data Health
- Drivers Data Health
- Device Utilization Data Health
- Software Utilization Data Health
- Software Performance Data Health
- Component SN: The serial number of the specified component.
- Component Type: For batteries, the component type will be 'battery'. For disk drives, the component type is broken into disk drive types: SSD for solid state drives, HDD for hard disk drives, and NVME for non-volatile memory express drives.
- Battery Data Health
- Disk (Basic) Data Health
- Disk (Details) Data Health
- Package Name
- Installed Version
- [Location Level](#)

The Deployment Status Report

The Deployment Status report provides information on:

1. Deployment status of HP TechPulse applications by application.
2. Capability of TechPulse applications to communicate with the TechPulse cloud.
3. Includes the following tabs: By Installation Status, By Proxy Configuration Status, Details.

By Installation Status tab

The By Installation Status tab shows the Installation Status, HP TechPulse Installation Status by Version, HP Touchpoint Analytics Installation Status by Version, HP TechPulse Installation Top Errors, HP Touchpoint Analytics Installation Top Errors, HP TechPulse Installation Compliance, and HP Touchpoint Analytics Installation Compliance visualizations.

Installation Status

This doughnut visualization shows deployment status for all enrolled devices. The visualization includes:

- Enrolled devices where both HP TechPulse and HP Touchpoint Analytics are properly installed and upgraded.
- Enrolled Devices where Only HP TechPulse is properly installed and upgraded but HP Touchpoint Analytics is either not installed or failed to upgrade.
- Enrolled Devices where only HP Touchpoint Analytics is properly installed and upgraded but HP TechPulse is either not installed or has failed to upgrade.
- Color by: Installation Status.

HP TechPulse Installation Status by Version

This bar visualization shows the number of devices that have successfully and unsuccessfully attempted upgrades to the various version of HP TechPulse and includes:

- X-axis: TechPulse Version Number
- Y-axis: Number of Devices
- Color by: Installation Status



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HP Touchpoint Analytics Installation Status by Version

This bar visualization shows the number of devices that have successfully and unsuccessfully attempted upgrades to the various versions of HP Touchpoint Analytics and includes:

- X-axis: Touchpoint Analytics Version Number
- Y-axis: Number of Devices
- Color by: Installation Status

HP TechPulse Installation Top Errors

This bar visualization displays top errors reported during installation of HP TechPulse and includes:

- X-axis: Number of Errors
- Y-axis: TechPulse Installation Error
- Sorted by: Number of Errors descending

HP Touchpoint Analytics Installation Top Errors

This bar visualization displays top errors reported during installation of HP Touchpoint Analytics and includes:

- X-axis: Number of Errors
- Y-axis: Touchpoint Analytics Installation Error
- Sorted by: Number of Errors descending

HP TechPulse Installation Compliance

This bar visualization shows devices where HP TechPulse autoupdate is enabled and includes:

- X-axis: Autoupdate on
- Y-axis: Number of Devices
- Color by: Compliance Status

HP Touchpoint Analytics Installation Compliance

This bar visualization shows devices where HP Touchpoint Analytics autoupdate is enabled and includes:

- X-axis: Autoupdate on
- Y-axis: Number of Devices
- Color by: Compliance Status

By Proxy Configuration Status tab

The By Proxy Configuration Status tab shows the Proxy Configuration Status Visualization.

Proxy Configuration Status

This doughnut visualization shows the proxy configuration status for all enrolled devices. The visualization includes:

- Enrolled devices where both HP TechPulse and HP Touchpoint Analytics are properly configured and can communicate with hpdaas.com
- Enrolled Devices where Only HP TechPulse is properly configured and can communicate with hpdaas.com but HP Touchpoint Analytics is unable to communicate with hpdaas.com.
- Enrolled Devices where only HP Touchpoint Analytics is properly configured and can communicate with hpdaas.com but HP TechPulse is unable to communicate with hpdaas.com.
- Color by: Proxy Configuration Status.

HP TechPulse Proxy Configuration Status by Version

This bar visualization shows communication status with hpdaas.com and includes:

- X-axis: Proxy used to communicate with TechPulse.



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- Direct indicates communication directly with TechPulse without proxy.
- None indicates that a proxy is not configured, and a device cannot communicate with hpdaas.com.
- Y-axis: Number of Devices.
- Color by: Configuration Status.

HP Touchpoint Analytics Proxy Configuration Status by Version

This bar visualization shows communication status with hpdaas.com and includes:

- X-axis: Proxy used to communicate with hpdaas.com.
 - Direct indicates communication directly with hpdaas.com without proxy.
 - None indicates that a proxy is not configured, and a device cannot communicate with hpdaas.com.
- Y-axis: Number of Devices.
- Color by: Configuration Status.

HP TechPulse Proxy Configuration Top Errors

This bar visualization displays top errors with proxy configuration of HP TechPulse and includes:

- X-axis: Number of Errors
- Y-axis: TechPulse Proxy Configuration Error
- Sorted by: Number of Errors descending

HP Touchpoint Analytics Proxy Configuration Top Errors

This bar visualization displays top errors with proxy configuration of HP Touchpoint Analytics and includes:

- X-axis: Number of Errors
- Y-axis: Touchpoint Analytics Proxy Configuration Error
- Sorted by: Number of Errors descending

Details tab

The Details tab provides additional information on incidents, incident resolution metrics and the devices experiencing the incidents.

- Last Signed-In User
- [Device Details](#)
- Enrolled Date
- Package Name
- Deployment Policy

Autoupdate on: The client is automatically updated to the latest released version.

Autoupdate off: The client version installed using the domain controller, group policy, or by batch registry entries will remain until the installed version expires. A client version expires after six months plus one month of the grace period.

- Installed Version: Unknown
- Proxy Policy
- Proxy
- Error Code
- Error Message
- [Location Level](#)

BIOS Inventory – BIOS Settings Report

The BIOS Settings report provides a detailed summary of the current BIOS settings across the fleet and the history of the BIOS settings' changes for each device.

The BIOS Settings report:

1. Supports only HP devices that are manufactured on or after January 1, 2015 and running the following OS: Windows 10 v1803 or higher
2. Is available for devices on Microsoft Windows operating system.
3. Provides the following filters: BIOS Version, Operating System, and OS Release
4. Includes the following tabs: Summary, Settings Change History, and Details.

Summary tab

The Summary tab consists of tables for each of the BIOS setting which you can collapse and expand. Each table lists the BIOS setting values, number of devices, share of total number of devices (%), and links to the Details tab that lists only the devices for that given BIOS setting.

An **Unknown** value is displayed for devices that don't meet the supported OS requirement or if the relevant information is not available for devices with an older version of HP TechPulse Windows application.

BIOS settings:

- Runtime Power Management
- Idle Power Savings
- ACPI S3 PS2 Mouse Wake Up
- Unique Sleep State Blink Rates
- S5 Maximum Power Savings
- SATA Power Management
- Hyper-Threading
- Integrated Video
- Turbo-boost
- Virtualization Technology (VTx)
- ME Firmware Version
- ME Management Mode
- BIOS Admin Password
- Power On Admin Password
- Device Guard Use Status
- FastBoot
- NetPXEBoot
- Sure Start BIOS Settings Protection
- Enhanced HP Firmware Intrusion Prevention and Detection
- Virtualization Technology for Directed I/O (VTd)
- Fast Charge

- Dynamic Platform and Thermal Framework (DPTF)
- Video Memory Size, Mb
- Battery Health Manager Settings
- Multi-processor

Settings Change History tab

The Setting Change History tab provides detailed information about the BIOS settings, BIOS setting values, changes made from the previous configuration, and the date changed.

Details tab

The Details tab provides additional information on the device and the BIOS information:

- Last Signed-In User: Last user logged into the device
- [Device Details](#)
- BIOS Version: The version of the currently installed BIOS.
- BIOS Setting: The name of the BIOS setting
- BIOS Setting Value: The BIOS value currently set
- [Location Level](#)

BIOS Inventory – Details Report

The BIOS Inventory report provides detailed BIOS information of enrolled devices. The BIOS inventory report:

1. Is available for both HP and non-HP devices.
2. Is available for devices on Microsoft Windows operating system.
3. Provides information on BIOS version for both HP and non-HP devices.
4. Provides information on out-of-date BIOS version only for HP devices. The out-of-date BIOS version (i.e. BIOS Version Status) is categorized as:
 - Old BIOS Version. The version of BIOS on HP device is older than the latest BIOS version provided by HP.
 - Latest BIOS Version. The version of BIOS on HP device is same as the latest BIOS version provided by HP.
 - Unknown BIOS Version. Unable to determine the BIOS version is out-of-date or latest. This can happen if either the device is a non-HP device, or HP TechPulse is unable to determine the BIOS version and Device Platform ID (i.e. baseboard identifier) on the device.
5. Includes the following tabs: Summary, Unique BIOS, By Week, and Details

Summary tab

No. of Devices by device model and BIOS version status. This is a drill down visualization and at the top level, the devices are grouped by device model and by BIOS version status. Clicking on any section in the visualization, results in a drill down to current Installed BIOS version (found on the device) by BIOS version status.

The top-level visualization includes:

X-axis: No. of Devices.

- Y-axis: Device model.
- Color by: BIOS version status.

The visualization is sorted based on:

- No. of Devices of a given model in descending order.

The drill down visualization includes:

- X-axis: No. of Devices.
- Y-axis: Installed BIOS version (current BIOS version found on the device).
- Color by: BIOS version status.

The visualization is sorted based on:

- No. of Devices of a given model, followed by
- The BIOS version status.

Unique BIOS tab

The bar chart shows the number of unique bios versions per device model.

The visualization includes:

- X-axis: No. of unique BIOS versions.
- Y-axis: Device model.

You can mouse-over the bars for information on the BIOS version running on the devices and the number of devices.

The visualization is sorted based on:

- No. of unique BIOS versions of a given model in descending order.

By Week tab

No. of Devices by week and BIOS version status, represented as a percentage of the total No. of Devices.

The visualization includes:

- X-axis: Week.
- Y-axis: Share of the total No. of Devices (%).
- Color by: BIOS version status.

Details tab

The Details tab provides additional detailed information about devices and BIOS information:

- [Device Details](#)
- Device Platform ID. The baseboard identifier of the platform the device is built on.
- BIOS Manufacturer. The manufacturer of the installed BIOS.
- Installed BIOS Status. The status of the currently installed BIOS.
- Installed BIOS Version. The version of the currently installed BIOS.
- Installed BIOS Release Date. The release date of the currently installed BIOS.
- Latest Available BIOS Version. The latest BIOS version that can be installed on this device.
- Latest Available BIOS Release Date. The release date of the latest BIOS version that can be installed on this device.
- Latest Available BIOS Criticality. The criticality of the latest BIOS version that can be installed on this device.
- Softpaq Number. Link to the Softpaq number of the latest BIOS version required to enable HP battery health manager on the device.
- Latest Critical Available BIOS Version. The latest critical BIOS version that can be installed on this device.
- [Location Level](#)

The Details tab has a default sorting order of:

1. Installed BIOS Status (Old first), followed by
2. Latest Available BIOS Criticality (Critical first), followed by
3. Serial Number in ascending order.

BIOS Inventory - BIOS Update History Report

The BIOS Update History report provides valuable BIOS information for each of your HP devices:

- [Device Details](#)
- Device Platform ID. The baseboard identifier of the platform the device is built on.
- BIOS Manufacturer. The manufacturer of the installed BIOS.
- BIOS Status. The status of the currently installed BIOS.
- BIOS Version. The version of the currently installed BIOS.
- BIOS Release Date. The release date of the currently installed BIOS.
- BIOS Installation Date: The date the BIOS was installed.
- Latest Critical Available BIOS Version Release Notes. Link to the release notes of the latest critical BIOS version.
- Softpaq Number. Link to download the Softpaq file of the latest BIOS version required.

Battery Replacement Report

The Battery Replacement report provides information on battery replacement recommendation timeframes of enrolled devices.

The battery replacement report:

1. Only shows devices that are classified with device type as Notebook in HP TechPulse
2. Is available for both HP and non-HP devices. For HP devices the battery replacement recommendation timeframe provides a timeframe in which the battery needs to be replaced. For non-HP devices, the battery replacement recommendation timeframe is always N/A.
3. Is available for devices on Android, macOS, Chrome Enterprise OS and Microsoft Windows operating system.
4. Leverages HP proprietary battery data attributes for HP Notebook devices (for example battery recall, corrupt capacity, bad cell, blown fuse, voltage out of spec, not charging, trickle overcharge, temperature alarm, charge capacity level) and a predictive model to predict the life of the battery and provide the battery replacement recommendation timeframe.
5. Leverages Android and MAC API's to indicate the life of the battery and provide the battery replacement recommendation timeframe.

Includes the following tabs: Summary, By Device Manufacturer, By Manufacture Year, and Details.

For devices on Microsoft Windows operating system, the battery replacement recommendation timeframe (i.e. the battery replacement timeframe) is categorized as:

- Recall. Battery Recall has been issued by HP.
- Needs Action. Battery has either failed or is expected to require replacement within a month.
- Early Detection. Battery is expected to require replacement in 2-3 months.
- OK. Battery is working okay and not requiring any replacement in the next 3+ months.

- N/A. Unable to determine if a battery needs replacement. This can happen if the battery is either from a non-HP notebook or if HP TechPulse is unable to determine the health of the battery at present due to lack of data.

For devices on Android operating system, the battery replacement recommendation timeframe (i.e. the battery replacement timeframe) is categorized as (according to Android APIs):

- Needs Action. Battery is either dead or having an unspecified failure.
- Early Detection. Battery is cold, overheating or the battery voltage is above the design specs.
- OK. Battery is good and not requiring any replacement.
- N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of data.

For devices on the macOS operating system, the battery replacement recommendation timeframe (i.e., the battery replacement timeframe) is categorized as:

- Needs Action. Battery is either in Service Battery or Replace Now status as reported by macOS APIs.
 - Service Battery. According to macOS, the battery isn't functioning normally. You can safely use your Mac when it's connected to [an appropriate power adapter](#), but you should contact HP if you have purchased extended care pack as a part of your HP DaaS for macOS contract or an macOS-authorized service provider as soon as possible.
 - Replace Now. According to macOS, the battery is functioning normally but holds significantly less charge than it did when it was new. You can safely continue using your computer, but if its lowered charging capacity is affecting your experience, you should contact HP if you have purchased extended care pack as a part of your HP DaaS for macOS contract or an macOS-authorized service provider as soon as possible.
- Early Detection. Battery is in Replace Soon status as reported by macOS APIs.
 - Replace Soon. According to macOS, the battery is functioning normally but holds less charge than it did when it was new. You should monitor the health of the battery by checking the battery status menu periodically.
- OK. According to macOS, battery is in Normal status and functioning normally, as reported by macOS APIs.
- N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of data.

Summary tab

The Summary tab shows Battery Replacement Summary and Battery Replacement Summary by Warranty visualizations.

Battery Replacement Summary

No. of Devices by battery replacement timeframe.

Battery Replacement Summary by Warranty

No. of devices by battery replacement timeframe by device warranty status. The device warranty status provides a combined overall status of all warranty and/or care pack of a device as a singular value, categorized as:

- In warranty. The device has an active warranty and/or carepack.
- Out of warranty. The device does not have any active warranty and/or carepacks.
- Not applicable. The device is not a HP manufactured device.
- Unknown. Unable to determine if the HP device has warranty and/or carepacks.

Note: The device warranty and care pack status are only available for HP manufactured devices.

The visualization includes:

- X-axis: Battery Replacement Timeframe.
- Y-axis: No. of Devices.
- Color by: Device Warranty Status.

By Device Manufacturer tab

No. of Devices by various battery replacement categories by device manufacturer.

The visualization includes:

- X-axis: Battery Replacement Timeframe.
- Y-axis: No. of Devices.
- Color by: Device Manufacturer.

By Manufacture Year tab

No. of Devices by various battery replacement timeframe by device manufacturer year. The device manufacture year is only available for HP devices.

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: Battery Replacement Timeframe.

The visualization is sorted by device manufacture year in ascending order.

Details tab

The Details tab provides additional data attributes of battery health and replacement recommendations.

- Battery Replacement Timeframe. See [Battery Replacement Timeframe](#).
- Current Battery Health. The current state of the health of the battery.
 - For HP devices on Microsoft Windows operating system, the health is categorized as:
 - Fail. The battery has failed due to any one of the following conditions – temperature alarm blown fuse, voltage out of spec, trickle overcharge, bad design voltage, corrupt capacity, bad cell, not charging.
 - Very Weak Battery. The battery is very weak due to deep discharge issues.
 - Weak Battery. The battery is weak due to deep discharge issues.
 - Calibrate Battery. The battery needs calibration.
 - Pass. The current state of the battery is functioning normally, but the battery replacement timeframe is a true indicator of the future state of the battery.
 - N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of enough data.
 - For devices on Android operating system, the health is categorized as (according to Android APIs):
 - Dead. Battery is dead.
 - Unspecified Failure. Battery is experiencing one or multiple unspecified failures.



- Cold. Battery is cold.
- Overheat. Battery is overheating.
- Over Voltage. Battery has a voltage above the design specs.
- Good. Battery is functioning normally.
- N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of enough data.
- For devices on macOS operating system, the health is categorized as:
 - Service Battery. According to macOS, the battery isn't functioning normally. You can safely use your Mac when it's connected to an appropriate power adapter, but you should take it to an macOS Store or macOS-authorized service provider as soon as possible.
 - Replace Now. According to macOS, the battery is functioning normally but holds significantly less charge than it did when it was new. You can safely continue using your computer, but if its lowered charging capacity is affecting your experience, you should take it to an macOS Store or macOS-authorized service provider.
 - Replace Soon. According to macOS, the battery is functioning normally but holds less charge than it did when it was new. You should monitor the health of the battery by checking the battery status menu periodically.
 - Normal: According to macOS, the battery is functioning normally.
 - N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of enough data.
- Battery Replacement Reason:
- Device Details
- Battery Serial Number. Serial number of the battery.
- Country. The country assigned to the device based on region & language settings.
- Battery Warranty Status. Warranty of the battery which is different than the device warranty. The battery warranty status is calculated based on the battery manufacture date and the battery warranty cycle (e.g., 6 months, 1 year, 2 years, 3 years). The Battery Warranty Status is only available for HP manufactured devices.
- CT Number. CT number of the battery. Only available for HP devices/batteries.
- Device Warranty Details
- [Location Level](#)

The details tab has a default sorting order of:

1. Battery Replacement Timeframe.
2. Device Name in ascending order.

Battery Usage Optimization Report

Understanding HP notebook batteries

HP Notebook batteries are of three main types

- **Cylindrical Batteries:** Mature technology typically used on larger form factors.
- **Prismatic Lithium-ion Batteries:** Metal cased prismatic cells used in standard systems where thin / light is not required.
- **Lithium-ion Polymer Battery:** Polymer cased cells used in the thinnest and lightest form factors due to its advantages in terms of size and weight. The PC industry is moving to Lithium Ion Polymer Batteries due to their advantages in terms of size and weight

Key factors that impact battery health for Lithium-ion Polymer batteries

Temperature exposure

Exposure to elevated temperatures can impact overall battery health

- Do not leave notebooks / batteries exposed to elevated temperatures for extended periods of time.
- Ensure notebook always has proper airflow and that none of the vents are blocked or obstructed in any way.
- For long term storage, store notebooks / batteries between 20°C and 25°C (68°F and 77°F) with an 80% - 90% battery charge.

Battery state-of-charge

Keeping your notebooks at a high state-of-charge can impact overall battery health.

- A battery is in a high state-of-charge when its charge capacity is between 90% - 100%.
- For those notebooks that are always left plugged in, optimum battery health can be achieved by maintaining the battery at a lower state-of-charge.
- To maintain the battery at a lower state-of-charge, customers can use the HP battery health management Settings to optimize battery performance based upon how the system is used most (only available on most 2016-2019 commercial notebooks).

For more information on how to optimize battery health and longevity, please visit: <https://support.hp.com/us-en/document/c01297640>

Battery Usage Optimization Report

The Battery Usage Optimization Report is an approach to advise its customers on the most optimized approach to use battery's by leveraging the following technique:

- Leverage **HP Battery Health Manager**. HP has introduced a new update to its HP [Battery Health Manager](#) utility on some platforms (or device models) for battery health optimization of HP batteries. HP Battery Health Manager is installed and configured based on a BIOS update. A complete list of the minimum BIOS update is available at <https://support.hp.com/us-en/document/c06179452> (Please check updated BHM – Min BIOS column for the latest set of minimum BIOS needed).

Optimum Battery Health Recommendations

For optimum battery health customers should enable the appropriate setting in the HP Battery Health Manager based upon their usage conditions and objectives. The HP Battery Health Manager:

- Provides intelligence that can better adjust battery charging based upon different usage models and exposure to temperature.
- It is the default setting on new HP platforms to let HP manage battery charging, removing all the guess work

for customers.

- Available on HP devices only (2016 and up)
- For supported HP platforms, minimum BIOS requirements, and access to this setting please visit <https://support.hp.com/us-en/document/c06465959>.

HP Battery Health Manager Settings

The HP Battery Health Manager provides the following settings to maximize battery health and optimization:

- **Let HP Manage My Battery Charging.** Use this setting to have the system dynamically change how it charges the battery based upon usage conditions and temperature overtime. This is the recommended setting to maximize battery health and optimization.
- **Maximize My Battery Health.** Use this setting if your customer's notebook is always plugged in to AC power. It limits the state of charge of the battery to 80% which optimizes battery health.
- **Maximize My Battery Duration.** Use this setting if your customer needs their battery to last as long as possible between charges. The battery charges to 100%, then stops charging.
 - a. **Not Enabled.** The Battery Health Manager setting is not enabled in the BIOS.

The HP Battery Health Manager is categorized as:

- **BIOS Up to Date.** This means that:
 - The device model can support HP Battery Health Manager and the BIOS is upgraded to the minimal BIOS version as described in <https://support.hp.com/us-en/document/c06179452>
- **BIOS Update Needed.** This means that:
 - The device model can support HP Battery Health Manager only after the BIOS is upgraded to at least a minimal BIOS version as described in <https://support.hp.com/us-en/document/c06179452>
- **Disabled – Not Activated.** This means that on consumer hardware platforms:
 - BIOS version that supports HP Battery Health Manager is up to date (i.e. no need for any BIOS update), but not yet enabled.
- **Enabled – Activated.** This means that on consumer hardware platforms:
 - BIOS version that supports HP Battery Health Manager is up to date (i.e. no need for any BIOS update) and enabled, and the battery health manager logic has started. This value is not set by the end user; rather the battery needs to meet certain conditions before the optimization can take effect.
- **Enabled – Not Activated.** This means that on consumer hardware platforms:
 - BIOS version that supports battery health manager is up to date (i.e. no need for any BIOS update) and enabled, and the battery health manager optimization logic has not started. Please note, even if the setting is set to enabled; it does not mean the optimization has started. This value is not set by the end user; rather the battery needs to meet certain conditions before the optimization can take effect.
- **N/A.** This means that:
 - The device model does not support HP Battery Health Manager. A complete list of device models supporting HP Battery Health Manager is available at <https://support.hp.com/us-en/document/c06179452>

Battery Usage Optimization Report:

- Only shows devices that are classified with device type as Notebook in HP TechPulse.
- It is available for HP devices only.
- It is available for devices on Microsoft Windows operating system.



- Leverages HP proprietary battery data attributes and HP Battery Health Manager (BHM) settings to help improve battery health, longevity, and performance.
- Includes the following tabs: Summary, By Model, By Warranty, and Details.

Summary tab

Devices by BHM

No. of Devices by various HP Battery Health Manager categories.

The visualization includes:

- X-axis: HP Battery Health Manager Categories
- Y-axis: No. of Devices.
- Color by: HP Battery Health Manager.

BIOS Up to Date

The doughnut chart represents only the BIOS Up to Date bar (green) data from the Devices by BHM chart.

Refer to the [Battery Manager Settings](#) section for information on each of the settings.

By Model tab

Devices by BHM

No. of Devices by various HP Battery Health Manager categories by device models.

The visualization includes:

- X-axis: Device Model.
- Y-axis: No. of Devices.
- Color by: HP Battery Health Manager.

The visualization is sorted by device models with the greatest to lowest number of devices in ascending order.

BIOS Up to Date

Number of devices by BHM Settings by device models. Refer to the [Battery Manager Settings](#) section for information on each of the settings.

By Warranty tab

Devices by BHM

No. of Devices by various HP Battery Health Manager categories by device warranty.

The visualization includes:

- b. X-axis: Battery Warranty.
- c. Y-axis: No. of Devices.

Color by: HP Battery Health Manager.

BIOS Up to Date

Number of devices by BHM Settings by device warranty. Refer to the [Battery Manager Settings](#) section for information on each of the settings.

Details tab

The Details tab provides additional data attributes of device, HP Battery Health Manager, and BIOS settings.

- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device. Clicking on the serial number hyperlink allows navigation to the device details page.



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- Device Model. Model of the device.
- Platform ID. The platform ID associated with the device model.
- Manufacture Year. Manufacture year of the device. The device manufacture date is only available for HP devices.
- Last Seen. Last online date of the device.
- Battery Serial Number. Serial number of the battery.
- CT Number. CT number of the battery. Only available for HP devices/batteries.
- BHM. The HP Battery Health Manager categories.
- [BHM Settings](#). The HP Battery Health Manager settings.
- Installed BIOS Version. The version of BIOS installed on the device.
- Latest BIOS Version. The latest BIOS version required to enable HP Battery Health Manager on the device.
- Softpaq Number. The Softpaq number of the latest BIOS version required to enable HP battery health manager on the device.
- Device Warranty Details
- Battery Warranty Status. Warranty of the battery which is different than the device warranty. The battery warranty status is calculated based on the battery manufacture date and the battery warranty cycle (e.g., 6 months, 1 year, 2 years, 3 years). The Battery Warranty Status is only available for HP manufactured devices.
- Location Description. The asset location of the device.
- Country (hidden). The country associated with the device.
- [Location Level](#)

BHM BIOS Updates tab

The BHM BIOS Updates tab provides the following for each device model:

- Softpaq Number: Link to the latest BIOS version required to enable the HP battery health manager on the device.
- Softpaq Release Notes: Link to the release notes for the latest BIOS version that can be installed on this device.

Blue Screen Error Reports

The Blue Screen Errors reports provide information on devices experiencing blue screen and driver crashes for enrolled devices. There are three reports for blue screen errors – Details, Top Devices with Errors and Top Errors.

Blue Screen Errors – Details Report

The Blue Screen Errors, Details report:

- Provides detailed information on devices experiencing blue screen errors (i.e. blue screen error code, description, Microsoft knowledge base (KB) article, driver, and driver version (if any) causing the blue screen error) in a tabular format.
- Is available for both HP and non- HP devices.
- Is available for Microsoft Windows operating system. Includes the following tabs: Details.

Details tab

The Details tab provides detailed information on devices and blue screen errors in a tabular format.

- Date Occurred. The date the blue screen error occurred on the device
- Device Details
- Operating System. Operating system and operation system release version at the time of blue screen error.
- Last Seen. Last online date of the device.
- Bug Check Code. The bug check code of the blue screen error. Clicking on the bug check code hyperlink allows navigation to the Microsoft knowledge base (KB) article.
- Bug Check Description. The friendly name of the bug check code as provided byMicrosoft.
- Driver. The driver causing the blue screen error.
- Driver Version. The version of the driver.
- Country. The country assigned to the device based on region & language settings.

The Details tab is sorted based on:

1. Date Occurred in descending order, followed by
2. Device Name in ascending order.

Blue Screen Errors - Top Devices with Errors Report

The Blue Screen Errors, Top Devices with Errors report:

- Provides a monthly break down of the top devices experiencing blue screen errors.
- Provides information on blue screen error code, description, Microsoft knowledge base (KB) article, driver (if any) causing the blue screen error.
- Is available for both HP and non- HP devices.
- Is available for Microsoft Windows operating system.
- Includes the following tabs: Summary, and Details.

Summary tab

The summary tab visualization shows a monthly break of the top devices experiencing blue screen errors. The visualization includes:

- X-axis: Device Name.
- Y-axis: The number of Blue Screen Errors.
- Color by: Month.

The visualization is sorted based on the devices experiencing the greatest number of blue screen errors.

Details tab

The Details tab provides information on device experiencing blue screen errors in a tabular format.

- Device Details
- Month.
- Bug Check Code. The bug check code of the blue screen error. Clicking on the bug check code, a hyperlink allows navigation to the Microsoft knowledge base (KB) article.
- Bug Check Description.
- Driver. The driver causing the blue screen error. The number of Blue Screen Errors

Blue Screen Errors - Top Errors Report

The Blue Screen Errors Top Errors report:

- Provides a monthly break down of number of blue screen errors and number of unique devices experiencing blue screen errors.
- Provides information on blue screen error codes, descriptions, KB article links and drivers (if any) causing blue screen errors.
- Is available for both HP and non- HP devices.
- Is available for Microsoft Windows operating system.
- Includes the following tabs: Monthly Summary, Weekly Summary, Errors Summary, and Details.

Monthly Summary tab

The monthly summary tab visualizations show a monthly break down of number of blue screen errors and No. of Devices experiencing blue screen errors.

The visualization includes:

- X-axis: Month.
- Y-axis: The number of Blue Screen Errors and No. of Devices.
- Color by: The number of Blue Screen Errors and No. of Devices.

The visualization is sorted based on the earliest to latest month (from left to right).

Weekly Summary tab

The weekly summary tab visualizations show a weekly break down of number of blue screen errors and No. of Devices experiencing blue screen errors, as well as the list of errors by weeks together with the weekly dynamics of No. of Errors over time.

The weekly Errors Over Time visualization includes:

- X-axis: Week.
- Y-axis: The number of Blue Screen Errors.
- Color by: The number of Blue Screen Errors and No. of Devices.

The visualization is sorted based on the earliest to latest week (from left to right).

The Errors by Week visualization includes:

- The list of Blue Screen Errors and the number of those errors occurred in the last week.
- Mini charts showing the change of No. of Errors per week per each error.

The table is sorted by the error name in alphabetical order.

Errors Summary tab

The errors summary tab visualizations show a monthly breakdown of top blue screen error description (i.e. bug check description).

Number of Blue Screen Errors

The number of blue screen errors visualization shows a monthly break down of the number of blue screen errors by top blue screen error description (i.e., bug check description).

The visualization includes:

- X-axis: The number of Blue Screen Errors.
- Y-axis: Bug Check Description.
- Color by: Month.

No. of Devices

No. of Devices visualization shows a monthly break down of No. of Devices by top blue screen error description (i.e. bug check description).

The visualization includes:

- X-axis: No. of Devices.
- Y-axis: Bug Check Description.
- Color by: Month.

Drivers Summary tab

The driver summary tab visualizations show a monthly breakdown of top drivers causing blue screen errors.

Number of Blue Screen Errors

The number of blue screen errors visualization shows a monthly break down of the number of blue screen errors by top drivers causing blue screen errors.

The visualization includes:

- X-axis: The number of Blue Screen Errors.
- Y-axis: Driver.
- Color by: Month.

No. of Devices

No. of Devices visualization shows a monthly break down of No. of Devices by top drivers causing blue screen errors.

The visualization includes:

- X-axis: No. of Devices.
- Y-axis: Driver.
- Color by: Month.

Details tab

The Details tab provides information on device experiencing blue screen errors in a tabular format.

- Bug Check Code. The bug check code of the blue screen error. Clicking on the bug check code, r hyperlink allows navigation to the Microsoft knowledge base (KB) article.
- Bug Check Description.
- Month.
- Driver. The driver causing the blue screen error.
- Operating System. Major operating system along with the version information. The operating system feature release information is shown for Microsoft Windows 10 operatingsystem.
- Serial Number. Serial number of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- No. of Errors.
- [Location Level](#)

Component Inventory – Display

The Display report:

- Provides information on display inventory, health, and usage.
- Provides trend usage of number of devices compared to the number of displays that are detected each month.
- Provides number of days detected per display.
- Is applicable to HP and non-HP devices.
- Is applicable for all roles.
- Includes the following tabs: Overview, By Model, By Manufacturer, By Type, Details

Overview tab

Display Inventory

The donut chart shows the number of devices compared to the number of detected displays for each device manufacturer.

Clicking on any section of the donut chart results in a tabular grid view.

Single and Multiple Display Usage

The donut chart shows the percentage of number of devices that use a particular number of detected displays for the last six months.

Clicking on any section of the donut chart results in a tabular grid view.



Current Device and Display Inventory

The chart shows the current standing of the number of devices compared to the number of detected displays for each type of device (notebook and desktop).

Monthly Summary

The chart shows the trend of number of devices compared to the number of detected displays by month (for the last six months).

The visualization includes:

- X-axis: Month
- Y-axis: Number of devices in comparison to the number of detected displays
- Color by: Number of devices and number of detected displays

By Model tab

The grid view shows the number of devices compared to the number of detected displays for each display model.

By Manufacturer tab

The grid view shows the number of devices compared to the number of detected displays for each device manufacturer.

By Device tab

The grid view shows the number of devices compared to the number of detected displays for each device model.

Details tab

The Details tab provides additional information of device and display:

- Last Signed-In User: Last user logged into the device
- Device Details
- Component (Display)
- Detected Status: Latest connection status of the display.
- Display Manufacturer: Name of the display manufacturer.
- Display Serial Number
- Display Model Name: Actual name of display
- Display Status: Display health status.
- Month: Month when the display was last detected.
- Location Level

Device Utilization Reports

The Device Utilization report:

- Provides information on devices that have high CPU and memory utilization.
- Provides information on software applications causing high CPU and memory utilization.
- Is applicable to HP and non-HP devices.
- Is applicable to devices that have Microsoft Windows and macOS operating systems.

High CPU utilization

Since each processor and processor parameter have their own characteristics and thresholds, it is difficult to allow users to set their own thresholds for each of these parameters.

To simplify, assume that HP TechPulse leverages central processing unit (CPU) time to categorize a device as overutilized, underutilized, normal, or having an unknown status. The CPU time equals the amount of time a CPU processes instruction for a computer program or operating system. The CPU time is measured in clock ticks or seconds; however, it is often useful to measure and indicate CPU time as a percentage of the CPU's capacity, which is called CPU usage.

CPU time and CPU usage have two main uses. The first use is to quantify the overall busyness of the device. When the CPU usage is above a certain threshold, the user may experience a lag. Such high CPU usage indicates insufficient processing power, and in this case, either the CPU needs to be upgraded, or the user time is reduced. The second use is to quantify how the processor is shared between applications running on the device. High CPU usage by a single application may indicate that it is highly demanding of the processing power or that it may malfunction.

The best representation of device CPU time requires that HP TechPulse with TechPulse collects data samples every second across many processor parameters. However, this is not practical, because the primary usage of a device is not for data sampling, but to enable the user to perform business productivity tasks, while collecting just enough data samples to categorize the device as overutilized, underutilized, normal or unknown. HP TechPulse collects data every minute and then aggregates it to an hour based on simple statistical methods like mean, median, etc. Depending on the amount of time a device is turned on during a twenty-four-hour period, HP TechPulse can have up to a maximum of twenty-four aggregated samples in each day.

HP TechPulse categorizes a device as:

- Overutilized = the average CPU usage of 50% or more for one hour.
 - a. Overutilized for the day is if 25% or more of the total online hours for that day the device was in the overutilized range.
 - b. Overutilized for the month is if 25% or more of the total online hours for that month the device was in the overutilized range.
- Normal = the average CPU usage is between 20-50 percent for one hour and all other aggregation periods are underutilized.
 - a. Normal for the day is if 25% or more of the total online hours for that day the device was in the normal range and all others are underutilized.
 - b. Normal for the month is if 25% of the total online hours for that month the device was in the normal range and all others are underutilized.
- Underutilized, if on a given day, the average CPU usage is between 0-20 percent for all aggregation periods
- Unknown, if on a given day, there is no data for all aggregation periods.

High memory utilization

HP TechPulse correlates data across many memory parameters to categorize a device as overutilized, underutilized, normal, or unknown based on memory usage data spanning multiple days. Since each memory type and memory parameter has their own characteristics and thresholds, it is difficult to allow users to set their own thresholds for each of these parameters.

To simplify, assume that HP TechPulse leverages memory percent to categorize a device as overutilized, underutilized, normal, or unknown.

HP TechPulse with TechPulse categorizes a device as:

- Overutilized, if on a given day, the average memory percent is more than 85 percent for at least one aggregation period.
- Normal, if on a given day, the average memory percent is between 50-85 percent for at least one aggregation period and all other aggregation periods are underutilized.
- Underutilized, if on a given day, the average memory usage is between 0-50 percent for all aggregation periods.
- Unknown, if on a given day, there is no data for all aggregation periods.

Software Performance by Applications Report

This report includes the following tabs: Summary, By Manufacturer Year, Windows Software Performance, Mac OS Software Performance, and Details.

Summary tab

The Summary tab shows CPU Utilization Summary and Memory Utilization Summary visualizations.

CPU Utilization Summary

- No. of Devices by CPU utilization.

Memory Utilization Summary

- No. of Devices by Memory utilization.

By Manufacture Year tab

The By Manufacture Year tab shows a visualization each for No. of Devices by CPU utilization and memory utilization by device manufacturer year. The device manufacture year is only available for HP devices.

CPU Utilization by Device Manufacture Year

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: CPU Utilization.

The visualization is sorted by device manufacture year in ascending order.

Memory Utilization by Device Manufacture Year

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: Memory Utilization.

The visualization is sorted by device manufacture year in ascending order.

Software Performance tab (There are separate tabs for Windows and macOS)

The Software Performance tab shows a visualization for the top-25 software applications by high CPU utilization and high memory utilization for over utilized devices.

Applications Causing CPU Overutilization

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices experiencing CPU overutilization because of the software application.

The visualization is sorted by the software application causing highest percentage of device CPU overutilization to the lowest.

Applications Casing Memory Overutilization

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices experiencing Memory overutilization because of the software application.

The visualization is sorted by the software application causing highest percentage of device memory overutilization to the lowest.

Details tab

The Details tab provides information on devices with their CPU and memory utilization details in a tabular format.

- [Device Details](#)
- Processor. The processor found on the device.
- Memory. The memory found on the device.
- Maximum Allowable Memory Capacity. The maximum allowable memory on the device. Comparing Memory found on the device to Maximum Allowable Memory Capacity allows expansion of memory on devices with overutilized memory. For example, if a device has high memory utilization and the Memory on the device is 8 GB and the Maximum Allowable Memory Capacity is 32 GB, then the memory on the device can be expanded by an additional 16 GB.
- CPU Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
- Memory Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
- No. of Hours.
- Month. The month in which the CPU and memory utilization is reported.
- No. of Overutilized Hours (CPU)
- No. of Overutilized Hours (Memory)
- Apps causing High CPU Usage. The names of up to five software applications causing high CPU utilization.
Note: Software applications that are not present in the top-25 applications listed in the Applications Causing CPU Overutilization visualization are also shown.
- Apps causing High Memory Usage. The names of up to five software applications causing high memory utilization.
Note: Software applications that are not present in the top-25 applications listed in the Applications Causing Memory Overutilization visualization are also shown.
- No. of Normal Hours (CPU)
- No. of Underutilized Hours (CPU)



- No. of Normal Hours (Memory)
- No. of Underutilized Hours (Memory)
- [Location Level](#)

The Details tab has a default sorting order of:

1. CPU Utilization and Memory Utilization.
2. Devices with both over utilized CPU and Memory are shown first, followed by
3. Devices with over utilized CPU, followed by
4. Devices with over utilized CPU, followed by
5. Devices with both normal CPU and Memory utilization, followed by
6. Devices with normal CPU and Memory utilization etc., followed by
7. Device Name in ascending order.

Software Performance By Applications (Utilization Bins) Report

The CPU and memory utilizations are shown in a more granular fashion as follows.

To show the CPU and memory utilization bins, average CPU and memory utilization for a device is calculated and categorized into bins as follows.

- 0-10
- 10-20
- 20-30
- 30-40
- 40-50
- 50-60
- 60-70
- 70-80
- 80-90
- 90-100
- Unknown

This report includes the following tabs: Summary, By Manufacturer Year, Windows Software Performance, Mac OS Software Performance, and Details.

Summary tab

The Summary tab shows CPU Utilization Summary and Memory Utilization Summary visualizations.

CPU Utilization Summary

No. of Devices by CPU utilization bins.

Memory Utilization Summary

No. of Devices by Memory utilization bins.

By Manufacture Year tab

The By Manufacture Year tab shows a visualization each for No. of Devices by CPU utilization bins and memory utilization bins by device manufacturer year. The device manufacture year is only available for HP devices.

CPU Utilization by Device Manufacture Year

The visualization includes:



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- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: CPU Utilization bins.

The visualization is sorted by device manufacture year in ascending order.

Memory Utilization by Device Manufacture Year

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: Memory Utilization bins.

The visualization is sorted by device manufacture year in ascending order.

Software Performance tab (There are separate tabs for Windows and macOS)

The Software Performance tab shows a visualization for the top-25 software applications by high CPU usage and high memory usage for all devices.

Applications Causing High CPU Usage

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices experiencing high CPU usage because of the software application.

The visualization is sorted by the software application causing highest percentage of device CPU usage to the lowest.

Applications Casing High Memory Usage

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices experiencing high Memory usage because of the software application.

The visualization is sorted by the software application causing highest percentage of device memory usage to the lowest.

Details tab

The Details tab provides information on devices with their CPU and memory utilization details in a tabular format.

- [Device Details](#)
- Processor. The processor found on the device.
- Memory. The memory found on the device.
- Maximum Allowable Memory Capacity. The maximum allowable memory on the device. Comparing Memory found on the device to Maximum Allowable Memory Capacity allows expansion of memory on devices with overutilized memory. For example, if a device has high memory utilization and the Memory on the device is 8 GB and the Maximum Allowable Memory Capacity is 32 GB, then the memory on the device can be expanded by an additional 16 GB.
- Avg CPU Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
- Avg CPU Utilization Bin.
- Avg Memory Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
- Avg Memory Utilization Bin
- Month. The month in which the average CPU and memory utilization is reported.



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- Apps causing High CPU Usage. The names of up to five software applications causing high CPU utilization.
Note: Software applications that are not present in the top-25 applications listed in the Applications Causing CPU Overutilization visualization are also shown.
- Apps causing High Memory Usage. The names of up to five software applications causing high memory utilization.
Note: Software applications that are not present in the top-25 applications listed in the Applications Causing Memory Overutilization visualization are also shown.
- [Location Level](#)

The details tab has a default sorting order of:

1. Avg CPU Utilization Bin in descending order, followed by
2. Avg Memory Utilization Bin in descending order, followed by
3. Device Name in ascending order.

Software Performance By Time Report

This report includes the following tabs: Summary, By Hour, By Day, and Details.

Summary tab

The Summary tab shows CPU Utilization Summary and Memory Utilization Summary visualizations by month.

CPU Utilization Summary

- No. of Hours by CPU utilization.

Memory Utilization Summary

- No. of Hours by Memory utilization.

By Hour tab

The By Hour tab shows visualizations for CPU Utilization and Memory Utilization by hour of the day.

CPU Utilization Summary

- No. of Hours by CPU utilization.

Memory Utilization Summary

- No. of Hours by Memory utilization.

By Day tab

The By Day tab shows visualizations for CPU Utilization and Memory Utilization by weekday.

CPU Utilization Summary

- No. of Hours CPU utilization.

Memory Utilization Summary

- No. of Hours Memory utilization.

Details tab

Same as Software Performance By Applications report.

All Data - Software Performance by Applications Report

This report option contains the Details tab from the Software Performance by Applications report.

All Data - Software Performance by Applications (Utilization Bins) Report

This report option contains the Details tab from the Software Performance by Applications report.

Disk Capacity Planning Report

The Disk Capacity Planning report:

- Forecasts ahead the time duration left prior to the disk space reaching a predetermined threshold. The thresholds are selectable in the report filters and defined as 0-10%, 0-20%, 0-30%, 0-40% and 0-50%.
- Uses data for last 3-6 months to determine the time left before the disk capacity will reach the threshold set in the report filter. The top-level categorizations for Disk Space Status are as follows:
 - a. Immediate. The remaining disk space has reached the threshold
 - b. Within 1 month. The disk space will reach the threshold within 1 month
 - c. Within 2 months. The disk space will reach the threshold within 2 months
 - d. Within 3 months. The disk space will reach the threshold within 3 months
 - e. OK. The disk space may be OK for at least the next 1, 2, or 3 months depending on the information in the Additional Status column
 - f. N/A. The disk space is OK for now, but there is not enough data to forecast ahead the time duration left prior to the disk space reaching the threshold.
- Is available for HP and non-HP devices.
- Is applicable to all devices that have Android, macOS, and Microsoft Windows operating system.
Note: macOS is only available in the Proactive Endpoint Management plan.

Summary tab

The number of disks by disk space status.

By Disk Size

The number of disks by disk size and by disk space status. The disk size is categorized as:

- 2 GB – Disk size between 0- 2 GB.
- 4 GB – Disk size between 2-4 GB.
- 8 GB – Disk size between 4-8 GB.
- 16 GB – Disk size between 8-16 GB.
- 32 GB – Disk size between 16-32 GB.
- 64 GB – Disk size between 32-64 GB.
- 128 GB – Disk size between 64-128 GB.
- 256 GB – Disk size between 128-256 GB.
- 500 GB – Disk size between 256-512 GB.
- 1 TB – Disk size between 512-1024 GB.
- 2 TB – Disk size between 1024-2048 GB.
- 4 TB – Disk size between 2048-4096 GB.
- 8 TB – Disk size between 4096-8192 GB.
- 12 TB – Disk size between 8192-12,228 GB.
- More than 12 TB – Disk size more than 12,228 GB.

The visualization includes:

- X-axis: Disk Size.
- Y-axis: No. of Devices.
- Color by: Disk Capacity Status.

By Disk Model

The By Disk Model tab provides information on disk space status by disk model and includes:

- Disk Space Status.
- Additional Status.
- Disk Capacity.
- Disk Model. The model of the disk. The number of Disks.

Details tab

The Details tab provides additional information on device, disk parameters and disk space status.

- Disk Space Status.
- Additional Status.
- Disk Capacity. The Disk Size category.
- Device Details
- Disk Serial Number. Serial number of the disk.
- Disk Model. The model of the disk
- Disk Capacity (GB). The raw capacity of the disk.
- Disk Used (GB). The amount of space used on the disk.
- Free Space (GB). The raw free disk space.
- Free Space. The raw free disk space categorized as:
 - Less than 2 GB
 - 2-4 GB
 - 4-8 GB
 - 8-16 GB
 - 16-32 GB
 - 32-64 GB
 - 64-128 GB
 - 128-256 GB
 - 256-500 GB
 - 500 GB - TB
 - 1-2 TB
 - 2-4 TB

- 4-8 TB
- 8-12 TB
- More than 12 TB Disk Firmware Version.
- [Location Level](#)

The details tab has a default sorting order of:

1. Disk Space Status in ascending order, followed by,
2. Disk Capacity in descending order, followed by,
3. Device Name in ascending order.

Disk Replacement Report

The Disk Replacement report provides information on disk replacement recommendation timeframes of enrolled devices.

The disk replacement report:

- Only includes devices that are classified as Desktop and Notebook in HP TechPulse and is available for both HP and non-HP devices
- Is available for devices on Android, macOS and Microsoft Windows operating system.
- Only recommends disk replacement timeframe for hard disk drives (HDD) and solid-state devices (SSD) on Microsoft Windows operating system.
- Leverages many S.M.A.R.T parameters and a predictive model to predict the life of the disk and provide the disk replacement recommendation timeframe for devices on Microsoft Windows operating system.
- Leverages Android and macOS API's to indicate the health of the disk and provide the disk replacement recommendation timeframe.
- Includes the following tabs: Summary, By Disk Size, By Device Manufacturer, By Manufacture Year, and Details.

For devices on Microsoft Windows operating system, the recommended disk replacement timeframe is categorized as:

- Needs Action. The disk requires replacement.
- Early Detection. The disk requires replacement in one month.
- Firmware Update Needed: Disk requires a firmware update.
- OK. Disk is not expected to require replacement in the next month.
- N/A. Unable to determine if a disk needs replacement. This can happen if HP TechPulse is unable to determine the health of the disk due to lack of data.

For devices on Android operating system, the recommended disk replacement timeframe is categorized as:

- Needs Action. The storage media is present but cannot be mounted or if the storage media is present but is blank or using an unsupported file system.
- OK. The disk is functioning normally.
- N/A. Unable to determine if a disk needs replacement. This can happen if HP TechPulse is unable to determine the health of the disk at present due to lack of data.

For devices on macOS, the recommended disk replacement timeframe is categorized as:

- Needs Action. Disk is in About to fail status based on S.M.A.R.T attributes

- OK. The disk is functioning normally.
- N/A. Unable to determine if a disk needs replacement. This can happen if HP TechPulse is unable to determine the health of the disk at present due to either lack of data or the disk is not supported.

Summary tab

The Summary tab shows Disk Replacement Summary and Disk Replacement Summary by Warranty visualizations.

Disk Replacement Summary

No. of Devices by various disk replacement timeframe categories.

Disk Replacement Summary by Warranty

No. of Devices by various disk replacement timeframe categories by device warranty status categories. The device warranty status provides a combined overall status of all warranty and/or care pack of a device as a singular value, categorized as:

- In warranty. The device has an active warranty and/or carepack.
- Out of warranty. The device does not have any active warranty and/or care packs.
- Not applicable. The device is not a HP manufactured device.
- Unknown. Unable to determine if the HP device has warranty and/or care packs.

Note: The device warranty and care pack information are only available for HP devices.

The visualization includes:

- X-axis: Disk Replacement Timeframe.
- Y-axis: No. of Devices.
- Color by: Device Warranty Status.

By Disk Size tab

The By Disk Size tab shows Devices by Disk Size and Disk Replacement Summary by Disk Size charts.

Devices by Disk Size

No. of Devices by various disk size categorizations. The disks are categorized as:

- 2 GB – Disk size between 0- 2 GB.
- 4 GB – Disk size between 2-4 GB.
- 8 GB – Disk size between 4-8 GB.
- 16 GB – Disk size between 8-16 GB.
- 32 GB – Disk size between 16-32 GB.
- 64 GB – Disk size between 32-64 GB.
- 128 GB – Disk size between 64-128 GB.
- 256 GB – Disk size between 128-256 GB.
- 500 GB – Disk size between 256-512 GB.
- 1 TB – Disk size between 512-1024 GB.
- 2 TB – Disk size between 1024-2048 GB.
- 4 TB – Disk size between 2048-4096 GB.
- 8 TB – Disk size between 4096-8192 GB.
- 12 TB – Disk size between 8192-12,228 GB.



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- More than 12 TB – Disk size more than 12,228 GB.

The visualization includes:

- X-axis: Disk Size.
- Y-axis: No. of Devices.

Disk Replacement Summary by Disk Size

No. of Devices by various disk size by various disk replacement timeframe.

The visualization includes:

- X-axis: Disk Size.
- Y-axis: No. of Devices.
- Color by: Disk replacement timeframe.

By Device Manufacturer tab

No. of Devices by various disk replacement timeframe categories by device manufacturer.

The visualization includes:

- X-axis: Disk Replacement Timeframe.
- Y-axis: No. of Devices.
- Color by: Device Manufacturer.

By Manufacture Year tab

No. of Devices by various disk replacement categorizations by device manufacturer year. The device manufacture year is only available for HP devices.

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: Disk Replacement Timeframe.

The visualization is sorted by device manufacture year in ascending order.

Details tab

The Details tab provides additional data attributes of device and disk parameters and replacement recommendations.

- Disk Replacement Timeframe.
- [Device Details](#)
- Disk Serial Number. Serial number of the disk.
- Drive Type. The type of the drive
- Disk Model. The model of the disk
- Disk Size. The raw capacity of the disk.
- Disk Capacity (GB). The capacity of the disk categorized as 1 TB, 256 GB, 512 MB etc.
- Disk Firmware Version.
- Current Disk Status. The current state of the health of the disk.

For HP devices on Microsoft Windows operating system, the health is categorized as:



- Low Disk Space. The local disk is running out of disk space.
- Mounted. Storage media is present and mounted at its mount point.
- Normal. Current state of the disk is functioning normally.
- Predicted Failure. Disk is going to fail soon and needs to be backed up and replaced
- Unknown. Unable to determine the health of the disk. This can happen if HP TechPulse is unable to determine the health of the disk due to lack of sufficient data.
- Unmountable. Storage media for devices on Android operating system, the health is categorized as (according to Android APIs):
 - is present but cannot be mounted
 - NOFS. Storage media is present but is blank or is using an unsupported filesystem (or is blank).
 - Removed. Storage Media is removed.
 - Unmounted. Storage media is present, but not mounted at its mount point.
 - Checking. Storage media is present and being disk-checked.
 - Mounted. Storage media is present and mounted at its mount point.
 - Shared. Storage media is unmounted because it is being shared via USB mass storage.
 - Bad Removal. External media was removed from SD card slot, but mount point was not unmounted.
 - Eject. User has expressed the desire to remove the external storage media. Applications should close all files they have open within the mount point when they receive this intent.
 - N/A. Unable to determine the health of the disk. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of enough data.

For devices on macOS operating system, the health is categorized as:

- About to Fail. According to macOS, the S.M.A.R.T. Status on the macOS device says “Failing” and the drive urgently needs to be backed up and replaced. If the user sees any message stating the disk has a fatal hardware error or problem, the drive is also going to fail soon and needs to be backed up and replaced ASAP.
- Verified. According to macOS, the SMART Status on the macOS says “Verified” the drive is in good health and functioning properly
- Not supported. According to macOS, the disk is not supported.
- N/A. Unable to determine if a battery needs replacement. This can happen if HP TechPulse is unable to determine the health of the battery at present due to lack of enough data.

- Disk Replacement Reason
- [Country](#). The country assigned to the device based on region & language settings.
- [Device Warranty Details](#)
- [Location Level](#)

The details tab has a default sorting order of:

- Disk Replacement Timeframe, followed by,
- Device Name in ascending order.

GPU Health/Performance Report

The report:

- Provides information on the devices experiencing GPU health and performance issues that require graphic driver updates.
- Provides reasons for those issues and the suggested remediation steps.
- Provides the health category for each device, which helps prioritize resolving the issues.
- Is available for all roles.
- Includes the following tabs: By Week, Details

Device Health Category

- **Immediate attention required:** A critical issue is present, or two lesser issues are present simultaneously.
To keep your fleet of devices healthy and minimize any performance issues that may impact productivity, we recommend that you act based on the suggestions.
- **Consider resolving detected issues:** Some issue is present.
If you detect any graphics related performance issue on the device, we recommend that you act based on the suggestions.
- **No actions required:** No issue is present.

Note: If you resolve the issue on the device (such as updating the drivers), it might take up to 10 days to synchronize the health data for the device on the report.

By Week tab

Devices by Health Category (area chart)

Number of devices by week (for last 12 weeks) for different device health categories.

The visualization includes:

- X-axis: Week (for last 12 weeks)
- Y-axis: Number of Devices
- Color by: [Health Category](#)

Clicking on any health category section of the chart results in a drill-down view comprising all the device models from the selected health category for the latest week only.

Bar chart

A bar chart sorted by the number of devices for each device model in the selected health category.

Clicking on any device model section of the bar chart brings up the Details tab pre-filtered to contain only that model for the selected health category.

Details tab

The Details tab provides detailed information on devices for the latest full week:

- [Device Details](#)
- Operating System
- Last Seen. Last online date of the device.
- Device OS



- Device OS Release
- Device OS Version
- Installed Graphics Cards
- Last Time Card was Replaced: Shows when a card was replaced or upgraded, and which cards were changed in the latest 3 weeks of available data for a device. Note there may be multiple values if card was replaced or upgraded more than once.
- N/A: If the card was never replaced in the latest 3 weeks of available data for a device.
- Week
- [Device Health Category](#)
- Problems Detected
- Suggested Solutions
- [Location Level](#)

The Details tab is sorted based on:

1. Device Health Category
2. Device Name in ascending order.

Hardware Health Monthly Summary Report

The Hardware Health report shows a monthly trend of suboptimal devices as unhealthy and facilitates drilling down to identify devices failing to meet individual performance metrics.

The following rules classify unhealthy devices with respect to performance metrics during a given month.

Performance Metrics	Criteria for unhealthy device
Battery Health	Battery replacement recommendations for 10% of the time or Battery Recall status at any time
Blue Screen Errors	At least one blue screen error
CPU Utilization	High CPU utilization for 25% of the time
Disk Health	Disk replacement recommendations for 10% of the time
Graphics health	Graphics failures for 10% of the time
Memory Utilization	High memory utilization for 25% of the time
Thermal Health	Thermal issues for 10% of the time
Storage Space	Less than 10% free space for 10% of the time

The overall health summary for a device is then categorized as:

- Healthy. If all the performance metrics of a device are classified as Healthy.
- Unhealthy. If any one of the performance metrics of a device are classified as Unhealthy.
- Unknown. Unable to determine the health of the device.

The Hardware Health Monthly Summary report:

- Provides an overall health summary for a device in any given month.
- Is available for HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating systems.
Note: macOS is only available in the Proactive Endpoint Management plan.
- Includes the following tabs: Health Summary, Resource User Guide and Details.

The table below shows applicability of different performance metrics across various operating systems.

Performance Metrics	Microsoft Windows 10	Android	macOS
Battery Health	✓	✓	✓
Blue Screen Errors	✓		
CPU Utilization	✓		
Disk Health	✓	✓	✓
Graphics health	✓		
Memory Utilization	✓		
Thermal Health	✓		✓
Storage Space	✓	✓	✓

Health Summary tab

No. of Devices by overall health summary by month.

The visualization includes:

- X-axis: Month.
- Y-axis: No. of Devices.
- Color by: Health Summary.

The chart is sorted based on Months in ascending order.

Resource Health Summary tab

The resource health summary tab includes a visualization each for each performance metrics.

The visualization includes a:

- X-axis: Month.
- Y-axis: No. of Devices.
- Color by: Health (i.e. health of each performance metric) The visualization is sorted based on Month in ascending order.

Details tab

The Details tab provides information on details of the device experiencing health issues.

- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device.
- Month.
- Health Summary. The overall health summary for a device in a given month.
- Performance Metrics. The list of performance metrics that are affected. Multiple values are comma separated.
- Resource Health Details. Details about the performance metrics that are affected. If Performance Metrics column indicates:



- Battery Health, then the column will show battery health replacement timeframe, and the battery serial number.
 - Blue Screen Errors, then the column will show the number of blue screen errors.
 - CPU Utilization, then the column will show processor information.
 - Disk Health, then the column will show disk health replacement timeframe, the disk serial number, total capacity, and free capacity on the disk.
 - Graphics Health, then the column will show graphics information.
 - Memory Utilization, then the column will show current memory the maximum memory allowable information.
 - Thermal Health, then the column will show thermal health.
 - Storage Space, then the column will show the disk serial number, total capacity, and free capacity on the disk.
- Device Details
 - Device Warranty Details
 - [Location Level](#)

Hardware Inventory Reports

The hardware inventory reports provide detail information on the hardware information of enrolled devices and includes the following reports – All Data, Details, Device Enrolment Summary, and Monthly Summary.

Hardware Inventory – All Data Report

The Hardware Inventory All Data report:

- Allows the ability to filter on all available hardware inventory fields.
- Includes the following tab: Details.

Hardware Inventory - Details Report

The Hardware Inventory Details report:

- Includes devices across all device manufacturer's and operating systems.
- Includes the following tabs: By Location, By Device Configuration, By Operating System, and Details.

By Location tab

No. of Devices by device country (i.e. the country assigned to the devices based on region and language settings) displayed on a world map. The world map is a heat map where-in the countries with most devices have a darker color as opposed to the countries with the least devices that have a lighter color.

By Device Configuration tab

The By Device Configuration tab shows By Device Type, By Device Manufacturer and By Manufacture Year visualizations.

By Device Type

No. of Devices by various device types (i.e., Notebook, Desktop, Tablet, Smartphone etc.).

By Device Manufacturer

No. of Devices by various device manufacturer. The visualization is sorted by device manufacturers with the most No. of Devices to the least.

The visualization includes:

- X-axis: Device Manufacturer.
- Y-axis: No. of Devices.
- Color by: Device Manufacturer.

By Manufacture Year

No. of Devices by device manufacture year. The device manufacture year is only available for HP devices. The visualization is sorted by device manufacturer year from the earliest to the latest.

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.

By Operating System tab

No. of Devices by operating system. This is a drill down visualization and at the top level, the devices are categorized by major operating systems like Windows 10, Android 8, Android 9, IOS 10, IOS 11, MAC 10 etc. Clicking on any section in the visualization, results in a drill down to operating system release information. For Windows 10 operating system, the operating system release information is categorized based on the major operating system release (e.g., 1703, 1709 etc.). For all other operating systems, the operating system version is displayed (e.g., 6.1.7601, 7601.23694 etc.).

Details tab

- The Details tab provides details on hardware inventory information.
- Device Details
- Operating System Release. For Windows 10 operating system, the operating system release information is categorized based on the major operating system release (for example, 1703, 1709 etc.). For all other operating systems, the operating system version is displayed (for example, 6.1.7601, 7601.23694 etc.).
- Operating System Build No. Detailed information of the operating system version.
- Version Support. Indicates if the Operating System Build No. is the latest build number for a specific Operating System Release.
- Memory. The memory found on the device.
- Graphics. The graphics found on the device.
- Processor. The processor found on the device.
- Enrolled Date. The date the device was enrolled in HP TechPulse.
- Device Warranty Details
- User Name. User associated with the device. Clicking the user name hyperlink allows navigation to the user details page.
- Last Activity. The last seen status category of the device. The last seen status is categorized as:
 - a. Today. Device was last seen by HP TechPulse in the last twenty-four hours.
 - b. Yesterday. Device was last seen by HP TechPulse yesterday.
 - c. This week. Device was last seen by HP TechPulse sometime this week.
 - d. 1 week ago. Device was last seen by HP TechPulse more than a week ago.
 - e. 2 weeks ago. Device was last seen by HP TechPulse more than two weeks ago.
 - f. 3 weeks ago. Device was last seen by HP TechPulse more than three weeks ago.
 - g. 4 weeks ago. Device was last seen by HP TechPulse more than four weeks ago.
 - h. 5 weeks ago. Device was last seen by HP TechPulse more than five weeks ago.

- i. 6 weeks ago. Device was last seen by HP TechPulse more than six weeks ago.
- j. 7 weeks ago. Device was last seen by HP TechPulse more than seven weeks ago.
- k. 8 weeks ago. Device was last seen by HP TechPulse more than eight weeks ago.
- l. 3 months ago. Device was last seen by HP TechPulse more than three months ago.
- m. 4-6 months ago. Device was last seen by HP TechPulse in the last four to six months.
- n. More than 6 months ago. Device was last seen by HP TechPulse more than six months ago

- [Location Level](#)

The details tab has a default sorting order of Device Name in ascending order.

Hardware Inventory – Device Enrollment Status Report

The Hardware Inventory Device Enrollment Status report:

- Includes devices across all device manufacturer's and operating systems.
- Shows No. of Devices by the month in which the devices were enrolled, unenrolled, or removed from HP TechPulse.
- Includes the following tabs: Monthly Summary, Summary, and Details.

Monthly Summary tab

The Monthly Summary tab shows No. of Devices enrolled, unenrolled or removed from HP TechPulse by month.

The visualization includes:

- X-axis: Device enrollment status.
- Y-axis: No. of Devices.
- Color by: Device Enrollment Status.

Summary tab

The Summary tab shows No. of Devices enrolled, unenrolled or removed from HP TechPulse in current month.

The visualization includes a pie chart broken and colored by device enrollment status.

Details tab

The Details tab provides additional data attributes of devices in current month.

- Serial Number. Serial number of the device.
- Asset Tag. The asset tag of the device (imported via device import).
- Alias. The alias of the device (imported via device import).
- State. The enrollment status of the device.
- Location. The physical location of the device (imported via device import or through device location registry key path).
- Department. The department associated with the location of the device (imported via device import).
- Cost Center. The cost center associated with the device (imported via device import).
- User Name. User associated with the device. Clicking the user name hyperlink allows navigation to the user details page.
- Last Activity. The last seen status category of the device. The last seen status is categorized as:
 - a. Today. Device was last seen by HP TechPulse in the last twenty-four hours.
 - b. Yesterday. Device was last seen by HP TechPulse yesterday.

- c. This week. Device was last seen by HP TechPulse sometime with this week.
- d. 1 week ago. Device was last seen by HP TechPulse more than a week ago.
- e. 2 weeks ago. Device was last seen by HP TechPulse more than two weeks ago.
- f. 3 weeks ago. Device was last seen by HP TechPulse more than three weeks ago.
- g. 4 weeks ago. Device was last seen by HP TechPulse more than four weeks ago.
- h. 5 weeks ago. Device was last seen by HP TechPulse more than five weeks ago.
- i. 6 weeks ago. Device was last seen by HP TechPulse more than six weeks ago.
- j. 7 weeks ago. Device was last seen by HP TechPulse more than seven weeks ago.
- k. 8 weeks ago. Device was last seen by HP TechPulse more than eight weeks ago.
- l. 3 months ago. Device was last seen by HP TechPulse more than three months ago.
- m. 4-6 months ago. Device was last seen by HP TechPulse in the last four to six months.
- n. More than 6 months ago. Device was last seen by HP TechPulse more than six months ago.

- [Location Level](#)

The details tab has a default sorting order of: Serial Number in ascending order.

Hardware Inventory - Monthly Summary Report

The Hardware Inventory Details report:

- Includes devices across all device manufacturer's and operating systems.
- Shows No. of Devices by the month in which the devices were enrolled in HP TechPulse.
- Includes the following tabs: Monthly Summary, and Details.

Monthly Summary tab

The tab shows Summary, By Device Type and By Device Manufacturer charts.

Summary

No. of Devices by the month in which the devices were enrolled in HP TechPulse.

The visualization includes:

- X-axis: Device enrolment month.
- Y-axis: No. of Devices.

Each column in the visualization is a cumulative of all devices from all previous enrolled months. Clicking on any given column shows the Details tab with the devices enrolled in the specific month.

By Device Type

No. of Devices by the month in which the devices were enrolled in HP TechPulse by device type (i.e. Notebook, Desktop, Tablet, Smartphone etc.).

The visualization includes:

- X-axis: Device Enrolment Month.
- Y-axis: No. of Devices.
- Color by: Device Type

Each column in the visualization is a cumulative of all devices from all previous enrolled months. Clicking on any given column shows the Details tab with the devices enrolled in the specific month.

By Device Manufacturer

No. of Devices by the month in which the devices were enrolled in HP TechPulse by device manufacturer.

The visualization includes:

- X-axis: Device Enrolment Month.
- Y-axis: No. of Devices.
- Color by: Device Manufacturer.

Each column in the visualization is a cumulative of all devices from all previous enrolled months. Clicking on any given column shows the Details tab with the devices enrolled in the specific month.

Details tab

The Details tab provides additional data attributes of hardware inventory information.

- Enrolled Month. The month in which the device was enrolled in HP TechPulse.
- Device Details
- Operating System Release. For Windows 10 operating system, the operating system release information is categorized based on the major operating system release (e.g., 1703, 1709 etc.). For all other operating systems, the operating system version is displayed (e.g., 6.1.7601, 7601.23694 etc.).
- Operating System Build No. Detailed information of the operating system version.
- Version Support. Indicates if the Operating System Build No. is the latest build number for a specific Operating System Release.
- Memory. The memory found on the device.
- Graphics. The graphics found on the device.
- Processor. The processor found on the device.
- Enrolled Date. The date the device was enrolled in HP TechPulse.
- Device Warranty Details
- User Name. User associated with the device. Clicking the user name hyperlink allows navigation to the user details page.
- Last Activity. The last seen status category of the device. The last seen status is categorized as:
 - a. Today. Device was last seen by HP TechPulse in the last twenty-four hours.
 - b. Yesterday. Device was last seen by HP TechPulse yesterday.
 - c. This week. Device was last seen by HP TechPulse sometime with this week.
 - d. 1 week ago. Device was last seen by HP TechPulse more than a week ago.
 - e. 2 weeks ago. Device was last seen by HP TechPulse more than two weeks ago.
 - f. 3 weeks ago. Device was last seen by HP TechPulse more than three weeks ago.
 - g. 4 weeks ago. Device was last seen by HP TechPulse more than four weeks ago.
 - h. 5 weeks ago. Device was last seen by HP TechPulse more than five weeks ago.
 - i. 6 weeks ago. Device was last seen by HP TechPulse more than six weeks ago.
 - j. 7 weeks ago. Device was last seen by HP TechPulse more than seven weeks ago.
 - k. 8 weeks ago. Device was last seen by HP TechPulse more than eight weeks ago.
 - l. 3 months ago. Device was last seen by HP TechPulse more than three months ago.

- m. 4-6 months ago. Device was last seen by HP TechPulse in the last four to six months.
- n. More than 6 months ago. Device was last seen by HP TechPulse more than six months ago

- [Location Level](#)

The details tab has a default sorting order of:

1. Enrolled Month in descending order, followed by,
2. Device Name in ascending order.

Hardware Performance Comparison Reports

The Hardware Performance Comparison report:

- Allows users to compare the device configurations' performance in their fleet to a set of other configurations in the same fleet or HP TechPulse benchmarks.

The metrics for comparison are:

- Weekly averages for CPU and memory utilization,
- Weekly number of blue screen errors,
- Or average time of abnormal startups/shutdowns in the last 12 weeks.

The benchmarks' differences are evaluated for statistical significance and for persistence (i.e., the number of consecutive weeks a metric is larger than the benchmark).

- Is available for all roles

Requirements for comparison

- There should be at least 30 data points from any devices in the company, and there should be at least two companies with 30 data points each in the week for the device configuration to be present and selectable in the filter.
- Device configuration is defined as the model name, CPU model, and total memory in GB.

Company Benchmark

Company Benchmark is the averaged metrics' value across all devices for the company's selected configurations. If no Benchmark configuration is selected, it averages all company configurations, satisfying the comparison requirements.

Delta to Company Benchmark

Delta to Company Benchmark shows how the metric across all devices in a selected Device configuration differs from the Company Benchmark.

Persistence of Delta to Company Benchmark:

- If the metric value is larger than the benchmark for **1 week or 2 consecutive weeks** and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 2 weeks or less."
- If the metric value is larger than the benchmark for **3 consecutive weeks** and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 3 weeks."
- If the metric value is larger than the benchmark for **4 consecutive weeks or more** and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 4 weeks or more."
- If the metric value is larger than the benchmark for any number of consecutive weeks and the difference is not statistically significant for at least the most recent week, -> the persistence value is "Not statistically significant."
- If the metric value is smaller than the benchmark, -> the persistence value is "Smaller than the benchmark."

TechPulse Benchmark

TechPulse Benchmark is the metrics' value across all devices for all companies in TechPulse for a selected configuration.

Delta to TechPulse Benchmark

Delta to TechPulse Benchmark shows how the Company's metric differs from the averaged metric for all devices in a selected configuration in all companies in TechPulse.

Persistence of Delta to TechPulse Benchmark:

- If the metric value is larger than the benchmark for **1 week or 2 consecutive weeks** and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 2 weeks or less."
- If the metric value is larger than the benchmark for **3 consecutive weeks** and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 3 weeks."
- If the metric value is larger than the benchmark for **4 consecutive weeks** or more and the difference is statistically significant, -> the persistence value is "Larger than the benchmark for 4 weeks or more."
- If the metric value is larger than the benchmark for any number of consecutive weeks and the difference is not statistically significant for at least the most recent week, -> the persistence value is "Not statistically significant."
- If the metric value is smaller than the benchmark, -> the persistence value is "Smaller than the benchmark."

Comparison to Company Configurations Report

This report:

- Is available in Excel format only
- Contains the following mandatory filters:
 - Device Configuration
 - Benchmark Configuration

You can select multiple configuration values.

- Includes the following tabs: CPU Utilization, Memory Utilization, Blue Screen Errors, Startup Performance, Shutdown Performance

Each tab has the following information:

- Serial Number
- Device Name
- Device Configuration
- Operating System
- Operating System Release
- Manufacture Date
- Country
- Metric Type
- Metric Value
- Company Benchmark
- Delta to Company Benchmark
- Company Benchmark

Summary Report

Details tab

The Details tab provides the following information for the latest week only:

- Device Configuration
- No. of Devices in Configuration
- Share of Total No. of Devices
- Metric type: Average CPU Utilization, Average Memory Utilization, Average No. of Blue Screen Errors, Average Startup Time, Average Shutdown Time
- Metric Value
- TechPulse Benchmark
- Delta to TechPulse Benchmark
- Persistence of Delta TechPulse Benchmark

The table is sorted based on:

1. Persistence of Delta TechPulse Benchmark, followed by
2. Delta to TechPulse Benchmark, followed by
3. Device configuration in descending order.

Weekly Comparison to TechPulse Benchmark Report

This report:

- Contains the following mandatory filter: Device Configuration
Only one configuration value can be selected.
- Includes the following tabs: CPU Utilization, Memory Utilization, Blue Screen Errors, Startup Performance, Shutdown Performance

Each tab has the Device Configuration Vs TechPulse Benchmark section.

Device Configuration Vs TechPulse Benchmark

The visualization includes data for the last 12 weeks:

- X-axis: Week
One line is for the selected configuration value and the other line is for the HP TechPulse benchmark.
- Y-axis: Metric Value
- Color by: Device configuration value

Clicking any section of the chart results in a drill-down view with the top 25 devices with the largest delta from the benchmark for the most recent week only.

Top-25 Devices with the Largest Delta to Benchmark

The visualization includes data for the most recent week only:

- X-axis: Value of Delta to TechPulse Benchmark
One line is for the configuration and the other line is for the HP TechPulse benchmark.
- Y-axis: Serial Number

Clicking any section of the bar chart takes you to the Details tab.



Details tab

- Serial Number
- Device Name
- Device Configuration
- Operating System
- Operating System Release
- Manufacture Date
- Country
- Metric Type
- Metric Value
- Company Benchmark
- Delta to Company Benchmark
- Persistence of Delta to Company Benchmark
- TechPulse Benchmark
- Delta to TechPulse Benchmark
- Persistence of Delta to TechPulse Benchmark
- [Location Level](#)

The table is sorted based on:

1. Persistence of Delta TechPulse Benchmark, followed by
2. Delta to TechPulse Benchmark, followed by
3. Serial Number in descending order.

Hardware Replacement Report

The Hardware Replacement report:

- Provides guidance on phased replacement of devices as the current devices reach their end of life.
- Builds upon the hardware health report by looking at monthly trends of each performance metric in the hardware health report.
- Is available for HP and non- HP devices.
- Is available for Microsoft Windows operating systems.
- Includes the following tabs: Summary, and Details.

First, the hardware health metric for each device is calculated across all the performance metrics and a device is a classified as health, unhealthy or unknown in each month.

The following rules classify unhealthy devices with respect to performance metrics during a given month.

Performance Metrics	Criteria for unhealthy device
Battery Health	Battery replacement recommendations for 10% of the time or Battery Recall status at any time
CPU Utilization	High CPU utilization for 25% of the time
Disk Health	Disk replacement recommendations for 10% of the time
Graphics health	Graphics failures for 10% of the time
Memory Utilization	High memory utilization for 25% of the time
Thermal Health	Thermal issues for 10% of the time

The overall health summary for a device is then categorized as:

- Healthy. If all the performance metrics of a device are classified as Healthy.
- Unhealthy. If any one of the performance metrics of a device are classified as Unhealthy.
- Unknown. Unable to determine the health of the device.

Based on the performance metrics in current month, a device has the hardware replacement categorization as:

- Replace Now.
 - The manufacture year of the device is greater than or equal to four years and anyone of the performance metrics is unhealthy in the current month.
 - The manufacture year of the device is between two to four years and the CPU Utilization and Memory Utilization of the performance metrics is unhealthy in the current month.
- Replace Soon.
 - The manufacture year of the device is unknown or less than two years and anyone of the performance metrics is unhealthy in current month.
 - The manufacture year of the device is between two and four years and any of the performance metrics – Battery Health, Disk Health, Graphics Health and Memory Utilization is unhealthy in the current month.
- OK. All the performance metrics are healthy in current month.
- N/A. Unable to determine the replacement recommendations of the device.

Summary tab

The Summary tab shows Affected Devices and Device Health Summary visualizations.

Affected Devices

No. of Devices by replace now and replace soon hardware replacement and device type.

By default, the visualization shows No. of Devices by replace now and device type. Click on replace soon section in the bar visualization to see No. of Devices by replace soon and device type.

Device Health Summary

No. of Devices by hardware replacement.

Details tab

The Details tab provides information on details of the device experiencing health issues and requiring replacements.

- Hardware Replacement. The overall hardware replacement (i.e. replace now, replace soon, OK, N/A)
- Affected Resources. The performance metric experiencing the issue. Multiple values are commaseparated.
- [Device Details](#)
- Device Warranty Details
- [Location Level](#)

Hardware Warranty Report

The Hardware Warranty report:

- Provides an overall summary of warranty and/or care pack status of enrolled devices.
- The device warranty status provides a combined overall status of all warranty and/or care pack of a device as a singular value, categorized as:
 - In warranty. The device has an active warranty and/or carepack.
 - Out of warranty. The device does not have any active warranty and/or care packs.
 - Not applicable. The device is not a HP manufactured device.
 - Unknown. Unable to determine if the HP device has warranty and/or care packs.

Note: The device warranty and care pack information are only available for HP devices.
- Includes the following tabs: Summary, and Details.

Summary tab

The Summary tab shows the overall warranty and/or care pack status By Manufacture Year, By Device Manufacturer and By Warranty Expiration visualizations.

By Manufacture Year

No. of Devices by the overall device warranty and/or care pack status by device manufacture year. The device manufacture year is only available for HP devices.

The visualization includes:

- X-axis: Device Manufacture Year.
- Y-axis: No. of Devices.
- Color by: Device Warranty Status.

The visualization is sorted by device manufacture year in ascending order.

By Device Manufacturer

No. of Devices by the overall device warranty and/or care pack status by device manufacturer.

The visualization includes:

- X-axis: Device Manufacturer.
- Y-axis: No. of Devices.
- Color by: Device Warranty Status.

By Warranty Expiration

No. of Devices by the overall device warranty and/or care pack status by the Expiry status. The Expiry status is categorized as:

- Expired. The overall combination of all warranty and/or care pack has expired.
- Today. The overall combination of all warranty and/or care pack will expire today.
- Tomorrow. The overall combination of all warranty and/or care pack will expire by tomorrow.
- Within 7 days. The overall combination of all warranty and/or care pack will expire within next 7 days.
- Within 30 days. The overall combination of all warranty and/or care pack will expire within next 30 days.
- Today. The overall combination of all warranty and/or care pack will expire Today
- Within 90 days. The overall combination of all warranty and/or care pack will expire within 90 days.
- Within 1 year. The overall combination of all warranty and/or care pack will expire within a year.
- Within 2 years. The overall combination of all warranty and/or care pack will expire within next 2 years.
- Within 3 years. The overall combination of all warranty and/or care pack will expire within next 3 years.
- More than 3 years. The overall combination of all warranty and/or care pack will expire after 3 years.
- Unknown. HP TechPulse is unable to determine a date for the overall combination of all warranty and/or care pack.

The visualization includes:

- X-axis: expiry status.
- Y-axis: No. of Devices.
- Color by: overall device warranty and/or care pack status.

Details tab

The Details tab provides additional data attributes of warranty and care pack information. Device Warranty Status. The overall device warranty and/or care pack status

- [Device Details](#)
- Last Checked On. The date that the warranty and care pack overall device warranty and/or care pack status was last checked and updated in HP TechPulse.
- Type. Indicates if the latest information on warranty and/or care pack status is a warranty or a care pack.
- Warranty Type. Indicates if the latest information on warranty and/or care pack status is a factory warranty, bundled warranty. Devices with multiple warranty types and care packs are shown as separate line items in the Details tab.
- End Date. The end date of the overall device warranty and/or care pack.

- Title. The title of the overall device warranty and/or carepack.
- Expiry. The expiry status of the overall device warranty and/or carepack.
- Days Remaining. The number of days remaining for the overall device warranty and/or carepack.
- [Location Level](#)

The details tab has a default sorting order of:

1. Status followed by
2. Days Remaining, followed by
3. Device Name in ascending order.

Microsoft Telemetry Report

The Microsoft Telemetry report provides

- Aggregated information on the summary key performance indicators of Device Health, Upgrade Readiness and Update Compliance of devices enrolled in Microsoft telemetry.
- Includes Device Health, Upgrade Readiness and Update Compliance tabs.

Device Health tab

According to Microsoft, [Device Health](#) is the newest Windows Analytics solution that complements the existing Upgrade Readiness and Update Compliance solutions by providing IT with reports on some common problems the end users might experience so they can be proactively remediated, thus saving support calls and improving end-user productivity.

Device Health provides the following:

- Identification of devices that crash frequently, and therefore might need to be rebuilt or replaced.
- Identification of device drivers that are causing device crashes, with suggestions of alternative versions of those drivers that might reduce the number of crashes.
- Notification of Windows Information Protection misconfigurations that send prompts to endusers.
- No need for new complex customized infrastructure, thanks to cloud-connected access using Windows 10 diagnostic data.

The Device Health tab:

- Provides aggregated level insights into operating system kernel crashes (blue screens) in your organization so that you can take actions to reduce them.
- Shows the Frequently Crashing Devices and Driver-Induced OS Crashes visualizations.

Frequently Crashing Devices

The Frequently Crashing Devices visualization provides a weekly trend of No. of Devices crashing. The number at the bottom-left of the visualization shows No. of Devices crashing in current week. The number at the bottom-right of the visualization shows the percentage increase in the number of crashes from previous week, and the total No. of Devices in this week.

Driver-Induced OS Crashes

The Frequently Crashing Devices visualization provides a weekly trend of No. of Devices crashing due to drivers. The number at the bottom-left of the visualization shows No. of Devices crashing in current week. The number at the bottom-right of the visualization shows the percentage increase in the number of crashes from previous week, and the total No. of Devices in this week.

Upgrade Readiness tab

According to Microsoft, upgrading to new operating systems has traditionally been a challenging, complex, and slow process for many enterprises. Discovering applications and drivers and then testing them for potential compatibility issues have been among the biggest pain points.

According to Microsoft, with the release of [Upgrade Readiness Windows Analytics solution](#), enterprises now have the tools to plan and manage the upgrade process end to end, allowing them to adopt new Windows releases more quickly. With new Windows versions being released multiple times a year, ensuring application and driver compatibility on an ongoing basis is key to adopting new Windows versions as they are released. Windows Upgrade Readiness not only supports upgrade management to Windows 10, but also Windows 10 upgrades in the [Windows as a service](#) model.

Microsoft developed Upgrade Readiness in response to demand from enterprise customers looking for additional direction and details about upgrading to Windows 10. Upgrade Readiness was built considering multiple channels of customer feedback, testing, and Microsoft's experience upgrading millions of devices to Windows 10.

Application Readiness

According to Microsoft, this is the first step of the Upgrade Readiness Windows Analytics solution workflow. In this step, applications are listed and grouped by importance level. Setting the importance level enables you to prioritize applications for upgrade. The Application Readiness visualization provides the total number of applications and number of applications to review.

Driver Readiness

The Driver Readiness visualization provides information on Drivers with known issues and drivers in need for review.

Update Progress

The Update Progress visualization allows you to monitor the progress and status of your deployment. Any device that has attempted to upgrade in the last 30 days displays the Deployment Status attribute. You'll be able to see the number of computers that have successfully upgraded, failed to upgrade, are stalled, etc.

Update Compliance tab

The Update compliance tab provides aggregated information across all devices on the following Windows 10 features – security updates, feature update status, Windows Defender antivirus protection and threat status, and delivery optimization.

According to Microsoft, Update Compliance is a [Windows Analytics solution](#) that enables organizations to:

- Monitor Windows 10 Professional, Education, and Enterprise security, quality, and feature updates.
- View a report of device and update issues related to compliance that need attention.
- See the status of Windows Defender Antivirus signatures and threats.
- Check bandwidth savings incurred across multiple content types by using Delivery Optimization.

Overall Security Update Status

The Overall Security Update Status visualization provides a visualization of devices that are and do not have the latest *security updates*. According to Microsoft, in Windows 10, Security Updates are cumulative and a subset of all quality updates. Devices that are Up to date have the latest Security Update installed.

Note: This section does not include Insider devices.

Latest Security Update Deployment Status

The Latest Security Update Deployment Status provides a visualization of the different deployment states devices are

in regarding the latest update for each build (or version) of Windows 10, along with the revision of that update.

According to Microsoft, the various deployment states reported by devices are as follows:

- Installed devices are devices that have completed installation for the given update.
- When a device is counted as In Progress or Deferred, it has either begun the installation process for the given update or has been intentionally deferred or paused using Windows Update for Business Settings.
- Devices that have Update Issues have failed to update at some point during the installation process of the given security update or have not seen progress for a period of seven days.
- If a device should be, in some way, progressing toward this security update, but its status cannot be inferred, it will count as Status Unknown. This is most often devices that have not scanned for an update in some time, or devices not being managed through Windows Update.

Overall Feature Update Status

The Overall Feature Update Status visualization breaks down how many devices are up-to-date or not, with a special callout for how many devices are running a build that is not supported (for a full list of feature updates, check out the [Windows 10 Release Information](#) page).

Protection Status

The Protection Status visualization's gives a count for devices that have either out-of-date signatures or real-time protection turned off for devices that use Windows Defender Antivirus.

According to Microsoft, Windows Defender Antivirus in Windows 10 is a built-in antimalware solution that provides security and antimalware management for desktops, portable computers, and servers. Note: This section does not include Insider devices, or devices with an E5 enterprise subscription. Devices that have newly enabled Windows Defender with Cloud Protection may take up to 28 days to appear in this report.

Threat Status

The Threat Status visualization shows, among devices that have encountered threats, and how many were and were not remediated successfully. According to Microsoft, the threat status is categorized as:

- Signature out of date devices are devices with a signature older than 14 days.
- No real-time protection devices are devices that are using Windows Defender AV but have turned off real-time protection.
- Recently disappeared devices are devices that were previously seen by Windows Defender AV and are no longer seen in the past 7 days.
- Remediation failed devices are devices where Windows Defender AV failed to remediate the threat. This could be due to several reasons, including a full disk, network error, operation aborted, etc. Manual intervention might be needed from IT team.
- Not assessed devices are devices where either a non-Microsoft AV solution is used, or it has been more than 7 days since the device recently disappeared.

Device Configuration

According to Microsoft, Delivery Optimization (DO) is a Windows 10 feature that can be used to reduce bandwidth consumption by sharing the work of downloading updates among multiple devices in your environment. You can use DO in conjunction with many other deployment methods, but it is a cloud-managed solution, and access to the DO cloud services is a requirement. To learn more about DO, view the documentation on [Configuring Delivery Optimization for Windows 10 updates](#).

Note: This section does not include Insider devices.



Devices can be set to use different download modes; these download modes determine in what situations Delivery Optimization will use peer-to-peer distribution to accomplish the downloads.

The Device Configuration visualization shows No. of Devices configured to use peer-to-peer distribution in Peering On compared to Peering Off modes.

Content Distribution (%)

The Content Distribution (%) visualization – also a part of Delivery Optimization (DO) feature – provides information on content breakdown, this visualization summarizes Bandwidth Savings %, which is the percentage of data received from peer sources out of the total data downloaded (for any device that used peer-to-peer distribution).

Content Distribution (GB)

The Content Distribution (GB) visualization – also a part of Delivery Optimization (DO) feature – provides information on content breakdown, this visualization shows a summarizes the total bytes downloaded by using peer-to-peer distribution compared to HTTP distribution. The download sources that could be included are:

- LAN Bytes. Bytes downloaded from LAN Peers which are other devices on the same local network
- Group Bytes. Bytes downloaded from Group Peers which are other devices that belong to the same Group (available when the “Group” download mode is used)
- HTTP Bytes. Non-peer bytes. The HTTP download source can be Microsoft Servers, Windows Update Servers, a WSUS server or an SCCM Distribution Point for Express Updates.

Mobility Factor Report

The Mobility Factor report provides information on the mobility aspects of devices by classifying devices into various mobility factor categories. The device's mobility factor during a time-period is based on multiple and complex mobile behavior patterns. For example., some users travel with same or different devices with different form factors to different places constantly, while others travel between two or three locations back and forth frequently with their devices, while others keep constantly moving short distances with their devices. The device's mobility factor is based on a relative ranking system across all devices in HP TechPulse. The device mobility factor is categorized as:

- High. The device with highest mobility.
- Limited. The device has movement, but as not as high as a device in High category.
- Stationary. The device has movement, but it has lower movement compared to Limited
- Bad Device. The device is showing movement of more than 600 miles/hour and hence not used in the mobility factor of the device.
- No Data. The device is either not returning any geolocation data or the location services has been turned off for the entire company in HP TechPulse

The mobility factor leverages device's real-time geolocation, for enrolled devices, as opposed to any device location from any external sources.

Note: HP TechPulse provides customers the flexibility to either enable or disable real-time geolocation services across all their devices that are enrolled. The real-time geolocation service is disabled by default for all new customers and an option is provided to view and either enable or disable the real-time geolocation of all devices at any given time. Even in case of real-time geolocation service being turned on, HP TechPulse does not allow for collection of real-time device geolocation for any devices classified as employee-owned or personal devices (within HP TechPulse).

Additionally, users are given a user mobility factor rating based on the highest device mobility factor across all devices. For example, if a user has three devices, and each has a ranking of High, Limited, and Stationary respectively, the user's mobility factor is set to High.

The Mobility Factor analysis is scheduled to run periodically once at the beginning of each month. Due to the monthly scheduled execution, users and devices that were enrolled or unenrolled in HP TechPulse after the last scheduled execution, will not appear in this report.

The Mobility Factor report:

1. Is available for both HP and non- HP devices.
2. Is available for Android, macOS and Microsoft Windows operating system.

Includes the Summary and Details tabs:

Summary tab

The Summary tab provides No. of Devices by device mobility factor by [hardware health](#).

Details tab

The Details tab provides additional information on the mobility aspects of devices based on the device's geolocation

- User Mobility Factor.
- User Name. The name of the user associated with the device
- Device Details
- Device Mobility Factor. The mobility factor of the device.



- Health Summary.
- Performance Metrics.
- Start Duration. The start time duration that is considered for the mobility factor analysis.
- End Duration. The end time duration that is considered for the mobility factor analysis.
- Total Distance Covered (miles). The total distance covered in miles between start and end duration.
- No. of unique 100-mile area covered. The number of unique 100-mile areas covered by the device.
- No. of times distance is more than 500 miles. The number of times the device covers more than 500 miles.
- Area of space covering all location points. The area travelled by the device during the start and end duration times.
- Perimeter of space covering all location points. The perimeter travelled by the device during the start and end duration times.
- [Location Level](#)

Thermal Grading Report

One of the major concerns of notebooks is heat disposition. The purpose of thermal grading report is to detect when a device may need service to prevent a thermal incident and extend the life of the device.

On devices with Microsoft Windows operating system, HP TechPulse correlates thermal data across multiple sensors – all processors (CPU), fan and system – and spanning multiple days to categorize the device as Ok or needing maintenance. Even though HP TechPulse collects thermal data for GPU's, battery's and disk sensors, the thermal data from these sensors is not utilized to categorize the device from a thermal grading perspective today.

Since, each thermal sensor has their own characteristics and thresholds across various device models, it is difficult to allow users to set their own thresholds for each of these parameters.

The thermal condition of a device on Microsoft Windows operating system is categorized as:

- OK. Device is not experiencing any thermal issues.
- Maintenance. Device requires cleaning by checking vents for blockage.
- Unknown. Unable to determine if the thermal condition of the device. This can happen if HP TechPulse is unable to determine the thermal condition of the device.

On devices with macOS operating system, the thermal condition is categorized as:

- Critical – According to macOS, the thermal state on device is significantly impacting the performance of the system and the device needs to cool down. Applications should reduce usage of the CPU, GPU, and any I/O to the minimum level required for user interaction. It is recommended that the app stop using peripherals such as the camera.
- Serious – According to macOS, the thermal state is high on device. Fans are running at maximum speed and system performance may be impacted. Applications should reduce usage of the CPU, GPU, and any I/O such as networking or Bluetooth.
- Nominal – According to macOS, the thermal state is within normal limits and no corrective action is needed.
- Fair – According to macOS, the thermal state is slightly elevated, fans may be audible.

The thermal grading report:

1. Is available for both HP and non-HP devices
2. Is available for devices on macOS and Microsoft Windows operating system.
3. Includes the following tabs: Summary, and Details.

Summary tab

No. of Devices by various thermal conditions.

Details tab

The Details tab provides additional data attributes of device along with the thermal condition.

- [Device Details](#)
- Thermal Condition. The thermal condition of the device.
- [Location Level](#)

The details tab has a default sorting order of:

1. Thermal Condition in descending order, followed by
2. Device Name in ascending order.

Thermal Events Report

The thermal events report provides detailed information of thermal crashes and hibernate events of enrolled devices.

The thermal events report:

- Is available for both HP and non-HP devices.
- Is available for devices on Apple MAC and Microsoft Windows operating system.
- Includes the following tabs: Summary, and Details.

Summary tab

The summary tab provides visualizations of the number of thermal crash events and hibernation events. You can click on the filters to narrow down the results.

Thermal Crash Events

No. of devices experiencing crashes due to thermal events per week.

The visualization includes:

- X-axis: Week.
- Y-axis: Number of Devices.
- Color by: Number of Events.

Hibernation Events

No. of devices experiencing crashes due to thermal events per week.

The visualization includes:

- X-axis: Week.
- Y-axis: Number of Devices.
- Color by: Number of Events.

Details tab

The Details tab provides additional data attributes of device along with the thermal condition.

- [Device Details](#)
- Month
- Week

- Event Type: Thermal ShutDown, Thermal Hibernate.
- No. Of Errors
- No. Of Errors (Range): No Events, 1-10 Events, 10+ Events.
- [Location Level](#)

Windows 10 Hardware Compatibility Report

The Windows 10 Hardware Compatibility report

- Provides information on suitability of devices for upgrade to Windows 10 operating system.
- Provides additional information of hardware health of devices.
- Checks devices against several criteria to identify devices that are compatible with Windows 10 build version 1803 or higher, and if the hardware health or performance may impede end user experience on devices after the upgrade. Customers may consider device replacement or upgrade based on these results.
- Inclusion in the OEM list of Windows 10-compatible devices.
- HP. <https://support.hp.com/ca-en/document/c05195282>
- Dell. <https://www.dell.com/support/article/us/en/04/sln297954/dell-computers-tested-for-windows-10-april-2018-update-and-previous-versions-of-windows-10?lang=en>
- Lenovo. <https://support.lenovo.com/us/en/solutions/ht506455>
- At least 4GB of RAM.
- BIOS UEFI v2.31 or above.
- At least 20GB of free disk space (strongly recommended to support OS updates after the initial upgrades).
- In addition, the report provides hardware health information for devices and identifies factors which may result in a poor user experience if the devices are upgraded
- Includes the following tabs: Summary, and Details.

The suitability of devices for upgrade to Windows 10 (i.e. upgrade compatibility recommendation) is categorized as:

- Upgrade Not Compatible. Devices lack one or more pre-requisites for upgrade to Windows 10 operating system.
- Upgrade Risk. Devices are ready to be upgraded to Windows 10 operating system, however, the devices may experience performance issues on Windows 10 operating system.
- Upgrade Compatible. Devices meet the necessary hardware specification to upgrade to Windows 10 operating system.
- Missing Criteria. Unable to determine if devices can be upgraded to Windows 10. This can happen if the device is missing information at present due to lack of data.

The reasons for upgrade not compatible are categorized as:

- Not on OEM list.
- Insufficient CPU speed
- Insufficient RAM size
- Insufficient HDD size

The reasons for upgrade risk are categorized as:

- Performance Risk
- Insufficient RAM size

The reasons for missing criteria are categorized as:

- Missing HDD size info
- Missing BIOS version info
- Missing CPU speed info

Summary tab

The Summary tab provides a breakdown of devices by upgrade compatibility recommendation. The Summary tab also includes visualization and allows to drill down results based on device model or upgrade compatibility assessment (e.g. Compatible, etc.), or reason for assessment of non-compatibility or performance risk.

Devices with Upgrade Risks

No. of Devices by upgrade compatibility recommendation. This is a drill down visualization and at the top level, the devices are categorized by upgrade compatibility status. Clicking on any section in the visualization, results in a drill down to number of devices by device type by device model.

Upgrade Risk Assessment Details

No. of Devices by upgrade compatibility recommendation by reasons for not being able to upgrade.

Details tab

The Details tab provides detailed information on devices and their suitability for upgrade to Windows 10 operating system.

- [Device Details](#)
- Recommendation. Upgrade compatibility recommendation.
- Issue Detected. Reason(s) for not being able to upgrade
- Processor. The processor found on the device.
- Free Disk Space (in GBs) - Available free disk space, expressed in gigabytes.
- Memory. The memory found on the device.
- Graphics. The graphics found on the device.
- TPM Version. The Trusted Platform Module version.
- Last Seen. Last online date of the device.
- Device Warranty Details
- Device Performance Rating. This is the "hardware health grade" for the device, expressed as Healthy, Unhealthy or Unknown. Please see Hardware Health Monthly Summary Report for details.
- Performance Metrics. These are the components identified as problem areas for the health grade assessment. Please see Hardware Health Monthly Summary Report for details.
- Details. Identifies how to collect more details on hardware health issues.
- [Location Level](#)

Retail Device Inventory Reports

The retail device inventory reports are for customers who have deployed the HP Retail Peripheral Client. These reports focus on inventory, usage, thresholds and change event analytics for barcode scanners, receipt printers, magnetic stripe readers (MSRs), and other related retail point of sale accessories.

The Retail Device Inventory report category is not enabled by default. To enable the reports, navigate to **Settings > Preferences > Reports** and toggle **Retail Device Inventory Reports**.

Retail - Base Unit with Peripheral Inventory Report

The Base Unit with Peripheral Inventory Reports gives a visual summary of all enrolled base unit devices with compatible retail peripherals attached to them.

The base units are broken out by country and enables the user to understand what type of base units for point of sale use they have in each country as well as the breakdown of retail peripherals that are connected to them. This allows the user to understand what retail base unit devices they have in each country and the peripherals connected to them in a concise high-level summary.

Summary tab

The summary tab shows a geographical breakdown of the base unit devices deployed world-wide. It allows the user to hover over each country to see exact number of systems as well as density mapping to see which countries have highest number of systems.

The user can click a specific country and have pie chart summaries break down the base unit devices by type in that selected country as well as the peripherals connected to them by category. The user can further drill down by selecting a base unit type to be redirected to the Details tab for those base units in the selected country.

Details tab

The details tab gives additional information on the base unit devices as well as high-level details on the number of peripherals connected to them.

- Base Unit Name. This shows which base unit the peripheral is attached to and allows for the ability to click into the base unit to see all the information available about it in the Devices Details page.
- Base Unit Serial
- Device Type. This is the device type for the system with the following classifications (All in One, Desktop, Notebook, Tablet, etc.)
- Managed Peripheral Count. This is the number of compatible peripherals connected to the enrolled system.
- Model
- Operating System
- Base Unit Manufacturer
- Custom Location. User input field that can show name of store, department, etc.
- Alias Name. User input field for alias of the Base Unit device.
- Store Number
- Country
- [Location Level](#)

Retail - Peripheral Change Report

The Peripheral Change Report gives a summary on compatible peripheral devices activity of being added or removed from enrolled base units with details on when it happened and where.

Gives summary of peripherals that have been added/removed from base units to track device churn & rotation.

Summary tab

The Summary tab summarizes the total number of peripheral changes broken down by peripheral category. It also summarizes the total number of changes in each month for the current period while breaking down the number of added peripherals compared to removed peripherals.

When you click on a specific peripheral category on the pie chart, the bar chart reflects the corresponding peripheral changes by month.

When you click on a specific peripheral category on the bar chart, the Details tab lists the corresponding peripheral changes for the month.

Key Change Activity tab

The Key Change Activity tab lists the peripheral devices removed from the base unit and never added to a new base unit or added back the same base unit:

- Missing or Decommissioned Peripheral
- Date Last Seen
- Days Since Last Seen
- Base Unit Last Connected To
- Store Number
- [Location Level](#)

Details tab

The Details tab give additional details on the specific peripheral devices, what base unit they are connected to, when the peripheral event occurred, and which location it occurred at.

- Base Unit Name
- Base Unit Serial Number
- Peripheral Name. Gives details on the specific model and/or manufacturer of the peripheral
- Peripheral Serial Number
- Peripheral Category. Shows the more detailed description of the peripheral types with “Others” broken out
- Peripheral Type. High level description of what kind of peripheral it is (Scanner, MSR, Printer, and Other)
- Change Type. Whether the change was a peripheral being Added to a base unit or Removed
- Status Change Date. The date and time that the change occurred.
- Custom Location. User input field that can show name of store, department, etc.
- Store Number
- Country
- [Location Level](#)

Retail - Peripheral Threshold Report

The Peripheral Threshold Report gives an overview of where all enrolled & supported peripherals are in terms of reaching their lifetime expected thresholds in key usage metrics for Printers, Scanners, & MSRs.

The report utilizes the Threshold value set by the peripheral manufacturers, or the custom value the end-user can set for specific peripheral models using the HP Retail Peripheral Agent per the [User Guide](#).

Printers tab

The Printers tab shows summary pie charts for Printed Lines Vs. Threshold & Knife Cuts Vs. Threshold. This shows where all Printers are at in terms of reaching expected lifetime thresholds from <50%, >50-<90%, >90%-<100%, & >100% of Threshold. User can drill down into the pie chart to see details of the devices

Scanners tab

The Scanner tab shows a summary pie chart for Good Scans Vs. Threshold. This shows where all Scanners are at in terms of reaching expected lifetime thresholds from <50%, >50-<90%, >90%-<100%, & >100% of Threshold. User can drill down into the pie chart to see details of the devices

Magnetic Strip Readers tab

The Magnetic Strip Readers tab shows a summary pie charts for Good Reads Vs. Threshold. This shows where all Magnetic Strip Readers are in terms of reaching expected lifetime thresholds from <50%, >50-<90%, >90%-<100%, & >100% of Threshold. User can drill down into the pie chart to see details of the devices

There is an MSR Performance bar chart that summarizes where each MSR is at in terms of Good Reads vs. Bad Reads to indicate these devices' performance. This ranges from Great >98% Good Reads, Good 95-98%, Okay 90-95% & Poor <90%. User can drill down into the chart for more details on devices

Details tab

The Details tab gives additional details on the specific peripheral devices' usage & thresholds

- Base Unit Name
- Base Unit Serial Number
- Peripheral Category. Shows the more detailed description of the peripheral types with the "other" type shown as their true category (Cash Drawer, Line Display, etc.)
- Peripheral Serial Number
- Peripheral Name
- No. of Paper Cuts
- No. of Paper Cuts Threshold
- Percentage of Paper Cuts Threshold Met
- No. of Receipt Line Printed
- No. of Receipt Lines Printed Threshold
- Percentage of Receipt Lines Printed Threshold Met
- No. of Good Scans
- No. of Good Scans Threshold
- Percentage of Good Scans Threshold Met
- No. of Good Reads
- No. of Bad Reads



- Percentage of Good Reads
- No. of Good Reads Threshold
- Percentage of Good Reads Threshold Met
- Store Number
- [Location Level](#)

Retail - Peripheral Inventory Report

The Retail Peripheral Inventory Report helps users in retail and hospitality environment better track their fleet of compatible peripheral devices connected to enrolled base units. It enables IT managers to have visibility on what peripherals they have, where they are, what they are connected to, their firmware versions, and serial number.

It displays the peripheral IT estate by main peripheral type (Printer, Scanner, MSR, Other) in the summary tab with the ability to drill down into each type for more details on the peripherals and their connected base unit. The reports give the ability to answer questions such as which receipt printer models have been deployed across the fleet or which specific base units have a 2x20 Customer Facing Display connected to them.

Summary tab

The summary tab provides a visualization of the peripherals in fleet by type in a pie chart. It details what number of peripherals are in each category and can be drilled down by clicking into each category to be directed to the details page for a specific peripheral category.

Details tab

The details tab provides additional detailed information on the peripherals in the fleet as well as the base units they are connected to.

- Base Unit Name. This shows which base unit the peripheral is attached to and allows for the ability to click into the base unit to see all the information available about it in the Devices Details page
- Base Unit Serial
- Base Unit Manufacturer
- Model
- Operating System
- Last Seen
- Base Unit Enrolled Date
- Peripheral Name. Gives details on the specific model and/or manufacturer of the peripheral
- Peripheral Serial Number
- Peripheral Category. Shows the more detailed description of the peripheral types with the “other” type shown as their true category (Cash Drawer, Line Display, etc.)
- Peripheral Type. High level description of what kind of peripheral it is broken into four types (Scanner, MSR, Printer, and Other)
- Custom Location. User input field that can show name of store, department, etc.
- Alias Name. User input field for alias of the Base Unit device.
- Store Number
- Firmware Version
- Country
- [Location Level](#)

Retail - Peripheral Usage Statistics Report

The Peripheral Usage Statistics Reports gives a detailed breakdown of overall usage across all compatible peripherals connected to enrolled base units with more in-depth overviews for the Printer, Scanner, and Magnetic Stripe Reader peripheral types.

This enables users to understand and analyze peripheral usage to make better informed decisions to improve retail operations and device utilization.

Summary tab

All Peripherals

The All Peripherals summary tab gives a summary of which stores have the highest level of total usage over the device's lifetime. It gives an overview of a health check for the attached retail peripherals were successfully detected and how many were not successfully detected in a historical summary. A summary of the total power-on hours across all stores is shown by month in a historical summary.

Printers

The Printers summary tab overviews key usage metrics of Receipt Printers including paper cuts and lines printed. The first summary chart gives the top ten printers with the highest level of lifetime usage with the ability to drill down into specific printers for more details. The Y-axis details the number of Printed Lines and the X-axis displays the printer's serial number.

The next 2 charts show historical month over month breakdowns of key usage metrics across all Printers. The first chart is focused on Total Printed Lines & the second on Total Paper Cuts.

Scanners

The Scanners summary tab overviews key usage metrics of Barcode Scanners with the total number of good scans. The first summary chart gives the top ten Scanners with the highest level of lifetime usage and the ability to drill down into specific Scanners for more details. The Y-axis details the number of Total Good Scans and the X-axis displays the Scanner's serial number.

The next chart shows historical month over month breakdowns of the Total Good Scans across all Scanners.

Magnetic Stripe Readers

The Magnetic Stripe Readers summary tab overviews key usage metrics of MSRs with the Total Good Reads. The first Summary gives the top ten MSRs with the highest level of lifetime usage and the ability to drill down into specific MSRs for more details. The Y-axis details the number of Total Good Reads and the X-axis displays the MSRs serial number.

The next chart shows historical month over month breakdowns of the Total Good Reads & Total Bad Reads across all MSRs.

Details tab

The detail tab gives additional information on the peripheral devices including usage information, model details, and information on the base units they are connected to.

- Base Unit Name
- Base Unit Serial Number
- Peripheral Category. Shows the more detailed description of the peripheral types with the "other" type shown as their true category (Cash Drawer, Line Display, etc.)
- Peripheral Serial Number
- Peripheral Name

- Check Health Status. Status on the peripheral devices being successfully detected.
- Check Health Status Extended
- Power-On Hours. Total power-on hours for the device
- Paper Cuts. Total number of Paper Cuts for the Printer. Will show as 0 for devices if not applicable.
- Receipt Lines Printed Count. Total number of Receipt Lines Printed for Printers. Will show as 0 for devices it is not applicable.
- Good Scan Count. Total number of Good Scans for Scanners. Will show as 0 for devices when not applicable.
- Good Read Count. Total number of Good Reads for MSRs. Will show as 0 for devices when not applicable.
- Bad Read Count
- Total Read Count
- Store Number
- Data Collected On. Date last usage details were collected on from peripherals.
- [Location Level](#)

Incident Resolution Report

The incident Resolution report:

Provides information on:

- Incident Burndown Rate (i.e. the number of open vs. closed incidents),
- Average Incident Initial Response Time (i.e. The time taken to respond to an incident, averaged across incident types and subtypes by week), and
- Average Incident Closure Time on a weekly basis (i.e. the time taken to close an incident, averaged across selected incident types and subtypes by week.
- Includes only system generated incidents. User escalated incidents created in ServiceNow via the HP TechPulse Incident Integration service are not included until the incident is assigned to a device in HP TechPulse.
- Includes the following tabs: Summary and Details.

Summary tab

The Summary tab shows Incident Burndown and Incident Response and Closure Time(s) visualization.

Incident Burndown

The visualization includes:

- X-axis: Week.
- Y-axis: The number of Incidents.
- Color by: Incident Status.

The visualization is sorted based on the earliest to latest week (from left to right).

Incident Response and Closure Time(s)

The visualization includes:

- X-axis: Week.
- Y-axis: Average Incident Initial Response Time and Average Incident Closure Time.
- Color by: Average Initial Incident Response Time and Average Incident Closure Time.

The visualization is sorted based on the earliest to latest week (from left to right).

Details tab

The Details tab provides additional information on incidents, incident resolution metrics and the devices experiencing the incidents.

- Week.
- ID. The incident ID associated with the incident.
- Type. The type of incident.
- Subtype. The subtype of the incident.
- Created On. The date the incident is created.
- Priority. The priority of the incident.
- Status. The Status of the incident
- [Device Details](#)
- Device Warranty Details
- Initial Incident Response Time (hrs.).
- Incident Closure Time (hrs.)
- [Location Level](#)

The details tab has a default sorting order of:

- Week in descending order, followed by
- Type in ascending order, followed by
- Subtype in ascending order, followed by
- Created On in ascending order, followed by
- Status in descending order, followed by
- Device Serial Number in ascending order.

Network – Wireless Networking Card Inventory

The Wireless Networking Card Inventory report:

- Provides details of the types of physical wireless network adapters that are in use on the enrolled devices:
 - Wireless 80211: The network interface uses a wireless LAN connection (IEEE 802.11 standard)
 - Wman: The network interface uses a mobile broadband interface for WiMax devices.
 - Wwanpp: The network interface uses a mobile broadband interface for GSM-based devices
 - Wwanpp2: The network interface uses a mobile broadband interface for CDMA-based devices
- Provides insights to what wireless generation the network cards across a fleet are capable of supporting.
- Provides insights into the device types across a fleet that support multiple wireless network cards types: WLAN and WWAN types
- Provides latest wireless adapter driver criticality across their fleet: Routine vs Critical updates
- Is available to all HP TechPulse roles.
- Includes Summary and Details tabs.

Summary tab

By Network Adapter

The visualization includes:

- X-axis: Number of devices
- Y-axis: Network adapter product name
- Color by: Network interface type (WLAN, WWAN)

The visualization is sorted based on number of devices. Clicking any section of the bar chart results in a drill-down view of the devices for the selected category.

By Device Model

The visualization includes:

- X-axis: Number of devices
- Y-axis: Device model
- Color by: Network interface type (WLAN, WWAN)

The visualization is sorted based on number of devices. Clicking any section of the bar chart results in a drill-down view of the devices for the selected category.

By Network Type

Each section of the donut chart shows the number devices for each network interface type.

Clicking on any section of the donut chart results in a drill-down view of the devices for the selected category.

Details tab

The Details tab provides additional information on the devices and the network cards.

- [Device Details](#)
- Date Time: Date/time of the network information
- Name: Name of the network adapter
- Description: Description of the network adapter
- Type: Network interface type



- Manufacturer: Name of the network adapter's manufacturer
- Network Connection ID: Name of the network connection as it appears in the Network Connections Control Panel Program.
- Physical Adapter: Indicates whether the adapter is a physical or a logical adapter
- Adapter Type: Description of type of adapter
- Product Name: Product name of the network adapter
- Latest Driver Criticality: Driver criticality of the network interface – Routine, Critical, Unknown
- [Location Level](#)

Performance - Value Reminder Email Report

The Value Reminder Email report:

- Is available for users with the Customer Success Manager role.
- Provides Information on your current company's weekly performance across the fleet in the categories of:
 - Productivity: The Productivity score for your company indicates the areas that combine to make your device experience optimal for your users.
 - Adoption: The Adoption score for your company indicates how many devices are enrolled vs how many seats you are entitled.
 - Device health: The Device Health score for your company indicates the devices that need to be replaced vs devices in good health.
 - Security: The Security score for your company indicates the devices that are vulnerable to security issues vs healthy devices.
- Sends a reminder email to highlight the value added by TechPulse at a glance. The email, sent to account owners and others if specified, includes information on how to improve the lowest scoring category as well as a link to view additional details.
- Includes the following tabs: Productivity, Security, Device Health, Adoption, and Recommendations.

Productivity tab

The Productivity tab shows productivity trend and KPI visualizations which provides a breakdown of productivity score in the current company compared to the average customer.

Productivity Score

The experience visualization includes:

- X-axis: Week.
- Y-axis: Productivity score.
- Color by: Current customer vs average.

Key Performance Indicators

The KPI visualization includes:

- X-axis: Indicator Value.
- Y-axis: Performance Indicator.
- Color by: Score.

Security tab

The Security tab shows number of devices not complaint and compliance status trend and KPI visualizations.

HP TechPulse Reporting Guide

No. of Devices Not Complaint and Compliance Status

The experience visualization includes:

- X-axis: Week.
- Y-axis: Compliance Score.
- Color by: Current customer vs average.

Key Performance Indicators

The KPI visualization includes:

- X-axis: Indicator Value.
- Y-axis: Performance Indicator.
- Color by: Score.

Device Health tab

The Device Health tab shows the health score trend and health summary visualizations.

Device Health Score

The health trend visualization includes:

- X-axis: Week.
- Y-axis: Health Score.
- Color by: Current customer vs average.

Device Health Summary

The KPI visualization includes a doughnut chart of fleet health colored by health status.

Adoption tab

The Adoption tab shows adoption score and total number of devices enrolled visualizations.

Adoption Score

The adoption score visualization includes:

- X-axis: Week.
- Y-axis: Adoption Score.
- Color by: Current customer vs average.

Total No. Of Devices Enrolled

The Total No. Of Devices Enrolled visualization provides a doughnut chart of the total number of devices in the fleet colored by enrollment status.

Recommendations tab

The Recommendations tab shows the best reports, remediations, and recommendations to improve the performance categories that are indicated in the Value Reminder Email.

Company Security Compliance Report

Company Security Compliance - Monthly Summary Report

HP TechPulse monitors antivirus protection and firewall protection compliance status in real-time by detecting all antivirus and firewall protection applications that are registered with Microsoft Windows operating system. The company security compliance monthly summary report provides company-wide monthly trends on the compliance status of antivirus and firewall endpoint protection (i.e. the compliance type) across all devices within a company.

Each of these compliance types have compliance status and they are categorized as:

- Compliant. The antivirus and/or firewall protection is enabled on the device.
- Not Compliant. The antivirus and/or firewall protection is disabled on the device.
- Not Monitored. The antivirus and/or firewall protection is not monitored on the device.

Each of these compliance types have two distinct metrics and are first calculated for an individual device and then rolled up across all devices within a company:

Time (hrs). The amount of time (in hours) a device within a company spends in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within a given month.

- The time is calculated based on the difference between each of the compliance status categories. E.g., in any given month, if on day 1 at time 8:00 AM the antivirus protection on a device is disabled, and on the same day 1 at time 8:15 AM the antivirus protection on the same device is enabled, then the Time(hrs) for the device in Not Compliant status category is 0.25 hours and the remainder of the time is considered in the Compliant status category.
- The Time(hrs) is calculated based on a 24-hour time-period. E.g., in any given month, if on day 1 at time 8:00 AM the antivirus protection on a device is disabled; and then the device goes offline at 10:00 AM on the same day 1; and then the device comes online on day 3 at 10:00 AM, and then the antivirus protection is enabled on day 3 at 11:00 AM, then the Time (hrs) for the device in Not Compliant status category is considered from day 1 8:00 AM to day 3 11:00 AM (i.e. 49 hours) and the remainder of the time is considered in the Compliant status category.
- A device that is not seen online for 5 consecutive days is automatically categorized as Not Monitored, till the time the device comes online.

No. of Devices. The number of unique devices within a company that are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), in any given month. In any given month, a device can be in all compliance status categories. For example, in any given month, if on day 1 at time 8:00 AM the antivirus protection on the device is disabled, and on the same day 1 at time 8:15 AM the antivirus protection on the device is enabled, then the device is counted in both compliant and not compliant compliance status categories in the month. Additionally, if the same device moves back and forth between various compliance status categories multiple times in any given month, the device is still counted only once in each of the compliance status categories. A device that is not seen online for 5 consecutive days is automatically categorized as Not Monitored, till the time it comes online.

The Company Security Compliance Monthly Summary report:

- Is available for both HP and non-HP devices
- Is applicable to devices that have Microsoft Windows operating system.
- Includes the following tabs: Endpoint Protection, and Details.

Summary tab

The summary tab includes a visualization each for each [compliance type](#) – antivirus protection and firewall protection.

The visualization includes:

- X-axis: Month.
- Y-axis: Time (hrs.) and No. of Devices.
- Color by: Compliance Status.

The visualization is sorted based on the earliest to latest month (from left to right).

Details tab

The Details tab provides endpoint protection security compliance information in a tabular format.

- Month.
- Compliance Type.
- Compliance Status.
- No. of Devices. The number of unique devices within a company that are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), in any given month.
- Total Time. The total time across all devices that were found enrolled within a company within a given month.
- Time (hrs.). The amount of time all the devices within a company spent in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within a given month.
- Time %. Time (hrs.) / Total Time (for any given month, compliance type and compliance status category)
- [Location Level](#)

The details tab has a default sorting order of:

1. Month in ascending order, followed by
2. Compliance Type in ascending order, followed by
3. Compliance Status in descending order.

Company Security Compliance - 24 Hour Summary Report

HP TechPulse monitors antivirus protection and firewall protection compliance status in real-time by detecting all antivirus and firewall protection applications that are registered with Microsoft Windows operating system. The company security compliance 24-hour summary report provides company-wide status on the compliance status of antivirus and firewall endpoint protection (i.e. the compliance type) across all devices within a company during the previous twenty-four hours.

Each of these compliance types have compliance status and they are categorized as:

- Compliant. The antivirus and/or firewall protection is enabled on the device.
- Not Compliant. The antivirus and/or firewall protection is disabled on the device.
- Not Monitored. The antivirus and/or firewall protection is not monitored on the device.

Each of these compliance types have two distinct metrics and are first calculated for an individual device and then rolled up across all devices within a company:

Time. The amount of time (in hours) a device within a company spends in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within the previous twenty-four hours.

- The time (hrs.) is calculated based on the difference between each of the compliance status categories. For example, during the previous twenty-four hours, if at time 8:00 AM the antivirus protection on a device is disabled, and then enabled at time 8:15 AM the antivirus protection on the same device is enabled, then the Time(hrs.) for the device in Not Compliant status category is 0.25 hours and the remainder of the time is considered in the Compliant status category.
- The Time (hrs.) is calculated based on a twenty-four-hour time-period. For example, during the previous twenty-four hours, if at 8:00 AM the antivirus protection on a device is disabled; and then the device goes offline at 10:00 AM; the Time (hrs.) for the device in Not Compliant status category is considered from 8:00 AM to midnight (i.e., sixteen hours) and the remainder of the time is considered in the Compliant status category.
- A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time the device comes online.

No. of Devices. The number of unique devices within a company that are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), in any given month. During the previous twenty-four hours, a device can be in all compliance status categories. For example, during the previous twenty-four hours at time 8:00 AM the antivirus protection on the device is disabled, and at time 8:15 AM the antivirus protection on the device is enabled, then the device is counted in both compliant and not compliant compliance status categories in the month. Additionally, if the same device moves back and forth between various compliance status categories multiple times during the previous twenty-four hours, the device is still counted only once in each of the compliance status categories. A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time it comes online.

The Company Security Compliance 24 Hour Summary report:

- Is available for both HP and non-HP devices
- Is applicable to devices that have Microsoft Windows operating system.
- Includes the following tabs: Summary, and Details.

Summary tab

The summary tab includes a visualization each for each compliance type – antivirus protection and firewall protection.

The visualization includes:

- X-axis: Month.
- Y-axis: Time (hrs.) and No. of Devices.
- Color by: Compliance Status.

The visualization is sorted based on the earliest to latest month (from left to right).

Details tab

The Details tab provides endpoint protection security compliance information in a tabular format.

- [Device Details](#)
- Month.
- Compliance Type.
- Compliance Status.
- No. of Devices. The number of unique devices within a company that are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), during the previous twenty-four hours.
- Total Time. The total time across all devices that were found enrolled within a company during the previous twenty-four hours.
- Time (hrs.). The amount of time all the devices within a company spent in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) during the previous twenty-four hours.
- Time %. Time (hrs.) / Total Time (for any given month, compliance type and compliance status category).
- No. of Not Compliant Instances.
- [Location Level](#)

The Details tab has a default sorting order of:

1. Compliance Type in ascending order, followed by
2. Compliance Status in descending order.

Device Security Compliance Report

Device Security Compliance - Monthly Summary Report

HP TechPulse monitors antivirus protection and firewall protection compliance status in real-time by detecting all antivirus and firewall protection applications that are registered with Microsoft Windows operating system. The device security compliance monthly summary report provides monthly trends on the compliance status of antivirus and firewall endpoint protection (i.e. the compliance type) for each device within a company.

Each of these compliance types have compliance status and they are categorized as:

- **Compliant.** The antivirus and/or firewall protection is enabled on the device.
- **Not Compliant.** The antivirus and/or firewall protection is disabled on the device.
- **Not Monitored.** The antivirus and/or firewall protection is not monitored on the device.

Each of these compliance types have two distinct metrics and are first calculated for an individual device and then rolled up across all devices within a company:

Time. The amount of time (in hours) a device within a company spends in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within a given month.

- The time (hrs) is calculated based on the difference between each of the compliance status categories. For example, in any given month, if on day one at 8:00 AM the antivirus protection on a device is disabled, and on the same day one at 8:15 AM the antivirus protection on the same device is enabled, then the Time (hrs) for the device in Not Compliant status category is 0.25 hours and the remainder of the time is considered in the Compliant status category.
- The Time (hrs) is calculated based on a twenty-four-hour time-period. For example, in any given month, if on day one at 8:00 AM the antivirus protection on a device is disabled; and then the device goes offline at 10:00 AM on the same day one; and then the device comes online on day three at 10:00 AM, and then the antivirus protection is enabled on day three at 11:00 AM, then the Time (hrs) for the device in Not Compliant status category is considered from day one at 8:00 AM to day 3 at 11:00 AM (i.e. 49 hours) and the remainder of the time is considered in the Compliant status category.
- A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time the device comes online.

No. of Instances. The number of times (i.e. instances), that devices within a company are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), in any given month. In any given month, a device can be in all compliance status categories. For example, in any given month, if on day one at 8:00 AM the antivirus protection on the device is disabled, and on the same day one at 8:15 AM the antivirus protection on the device is enabled, then the device is counted in both compliant and not compliant compliance status categories in the month. Additionally, if the same device moves back and forth between various compliance status categories multiple times in any given month, the device is counted multiple times in each of the compliance status categories. A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time it comes online.

The Device Security Compliance Monthly Summary report:

- Is available for both HP and non-HP devices.
- Is applicable to devices that have Microsoft Windows operating system.
- Includes the following tabs: Endpoint Protection, and Details.

Summary tab

The summary tab includes a visualization each for each compliance type – antivirus protection and firewall protection.

The visualization includes:

- X-axis: Month.
- Y-axis: Time (hrs.) and No. of Devices.
- Color by: Compliance Status.

The visualization is sorted based on the earliest to latest month (from left to right).

Details tab

The Details tab provides endpoint protection security compliance information in a tabular format.

- [Device Details](#)
- Month.
- Compliance Type.
- Compliance Status.
- Total Time. The total time across all devices that were found enrolled within a company within a given month.
- Time (hrs.). The amount of time all the devices within a company spent in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within a given month.
- Time %. Time (hrs.) / Total Time (for any given month, compliance type and compliance status category)
- The number of Not Compliant Instances. The number of times (i.e. instances), that devices within a company are in Not Compliant status in any given month.

The details tab has a default sorting order of:

1. Month in ascending order, followed by
2. Compliance Type in ascending order, followed by
3. Compliance Status in descending order, followed by
4. Time % in descending order, followed by
5. The number of Not Compliant Instances in descending order, followed by
6. Device Name in ascending order.

Device Security Compliance - 24 Hour Summary Report

HP TechPulse monitors antivirus protection and firewall protection compliance status in real-time by detecting all antivirus and firewall protection applications that are registered with Microsoft Windows operating system. The device security compliance 24-hour summary report provides status on the compliance status of antivirus and firewall endpoint protection (i.e. the compliance type) across all devices within a company during the previous twenty-four hours.

Each of these compliance types have compliance status and they are categorized as:

- Compliant. The antivirus and/or firewall protection is enabled on the device.
- Not Compliant. The antivirus and/or firewall protection is disabled on the device.
- Not Monitored. The antivirus and/or firewall protection is not monitored on the device.

Each of these compliance types have two distinct metrics and are first calculated for an individual device and then rolled up across all devices within a company:

Time. The amount of time (in hours) a device within a company spends in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) within the previous twenty-four hours.

- The time (hrs) is calculated based on the difference between each of the compliance status categories. For example, during the previous twenty-four hours, if at 8:00 AM the antivirus protection on a device is disabled, and then enabled at 8:15 AM the antivirus protection on the same device is enabled, then the Time (hrs) for the device in Not Compliant status category is 0.25 hours and the remainder of the time is considered in the Compliant status category.
- The Time (hrs) is calculated based on a twenty-four-hour time-period. For example, during the previous twenty-four hours, if at 8:00 AM the antivirus protection on a device is disabled; and then the device goes offline at 10:00 AM; the Time (hrs) for the device in Not Compliant status category is considered from 8:00 AM to midnight (i.e., sixteen hours) and the remainder of the time is considered in the Compliant status category.
- A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time the device comes online.

The number of Instances. The number of times (i.e., instances), that devices within a company are in any of the compliance status categories (e.g., Compliant, Not Compliant, Not Monitored), in any given month. In any given month, a device can be in all compliance status categories. For example, in any given month, if on day 1 at time 8:00 AM the antivirus protection on the device is disabled, and on the same day one at 8:15 AM the antivirus protection on the device is enabled, then the device is counted in both compliant and not compliant compliance status categories in the month. Additionally, if the same device moves back and forth between various compliance status categories multiple times in any given month, the device is counted multiple times in each of the compliance status categories. A device that is not seen online for five consecutive days is automatically categorized as Not Monitored, till the time it comes online.

The Device Security Compliance 24 Hour Summary report:

- Is available for both HP and non-HP devices.
- Is applicable to devices that have Microsoft Windows operating system.
- Includes the following tabs: Antivirus Applications, Firewall Applications, 24 Hour Summary, and Details.

Antivirus Applications

No. of Devices by the month by antivirus application names.

The visualization includes:

- X-axis: Antivirus Application.
- Y-axis: No. of Devices.

The visualization is sorted based on:

- The Antivirus Application found on the largest No. of Devices to the least.

Firewall Applications

No. of Devices by the month by firewall application names.

The visualization includes:

- X-axis: Firewall Application.
- Y-axis: No. of Devices.

The visualization is sorted based on:

- The Firewall Application found on the largest No. of Devices to the least.

Summary tab

The summary tab includes a visualization each for each compliance type – antivirus protection and firewall protection.

The visualization includes:

- X-axis: Month.
- Y-axis: Time (hrs.) and No. of Devices
- Color by: Compliance Status.

The visualization is sorted based on the earliest to latest month (from left to right).

Details tab

The Details tab provides endpoint protection security compliance information in a tabular format.

- Device Details
- Month.
- Compliance Type.
- Compliance Status.
- Total Time. The total time across all devices that were found enrolled within a company during the previous twenty-four hours.
- Time (hrs.). The amount of time all the devices within a company spent in each compliance status (e.g., Compliant, Not Compliant, Not Monitored) during the previous twenty-four hours.
- Time %. Time (hrs.) / Total Time (for any given month, compliance type and compliance status category).
- Policy Value. The policy value indicates the name of the antivirus and firewall application found last on the device during the previous twenty-four hours.
- The number of Not Compliant Instances. The number of times (i.e. instances), that devices within a company are in Not Compliant status in any given month.

The details tab has a default sorting order of:

- Compliance Type in ascending order, followed by
- Compliance Status in descending order, followed by
- Time % in descending order, followed by
- The number of Not Compliant Instances in descending order, followed by
- Device Name in ascending order.

Device Compromised Report

The Device Compromised report provides detailed information on the device compromised, device passcode compliance and device encryption status of enrolled devices.

The device compromised status is categorized as:

- Compromised.
- Not Compromised.
- Unknown.
- N/A.

The device compromised status for different platforms is categorized based on the following:

- Android devices, if a device is rooted then the device is classified as Compromised; otherwise the device is classified as Not Compromised.

This is applicable to both VMWare Workspace ONE and Microsoft Endpoint Manager.

- IOS devices, if a device is jail broken, then the device is classified as Compromised; otherwise the device is classified as Not Compromised.

This is applicable to both VMWare Workspace ONE and Microsoft Endpoint Manager.

- MAC devices
 - VMWare Workspace ONE: This is always set to Not Compromised.
 - Microsoft Endpoint Manager: Not supported for MAC devices and hence is set to Unknown.
- Microsoft Windows devices:
 - VMWare Workspace ONE, the status is based on failure to enforce any of the settings defined in the VMWare Workspace ONE.
 - Microsoft Endpoint Manager: Not supported for MAC devices and hence is set to Unknown.

The passcode compliance status is categorized as:

- Compliant. The device is confirming to the passcode policies (set in either VMWare Workspace ONE or Microsoft Endpoint Manager).
- Not Compliant. The device is not confirming to the passcode policies (set in either VMWare Workspace ONE or Microsoft Endpoint Manager).
- Unknown.
 - VMWare Workspace ONE: The device is offline or failed to communicate with VMWare Workspace ONE.
 - Microsoft Endpoint Manager: The device is offline or failed to communicate with Microsoft Endpoint Manager or Azure Active Directory for any reasons.

- Error. This is available only with Microsoft Endpoint Manager. The device failed to communicate Microsoft Endpoint Manager or Azure Active Directory and received an error.
- Conflict. This is available only with Microsoft Endpoint Manager. This indicates that two or more conflicting passcode policy settings are applied to the device and Microsoft Endpoint Manager is unavailable to resolve the conflict.

The passcode compliance status functions in the same manner across all different platforms and across VMWare Workspace ONE and Microsoft Endpoint Manager.

The device encryption status is categorized as:

- Encrypted. The device is encrypted.
- Not Encrypted. The device is not encrypted.

The device encryption status functions in the same manner across all different platforms and across VMWare Workspace ONE and Microsoft Endpoint Manager.

The Device Compromised report:

- Is available for both HP and non-HP devices
- Is applicable to devices that have Android, macOS and Microsoft Windows operating system.
- Includes the following tabs: Summary, and Details.

Summary tab

The summary tab includes a visualization for device compromised, passcode compliance and device encryption status of enrolled devices.

Details tab

The Details tab provides additional data attributes on device and device compromised status in a tabular format.

- [Device Details](#)
- Enrolled Date. The date the device was enrolled in HP TechPulse.
- Country. The country assigned to the device based on region & language settings.
- Compromised. The device compromised status.
- Passcode. The passcode compliance status.
- Encryption. The device encryption status.

The details tab has a default sorting order of:

1. Device Name in ascending order, followed by
2. Serial Number in ascending order.

Lost Device Protection Report

Lost Device Protection – Details Report

The Lost Device Protection Details report:

- Provides information on the device wipe operations initiated on devices.
- Is available for both HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating system.
- Is only available with VMWare Workspace ONE only. Includes the following tabs: Summary, and Details.

Summary tab

No. of Devices by device wipe operations by month.

The visualization includes:

- X-axis: Month.
- Y-axis: The number of Operations (i.e. The number of device wipe operations).
- Color by: Wipe operations.

The visualization is sorted based on:

- Month, in ascending order.

Details tab

- The Details tab provides additional data attributes on device and device wipe operations in a tabular format.
- Month. The month in which the device wipe operation was initiated.
- Date Initiated. The date time a device wipe operation was initiated.
- Date Completed. The date time a device wipe operation was completed.
- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device.
- Last Seen. Last online date of the device.
- Operation. This is set to Wipe.
- Status. Indicates if the device wipe operation completed successfully or not.
- Duration (minutes). Date Completed – Date Initiated, in minutes. If the device wipe operation is not completed, then the Duration (minutes) is calculated based on Current Date – Date Initiated.

The details tab has a default sorting order of:

1. Month in descending order, followed by
2. Date Initiated in ascending order.

Lost Device Protection - Top Devices Report

The Lost Device Protection Details report:

- Provides information on devices having the most wipe operations.
- Is available for both HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating system.
- In only available with VMWare Workspace ONE Includes the following tabs: Top Devices.

Top Devices tab

Devices having the greatest number of device wipe operations.

The visualization includes:

- X-axis: Device Name followed by Month.
- Y-axis: The number of Operations (i.e. The number of device wipe operations).
- Color by: Wipe operations.

The visualization is sorted based on:

1. Device Name having the greatest number of device wipe operations, followed by
2. Month, in descending order.

Details tab

The Details tab provides additional data attributes on device and device wipe operations in a tabular format.

- Month. The month in which the device wipe operation was initiated.
- Date Initiated. The date time a device wipe operation was initiated.
- Date Completed. The date time a device wipe operation was completed.
- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device.
- Last Seen. Last online date of the device.
- Operation. This is set to Wipe.
- Status. Indicates if the device wipe operation completed successfully or not.
- Duration (minutes). Date Completed – Date Initiated, in minutes. If the device wipe operation is not completed, then the Duration (minutes) is calculated based on Current Date – Date Initiated.

The details tab has a default sorting order of:

1. Month in descending order, followed by
2. Date Initiated in ascending order.

Non-Reporting Devices Report

The HP TechPulse software on the device regularly communicates to the HP TechPulse portal to provide its status that it is running correctly on the device. The last seen status is the timestamp of the last time the device communicated successfully to the HP TechPulse portal. The Non –Reporting devices report:

- Provides the hardware inventory of devices by last seen status in HP TechPulse.
- Is available for both HP and non-HP devices.
- Is available for Android, macOS, Chrome Enterprise OS and Microsoft Windows operating system.
Note: macOS is only available in the Proactive Endpoint Management plan.
- Includes the following tabs: Summary, and Details.

Summary tab

No. of Devices by various last seen status categorized as:

- Today. Device was last seen by HP TechPulse in the last twenty-four hours.
- Yesterday. Device was last seen by HP TechPulse yesterday.
- This week. Device was last seen by HP TechPulse sometime with this week.
- 1 week ago. Device was last seen by HP TechPulse more than a week ago.
- 2 weeks ago. Device was last seen by HP TechPulse more than two weeks ago.
- 3 weeks ago. Device was last seen by HP TechPulse more than three weeks ago.
- 4 weeks ago. Device was last seen by HP TechPulse more than four weeks ago.
- 5 weeks ago. Device was last seen by HP TechPulse more than five weeks ago.
- 6 weeks ago. Device was last seen by HP TechPulse more than six weeks ago.
- 7 weeks ago. Device was last seen by HP TechPulse more than seven weeks ago.
- 8 weeks ago. Device was last seen by HP TechPulse more than eight weeks ago.
- 3 months ago. Device was last seen by HP TechPulse more than three months ago.
- 4-6 months ago. Device was last seen by HP TechPulse in the last four to six months.
- More than 6 months ago. Device was last seen by HP TechPulse more than six months ago.

Details tab

The Details tab provides additional data attributes of device along with the last seen status.

- Last Seen. The last seen status category.
- Device Name. Name of the device. Clicking the device name navigates to the device details page.
- Serial Number. Serial number of the device.
- Device Type. Type of device.
- Device Manufacturer. Manufacture of the device.
- Last Seen. Last online date of the device.
- Device Enrolled Date. The date the device was enrolled in HP TechPulse.

The details tab has a default sorting order of:

1. Last Seen in descending order, followed by
2. Device Name in ascending order.

Sure Click Pro Security Report

The HP Sure Click Pro Security report:

- Is only available with the HP Proactive Security service.
- Provides detailed information on device protection state and threats detected by HP isolation technology software. Subscribers to the HP Proactive Security service can leverage HP isolation technology to combat a wide range of web-based and file-based threats on Windows 10 devices.
- Provides detailed status of the HP Sure Click software on managed devices, and identifies devices where protection is not active, indicating the device is at greater risk from malware-based attack.
- Provides information on a wide range of protection metrics for actual threat isolation events across the enterprise.
- Includes the following tabs: Devices, Users, Threats, Device Protection Details and Threat Protection Details

Devices tab

The Devices tab provides a breakdown of devices where HP isolation technology has been deployed, and their high-level protection state.

Client Status

Devices are grouped in this visualization based on protection state (Protected/Not Protected), with drilldown options to identify reason a device is unprotected. The view in this visualization can be clicked to view more details on devices in each category.

Disabled Clients – Protection Gap by Length of Time

This visualization allows the user to see devices where HP Sure Click protection has been disabled, sorted by the length of time they have not been protected. This helps IT device managers to identify devices where corrective action is most urgently needed.

Most Impacted Devices by Prevented Threats

This visualization provides a list of devices where the most threat isolation events occurred. This can help customers identify potential targets of spear-phishing, or where training on safe handling of unknown file attachments may be of benefit.

Users tab

The Users tab shows the Most at Risk Users by Prevented Threats visualization.

Most at Risk Users by Prevented Threats

The visualization identifies users on whose devices the most threat isolation events have occurred, can be used to identify users who have been most-heavily targeted by threats either due to browsing and file open behavior, or potentially due to spear-phishing or other tailored, personalized attacks.

Threats tab

The Threats tab identifies threat activity based on impacted application and activity detected over time. The chart sections allow the viewer to click to view filtered details on threats which fit a given category.

Prevented Threats by Source

This visualization shows the application in which the threat attempted to execute. Examples can include common applications, including files downloaded from the web using browsers such as Google Chrome or Internet Explorer, or opened in Microsoft Office applications, Acrobat Reader, and others.

Threats Over Time

This visualization shows time-based view of isolated threat activity over time.



Device Protection Details tab

The Device Protection details tab shows additional information on devices where the HP isolation technology agent has been installed and is used to assist in identifying devices at risk, as well as to diagnose the reason for a lapse in protection.

- Last Signed-in User. The user account which has most recently logged on to the system.
- Last Seen. Date the device last sent data to the HP TechPulse controller.
- Device Name. Name of the device. Clicking the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device.
- Device State. Protected or Not Protected
- Reason. Protection status category. If status is not RUNNING, then please check the Management Actions column for additional details.
- Last Disabled Date. The date when the client was disabled or uninstalled from the device, if applicable.
- Total Threats Occurred. The number of threats detected while protection was enabled.
- Management Actions. If errors are detected with protection status, then this column may contain website links to the Sure Click Pro knowledge base, with instructions on how to diagnose and troubleshoot the issue.

Threat Protection Details tab

The Threat Protection Details tab shows information on isolated threat events across the customer environment. These include details on the content file name and path, as well as the date, time, and user of the device.

- Last Signed-in User. The user account which has most recently logged on to the system.
- Date Occurred. Date of the threat activity event
- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device
- File hash. The unique file hash of the file that triggered the threat event. This can be used by customers to add it to their antivirus blacklist to ensure that devices without Sure Click Pro can also be protected from this threat type.
- Details. Sure Click Pro now supports the ability to view threat bundles. This report summarizes the threats seen, categories, severity, malware family, and MITRE ATT&CK™ framework techniques seen (and protected against).
- Application. The application where the malicious activity was identified
- Affected Resource – file name or website address where the malicious content was identified

Sure Start System Integrity Report

The Sure Start System Integrity report enables the IT administrator to view PC BIOS and firmware corruption events detected by HP Sure Start. This information can increase visibility into low-level malware attacks against PC firmware, as well as other, non-malware, BIOS corruption events.

- The report is available for HP devices which support HP SureStart.
- Includes the following tabs: Summary, Details

Summary tab

The Summary tab provides a breakdown of devices where HP isolation technology has been deployed, and their high-level protection state.

Unauthorized Sure Start Firmware Changes

This chart shows a breakdown of changes to the firmware detected by HP Sure Start which do not indicate a normal BIOS or firmware maintenance activity. Causes may include BIOS corruption, a malware event or potentially a failed BIOS update.

Activity Over Time

This visualization shows Sure Start activity shows a time-based view of detected firmware change and recovery activity.

Most Impacted Devices

This chart shows a listing of the devices which display the highest number of firmware corruption and repair events.

High-Severity Events

This visualization shows a listing of serious firmware corruption events, which may require attention of HP's hardware support team.

Details tab

The Details tab shows a detailed listing of Sure Start events. This includes details on the impacted devices and event types.

- Event date/time. – When the event happened.
- Device Name. Name of the device.
- Serial Number. Serial number of the device. One can click on the device name hyperlink allows navigation to the device details page.
- Source. This identifies the Sure Start event source (component) number.
- Event ID. The event ID shows the event number. This assists the hardware team to troubleshoot the issue.
- Event Type. This identifies whether the event indicates a problem was detected, or whether a repair occurred.
- Event Text. This is the description of the detected activity.

Sure Recover Activity Report

The Sure Recover Activity report provides unified, companywide visibility on Sure Recover image restore events.

- The report is available for HP devices which support HP SureRecover.
- Includes the following tabs: Summary, Details

Summary tab

The Summary tab provides a breakdown of recent Sure Recover activity in the enterprise.

Recovery Events by Type

This chart shows a breakdown of image recovery events, separated by recovery started, completed, or failed. Failed events may indicate an unsuccessful image recovery attempt occurred. Recovery failure events may occur for a wide range of reasons. These include:

- Recovery was interrupted by the user
- Device was powered off, or lost power before finishing
- There was a problem with the recovery image
- There was a problem downloading the recovery image

However, once the image was restored to operational state, and the device re-enrolled in TechPulse, the failure events may appear in the report. As a result, the count of Sure Recover started, and Sure Recover finished/failed events may not match evenly.

Activity Over Time

This visualization shows Sure Recover activity along a timeline.

Recent Recovery Activity

This table shows the most recent detected Sure Recover activity for the enterprise.

Details tab

- The Details tab shows a detailed listing of Sure Recover events. This includes details on the impacted devices and event types.
- Event date/time. When the event happened.
- Device Name. Name of the device.
- Serial Number. Serial number of the device. One can click the device name and navigate to the device details page.
- Last seen date. The date the device most recently connected with the TechPulse analytics system.
- Event type. This field indicates the type of event (recovery initiated, completed, etc.)
- Event text. This is the event description.
- Recovery trigger. This column indicates whether the recovery was initiated automatically by the PC or by the end user.
- Recovery source. The recovery source shows the location of the recovery image.
- Error code. The error code is the diagnostic code (where applicable) generated by the recovery process.

Sure Recover Settings Report

The Sure Recover Settings report provides a companywide view of PC image recovery settings to identify gaps in coverage or opportunities to reduce end user downtime after an OS corruption event.

- The report is available for HP devices which support HP SureRecover.
- Includes the following tabs: Summary, Details

Summary tab

The Summary tab includes the Sure Recover Status chart.

Sure Recover Status

This chart shows a visualization of which devices support Sure Recover, and whether they are enabled for remote management. The user can click on a section of the chart to view a detailed list of devices which fit the category displayed.

Details tab

The Details tab shows a detailed listing of Sure Recover settings for the organization.

- Device Name. Name of the device.
- Serial Number. Serial number of the device. One can click on the device name hyperlink allows navigation to the device details page.
- Sure Recover Enabled. This column shows whether the Sure Recover feature is enabled on the device, or whether it is not supported by the device.
- Recovery Settings Management. If the device supports Sure Recover, this field will show whether remote recovery settings management is enabled on the device.
- Custom Recovery Agent. For devices which support Sure Run, this field identifies whether a custom image recovery agent, which is used to perform the image recovery task, is enabled.
- Recovery Agent Location. On devices where a custom image recovery agent is enabled, this specifies the location where the device will find the custom agent.
- Custom OS Recovery Image. The custom OS recovery image option indicates whether the Sure Recover feature will leverage the HP Sure Recover web-based image, or whether a customer-defined location is configured.
- Recovery Image Location. This specifies the location of the recovery image, if configured.
- Download Driver DVD Image. The Driver DVD image setting determines whether Sure Recover will download the HP driver DVD image and install HP drivers during the OS reimaging process.
- Frequency. Customers can configure Sure Recover to automatically reimaging the system on a periodic basis. This column displays the settings configured on the device for periodic, automatic reimaging.
- Device Last seen date. The date the device most recently connected with the TechPulse analytics system.

Sure Sense Advanced Security Report

The HP Sure Sense Advanced Security report:

- Is only available with the HP Proactive Security service.
- Provides detailed information on device protection state and threats detected by the HP Sure Sense Advanced AI-based antimalware agent. Subscribers to the HP Proactive Security service gain powerful, broad-based endpoint protection on Windows 10 devices.
- Provides detailed status of the HP Sure Sense Advanced software on managed devices, and identifies devices where protection is not active, indicating the device is at greater risk from malware attack.
- Provides information on a wide range of protection metrics for actual threat prevention events across the enterprise.
- Includes the following tabs: Devices, Threats, Device Protection Details and Event and File Protection Details

Devices tab

The Devices tab provides a breakdown of devices where HP Sure Sense Advanced has been deployed, and their high-level protection state.

Client Status

Devices are grouped in this visualization based on protection state (Not Installed/Protected/Not Protected), with drilldown options to identify reason a device is unprotected. The view in this visualization can be clicked to view more details on devices in each category.

Devices by OS

This visualization provides a breakdown of protected devices, where Sure Sense Advanced is deployed, by operating system.

Disabled Clients – Protection Gap by Length of Time

This visualization allows the user to see devices where HP Sure Sense Advanced was formerly in operation, but where protection has been disabled, sorted by the length of time they have not been protected. The chart shows the devices where protection has been disabled for the longest time.

Threats tab

The Threats tab identifies threat activity based on impacted application and activity detected over time. The chart sections allow the viewer to click to view filtered details on threats which fit a given category.

Threats by Deep Classification

This chart will group by classification the threats seen in the environment by type (e.g. Spyware, Trojan, Ransomware, etc.).

Most at Risk Users by Prevented Threats

This chart shows the devices where the most threats have been detected.

Threats Over Time

This visualization shows time-based view of isolated threat activity over time. A spike in threat activity may indicate a broad malware attack has occurred against the organization.

Device Protection Details tab

The Device Protection details tab shows details about the HP Sure Sense Advanced protection state for enrolled devices and is used to assist in identifying devices at risk, as well as to diagnose the reason for a lapse in protection.

- Device Name. Name of the device. Clicking the device name hyperlink allows navigation to the device details



page.

- Serial Number. Serial number of the device.
- Device Last Seen. Date the device last sent data to the HP TechPulsecontroller.
- Protection State. Protected, Not Installed or Not Protected.
- DI Policy Name. This is the name of the protection policy applied to the device.

Threat Protection Details tab

The Threat Protection Details tab shows information on threats blocked by HP Sure Sense Advanced across the customer environment. These include details on the content file name and path, as well as the date, time, and malware deep classification.

- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device
- Threat Date. Date of the threat activity event
- Threat Deep Classification. The assessed type of malware (trojan, potentially unwanted app (aka PUA), spyware, etc.) as detected by the deep learning engine.
- Threat Severity. The assessed risk level of the malicious file.
- Filename – file name or website address where the malicious content was identified
- File hash. The unique file hash of the file that triggered the threat event. This can be used by customers to add it to their traditional antivirus blacklist, or in the case of a harmless event or false positive, be excluded from anti-malware scans and blocking.
- Action Taken. There are two types of actions: Prevented or Detected. Prevented means the file was blocked and quarantined if possible. The AI engine will automatically block threats known to be malicious, or those whose behavior is deemed as harmful to the target device. Detected events are warning events triggered on files whose behavior is deemed unusual, but not malicious in nature. For example, some so-called PUA's (potentially unwanted apps), such as BitTorrent or certain IT system utilities, perform unusual actions. If not deemed an actual malware program, then a "Detect" warning is generated. Customers can review Detected event activity to determine whether additional action may be needed.
- Device Last Seen. When the device recently connected to the TechPulsecontroller.

Windows Defender Endpoint Protection

The Windows Defender Endpoint Protection report:

- Is only available with the HP Proactive Security service.
- Provides a listing of Windows Defender device protection status and shows devices where protection is not active, a key indicator that a device may be vulnerable to malware attacks.
- Provides detailed information on threat events which have been identified by Windows Defender across the enterprise.
- Includes the following tabs: Summary, Device Protection Details, Threat Protection Details.

Summary tab

The Summary tab provides a concise summary of Defender antivirus protection status and a rollup of threat activity.

Defender Protection Status

Devices are grouped in this visualization, and grouped in the following states:

- Protected: Defender antivirus is set to be the default antivirus agent and protection is enabled.
- Not Protected: Defender antivirus is set to be the default antivirus agent and protection is not enabled.
- Other: The device is protected by a third-party antivirus agent other than Windows Defender or is unprotected.

Threats by Category

This chart provides a breakdown of threat activity by identified malware type.

Threats by Severity

This chart shows a rollup of threats broken down by relative severity, or likely impact represented by detected malware.

Threats Response Summary

The Threats Response Summary visualization shows a grouping of actions taken on threats seen across the environment.

Device Protection Details tab

The Device Protection details tab shows details about the Windows Defender protection state for enrolled devices and is used to assist in identifying devices at risk because antivirus protection is not active.

- Last Signed-in User. The user account which has most recently logged on to the system.
- Serial Number. Serial number of the device.
- Device Name. Name of the device. Clicking the device name hyperlink allows navigation to the device details page.
- Protection Status. Whether Defender protection is active on the device.
- Signature Version. The Defender antivirus signature base revision number installed on the device.
- Last Seen. Date the device last sent data to the HP TechPulse controller.
- Threats. The number of threat events detected on the device by Defender.

Threat Protection Details tab

The Threat Protection Details tab shows information on threats blocked by Windows Defender. This includes details on the content file name and path, as well as the date, time, and malware deep classification.

- Date. Date and time the threat was detected.

- **Serial Number.** Serial number of the device on which the threat was detected.
- **Device Name.** Device computer name. Clicking on the device name hyperlink allows navigation to the device details page.
- **Category.** The assessed type of malware (trojan, potentially unwanted app (aka PUA), spyware, etc.) as detected by the deep learning engine.
- **Detection Origin.** Whether the threat was network-based or on the local machine. This information cannot always be accurately assessed and may sometimes show as a blank or null value in the report.
- **Detection Type.** This column indicates how Defender identified it as a threat, whether a known threat – Concrete, or via behavioral analysis (Heuristics). For more details on Windows Defender Detection, Origin and Source types, please see → <https://docs.microsoft.com/en-us/windows/security/threat-protection/microsoft-defender-antivirus/troubleshoot-microsoft-defender-antivirus> .
- **Detection Source:** This column indicates how the detection was initiated (e.g. end user scan, realtime protection, etc.).
- **File path** – file path and name
- **Threat name.** The “common name” of the malware variant, if known.
- **Severity.** Describes the risk posed by the prevented threat.
- **Action Taken.** This field specifies the response to the threat made by Defender (Quarantine, Whitelisted, etc.).

Chrome Auto Update Expiration

The Auto Update Expiration report:

- Provides customers a fleet-level report on supported Chrome OS Enterprise devices that are approaching or have passed the auto-update expiration date.
- Provides customers the ability to proactively identify and address devices that are at risk of no longer receiving the latest Chrome Enterprise OS features and security updates.
- Is available for HP devices with Chrome Enterprise OS.
- Is available for all roles.
- Includes the following tabs: Summary and Details.

Summary tab

The bar chart displays the number of devices by date range: More than 1 year, Within 1 year, Within 6 months, Within 3 months, Expired, Unknow, and This month.

Clicking any section of the bar chart results in a drill-down view of the devices for that date range.

Details tab

The Details tab includes the following columns:

- [Device Details](#)
- Auto Update Expiration (by date range)
- Expiration Date (actual expiration date)
- [Location Level](#)



Driver Inventory Report

The Driver Inventory report provides detailed driver information of enrolled devices. The Driver Inventory report:

- Is available for both HP and non-HP devices.
- Is available for devices on Microsoft Windows operating system.
- Provides information on signed hardware drivers for both HP and non-HP devices.
- Provides information on out-of-date drivers only for HP signed drivers. The Driver Status is categorized as:
 - Outdated. The version of HP driver on HP device is older than the latest driver version provided by HP.
 - Updated. The version of HP driver on HP device is same as the latest driver version provided by HP.
 - Unknown. Unable to determine if the HP driver version is out-of-date or latest.
- Includes the following tabs: Summary, Drivers, Drivers Table and Details.

Summary tab

Pie charts showing:

- The relative number of drivers that are classified as Updated, Outdated, and Unknown.
- The relative number of Outdated Drivers grouped by Critical, Recommended, and Routine.

The Summary chart includes:

- Driver Status: Relative number of drivers by status (Updated, Outdated, and Unknown)
- Outdated Drivers by Criticality: Relative number of drivers by criticality (Critical, Recommended, and Routine). HP Drivers only.

Drivers tab

DRIVERS BY MODEL

No of devices by device model by driver status

- Updated – If a device has all drivers that are Updated, then the device is classified as Updated
- Outdated – If a device has at least one driver that is Outdated, then the device is classified as Outdated
- Unknown – If a device has all drivers that are unknown or have no status, then the device is classified as Unknown.

Sorted by Device Model with greatest number of devices.

Drivers Table tab

The Drivers Table tab includes the following columns in order

- Device Model
- Driver Name
- Version (driver version)
- Criticality
- Status (this is not in the mock-up, but please add this)
- Number of Devices (no. of devices by model, driver name, version, and criticality)
- Sorted by Device Model with greatest number of devices.

Details tab

The Details tab includes the following fields in this order:

- Serial Number (order by 3 asc)
- Device Name
- Device Type (hidden)
- Device Manufacturer (hidden)
- Device Model
- Manufacture Date (hidden)
- Device Platform ID (hidden)
- Operating System
- Operating System Release
- Operating System Build No.
- Operating System Type (32 vs 64 bit) (hidden)
- Driver Status (Outdated, Updated, Unknown) (order by 1)
- Order by Outdated first followed by Updated followed by Unknown
- Driver Category
- Driver Name (order by 4 asc)
- Installed Driver Version
- Latest Driver Version
- Latest Driver Release Date
- Driver Criticality (Order by Critical, Recommended, Routine in that order)
- Softpaq Number: Link to download the latest driver version.
- [Location Level](#)

Filter By:

- Driver Status
- Driver Criticality
- Device Model

Software Catalog Compliance Report

The Software Catalog Compliance report:

- Provides information on the compliance status of software applications that are published to the device from either VMWare Workspace ONE and/or Microsoft Endpoint Manager.
- Is available for both HP and non- HP devices.
- Is available for Android, macOS IOS, macOS, and Microsoft Windows operating systems. Includes the following tabs: Summary, and Details.

The software application compliance status is categorized as:

- Installed. The software application is installed successfully on the device.
- Pending. The software application is pending. VMWare Workspace ONE attempts to publish the software application five times to the device till the software application is installed on the device. During this state, the status is termed as Pending.
- Not Installed. The software application is not installed successfully on the device after five attempts.
- Failed. VMWare Workspace ONE can communicate with the device, but the installation of the software application has failed due to some restrictions on the device.
- Uninstall Failed.
- Error.
- Not Applicable.
- Removed.

Summary tab

No. of Devices by software application name by status.

The visualization includes:

- X-axis: Application Name.
- Y-axis: No. of Devices
- Color by: Status.

Details tab

The Details tab provides additional information on device, software applications and their compliance in a tabular format.

- Status.
- Type. The type of software application.
 - For VMWare Workspace ONE, the possible values include: Mandatory or Optional
 - Mandatory. The software application is mandatory on the device.
 - Optional. The software application is optional on the device.
 - For Microsoft Endpoint Manager, the possible values include: N/A
 - N/A. Microsoft Endpoint Manager does not support categorization of software applications by type.
- Application Name. The friendly name of the software application.
- Application Version. The version information of the software application.



- Application Publisher. The publisher information of the software application.
- Application Size (MB). The size of the software application in MB.
- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. The serial number of the device.
- Device Type. The type of device.
- Last Seen. Last online date of the device
- Enrolled Date. The date the device was enrolled in HP TechPulse
- Country. The country assigned to the device based on region & language settings.
- Date. The datetime of the last update received from VMWare Workspace ONE or Microsoft Endpoint Manager.
- Operating System.
- [Location Level](#)

Software Errors Reports

The Software Errors reports

- Provide information on applications experiencing errors (crashes or is otherwise unresponsive).
- Includes only errors, for locally installed applications (and not Web applications)
- Is available for both HP and non- HP devices.
- Is available for Microsoft Windows operating system.
- Includes four reports for software errors – 24 Hour Summary, Top Devices with Errors, Top Errors – Monthly Summary, and Top Errors – Weekly Summary.

Software Errors - 24 Hour Summary Report

The Software Errors, 24 Hour Summary report:

- Provides the devices experiencing software errors in the previous twenty-four hours.
- Includes the following tabs :24 Hour Summary.

24 Hour Summary tab

The 24-Hour Summary tab provides information on devices, applications, versions, and modules experiencing software errors in the previous twenty-four hours in a tabular format.

- Date Occurred. The date of occurrence of the software error.
- [Device Details](#)
- Operating System. The operating system information on the date of the software error.
- Operating System Release. The Operating System release information on the date of the software error.
- Operating System Build No. Detailed information of the operating system version on the date of the software error.
- Application Name. The name of the application experiencing software errors.
- Application Version. The version of the application.
- Module. The module within the application experiencing software errors.
- Level. Indicates if the error is critical or error.
- No. of Errors. The number of software errors on the device in the previous twenty-four hours.

- Windows Event ID.
- Windows Event Provider
- [Location Level](#)

The details tab is sorted based on:

1. Date in descending order, followed by
2. Device Name in ascending order.

Software Errors - Top Devices with Errors Report

The Software Errors, Top Devices with Errors report:

- Provides a monthly summary of the top devices experiencing software errors.
- Includes the following tabs: Summary, and Details.

Summary tab

The summary tab visualization shows a monthly summary of the top devices experiencing software errors. The visualization includes:

- X-axis: Device Name.
- Y-axis: No. of Errors.
- Color by: Month.

The visualization is sorted based on the devices experiencing the greatest number of software errors.

Details tab

The Details tab provides additional information on devices, applications, versions, and modules experiencing software errors in a tabular format.

- [Device Details](#)
- Operating System. The operating system information on the date of the software error.
- Operating System Release. The Operating System release information on the date of the software error.
- Operating System Build No. Detailed information of the operating system version on the date of the software error.
- Application Name. The name of the application experiencing software errors.
- Application Version. The version of the application.
- Module. The module within the application experiencing software errors.
- Month
- No. of Errors. The number of software errors on the device in the Month.
- Windows Event ID.
- Windows Event Provider.
- [Location Level](#)

Software Errors - Top Errors Monthly Summary Report

The Software Errors, Top Errors Monthly Summary report:

- Provides a monthly summary of number of software errors and number of devices experiencing software errors.
- Includes the following tabs: Monthly Summary, Errors by Operating System, Errors Summary, and Details.

Monthly Summary tab

The monthly summary tab visualizations show a monthly summary of number of software errors and No. of Devices experiencing software errors by month.

The visualization includes:

- X-axis: Month.
- Y-axis: The number of Software Errors and No. of Devices.
- Color by: The number of Software Errors and No. of Devices.

The visualization is sorted based on the latest to earliest month (from left to right).

Errors by Operating System tab

The errors by operating system visualizations show a monthly summary of software errors by operating system build no.

Number of Errors

The number of software errors visualization shows a monthly summary of the number of software errors by operating system build no.

The visualization includes:

- X-axis: The Operating System Build No.
- Y-axis: No. of Errors.
- Color by: Month.

The visualization is sorted based on the Operating System Build No in ascending order.

No. of Devices

No. of Devices visualization shows a monthly summary of No. of Devices experiencing software errors by operating system build no.

The visualization includes:

- X-axis: The Operating System Build No.
- Y-axis: No. of Devices.
- Color by: Month.

The visualization is sorted based on the Operating System Build No in ascending order.

Errors Summary tab

The errors summary tab visualizations show a monthly summary of top software applications experiencing software error.

Number of Software Errors

The number of software errors visualization shows a monthly summary of the number of software errors by top software applications experiencing errors.

The visualization includes:

- X-axis: The number of Software Errors.
- Y-axis: Application Name.
- Color by: Month.

The visualization is sorted based on the application having the most errors in the current month.

No. of Devices tab

No. of Devices visualization shows a monthly summary of No. of Devices by top software applications experiencing errors.

The visualization includes:

- X-axis: No. of Devices.
- Y-axis: Application Name.
- Color by: Month.

The visualization is sorted based on the application having the most errors in the current month in the Number of Software Errors visualization.

Details tab

The Details tab provides additional information on devices, applications, versions, and modules experiencing software errors in a tabular format.

- [Device Details](#)
- Operating System. The operating system information on the date of the software error.
- Operating System Release. The Operating System release information on the date of the software error.
- Operating System Build No. Detailed information of the operating system version on the date of the software error.
- Application Name. The name of the application experiencing software errors.
- Application Version. The version of the application.
- Module. The module within the application experiencing software errors.
- Month
- No. of Errors. The number of software errors on the device in the Month.
- Windows Event ID
- Windows Event Provider
- [Location Level](#)

Software Errors - Top Errors Weekly Summary Report

The Software Errors, Top Errors Weekly Summary report:

- Provides a weekly summary of software errors and number of devices experiencing software errors.
- Includes the following tabs: Weekly Summary, Errors Summary, and Details.

Weekly Summary tab

The weekly summary tab visualizations show a monthly break down of number of software errors and No. of Devices experiencing software errors by week.

The visualization includes:

- X-axis: Month.

- Y-axis: The number of Software Errors and No. of Devices.
- Color by: The number of Software Errors and No. of Devices.

The visualization is sorted based on the latest to earliest week (from left to right).

Errors Summary tab

The errors summary tab visualizations show a weekly breakdown of top software applications experiencing software error.

Number of Software Errors

The number of software errors visualization shows a weekly break down of the number of software errors by top software applications experiencing errors.

The visualization includes:

- X-axis: The number of Software Errors.
- Y-axis: Application Name.
- Color by: Week.

The visualization is sorted based on the software application having the most errors in the current week.

No. of Devices

No. of Devices visualization shows a weekly break down of No. of Devices by top software applications experiencing errors.

- The visualization includes:
- X-axis: No. of Devices.
- Y-axis: Application Name.
- Color by: Week.

The visualization is sorted based on the software application having the most errors in the current week in the Number of Software Errors visualization.

Details tab

The Details tab provides additional information on devices, applications, versions, and modules experiencing software errors in a tabular format.

- [Device Details](#)
- Operating System. The operating system information on the date of the software error.
- Operating System Release. The Operating System release information on the date of the software error.
- Operating System Build No. Detailed information of the operating system version on the date of the software error.
- Application Name. The name of the application experiencing software errors.
- Application Version. The version of the application.
- Module. The module within the application experiencing software errors.
 - Month
 - Week
- No. of Errors. The number of software errors on the device in the Month.
- Windows Event ID.
- Windows Event Provider.

- [Location Level](#)

Software Inventory Reports

The Software Inventory reports enable the IT administrator to view the operating system version and applications installed on devices, including the following:

- When an application was last updated.
- The top applications installed within the fleet.
- Applications updated/installed within this week, last week, or last month

The Software Inventory reports:

- Is available for both HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating system.
Note: macOS is only available in HP TechPulse Proactive Endpoint Management plan.
- Includes Microsoft Windows store software applications and macOS iOS factory default applications.
- Includes the following reports – All Data, Details, Recently Detected Applications, and Summary.

Software Inventory – All Data Report

The Software Inventory All Data report:

- Allows the ability to filter on all available Software inventory fields.
- Includes the following tab: Details.

Software Inventory – Details Report

The Software Inventory Details report:

- Provides information on software applications by device by application state (installed/updated and/or uninstalled)
- Is available for both HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating systems.
- Note: macOS IOS is only available in HP TechPulse Enhanced and Premium plans
- Includes the following tabs: Summary, and Details.

The application state is categorized as:

- Installed.
- Uninstalled.

The application detected is categorized as:

- Today. Software application was last detected as either installed/updated or uninstalled in the last twenty-four hours.
- Yesterday. Software application was last detected as either installed/updated or uninstalled yesterday.
- This week. Software application was last detected as either installed/updated or uninstalled sometime with this week.
- 1 week ago. Software application was last detected as either installed/updated or uninstalled more than a week ago.
- 2 weeks ago. Software application was last detected as either installed/updated or uninstalled more than two weeks ago.



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- 3 weeks ago. Software application was last detected as either installed/updated or uninstalled more than three weeks ago.
- 4 weeks ago. Software application was last detected as either installed/updated or uninstalled more than four weeks ago.
- 5 weeks ago. Software application was last detected as either installed/updated or uninstalled more than five weeks ago.
- 6 weeks ago. Software application was last detected as either installed/updated or uninstalled more than six weeks ago.
- 7 weeks ago. Software application was last detected as either installed/updated or uninstalled more than seven weeks ago.
- 8 weeks ago. Software application was last detected as either installed/updated or uninstalled more than eight weeks ago.
- 3 months ago. Software application was last detected as either installed/updated or uninstalled more than three months ago.
- 4-6 months ago. Software application was last detected as either installed/updated or uninstalled in the last four to six months.
- More than 6 months ago. Software application was last detected as either installed/updated or uninstalled more than six months ago.
- Unknown. HP TechPulse is unable to get the installed/updated or uninstalled date. This usually occurs for macOS iOS devices enrolled in either VMWare Workspace ONE or Microsoft Endpoint Manager.

Note: If a software application is installed on a device prior to installation of HP TechPulse software on the device, the application detected date defaults to the first date that the application was detected on the device by HP TechPulse.

Summary tab

The number of software applications by device by application state.

The visualization includes:

- X-axis: Device Name.
- Y-axis: The number of Applications (i.e. The number of software applications).
- Color by: Application State.

The visualization is sorted based on:

- Devices (i.e. Device Name) having the greatest number of software applications to the devices having the least number of software applications.

Details tab

The Details tab provides additional information on device and software applications in a tabular format.

- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Application Detected
- Application Name. The friendly name of the software application.
- Application Version. The version information of the software application.
- Operating System. The major operating system found on the device
- Application State

- [Location Level](#)

The details tab has a default sorting order of:

1. Device Name in ascending order, followed by,
2. Application Detected in ascending order, followed by
3. Application Name in ascending order.

Software Inventory - Recently Detected Applications Report

The Software Inventory Recently Detected Application report:

- Provides information on the recently detected applications by application state (installed/updated and/or uninstalled) by application detected (i.e. the date that the software application was either installed or uninstalled from the device).
- Is available for both HP and non- HP devices.
- Is available for Android, macOS and Microsoft Windows operating systems.
Note: macOS IOS is only available in HP TechPulse Enhanced and Premium plans.
- Includes the following tabs: Summary, and Details.

The application state is categorized as:

- Installed.
- Uninstalled.

The application detected is categorized as:

- Today. Software application was last detected as either installed/updated or uninstalled in the last twenty-four hours.
- Yesterday. Software application was last detected as either installed/updated or uninstalled yesterday.
- This week. Software application was last detected as either installed/updated or uninstalled sometime with this week.
- 1 week ago. Software application was last detected as either installed/updated or uninstalled more than a week ago.
- 2 weeks ago. Software application was last detected as either installed/updated or uninstalled more than two weeks ago.
- 3 weeks ago. Software application was last detected as either installed/updated or uninstalled more than three weeks ago.
- 4 weeks ago. Software application was last detected as either installed/updated or uninstalled more than four weeks ago.
- 5 weeks ago. Software application was last detected as either installed/updated or uninstalled more than five weeks ago.
- 6 weeks ago. Software application was last detected as either installed/updated or uninstalled more than six weeks ago.
- 7 weeks ago. Software application was last detected as either installed/updated or uninstalled more than seven weeks ago.
- 8 weeks ago. Software application was last detected as either installed/updated or uninstalled more than eight weeks ago.
- 3 months ago. Software application was last detected as either installed/updated or uninstalled more than three months ago.



- 4-6 months ago. Software application was last detected as either installed/updated or uninstalled in the last four to six months.
- More than 6 months ago. Software application was last detected as either installed/updated or uninstalled more than six months ago.
- Unknown. HP TechPulse is unable to get the installed/updated or uninstalled date. This usually occurs for macOS IOS devices enrolled in either VMWare Workspace ONE or Microsoft Endpoint Manager.

Note: If a software application is installed on a device prior to installation of HP TechPulse software on the device, the application detected date defaults to the first date that the application was detected on the device by HP TechPulse.

Summary tab

The number of software applications by application detected by application state.

The visualization includes:

- X-axis: Application Detected.
- Y-axis: The number of Applications (i.e. The number of software applications).
- Color by: Application State.

The visualization is sorted based on:

- Application Detected in ascending order.

Details tab

The Details tab provides additional information on device and software applications in a tabular format.

- Application Detected.
- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Application Name. The friendly name of the software application.
- Application Version. The version information of the software application.
- Operating System. The major operating system found on the device
- Application State.
- [Location Level](#)

The details tab has a default sorting order of:

1. Application Detected in ascending order, followed by
2. Device Name in ascending order, followed by
3. Application Name in ascending order.

Software Inventory – Summary Report

The Software Inventory Summary report:

- Provides a summary of software applications installed across all devices by operating system.
- Is available for both HP and non-HP devices.
- Is available for Android, macOS IOS, macOS, and Microsoft Windows operating systems.
Note: macOS is only available in the Proactive Endpoint Management plan.
- Includes the following tabs: Summary, and Details.

The report also includes a filter criterion called Installed % which allows to generate the report for either top or bottom software applications installed across all devices. The Installed % is No. of Devices that has a software application installed / the number of total enrolled devices for a particular operating system. Adding a filter criterion of Installed % Greater than or Equal to a 97 from the respective dropdown, shows the top software applications installed on 97% of the devices. Adding a filter criterion of Installed % Less than or Equal to a 3 from the respective dropdown, shows the bottom software applications installed on 3% of the devices.

Summary tab

The Summary tab provides a summary of software applications installed by operating system.

The visualization includes:

- X-axis: Application Name.
- Y-axis: No. of Devices.
- Color by: Operating System.

The visualization is sorted based on:

- Application Name's found on most No. of Devices to the least of devices.

Details tab

The Details tab provides a summary of software applications installed by operating system in a tabular format.

- Operating System. The major operating system found on the device
- Application Name. The name of the software application installed on the device.
- Installed Devices. No. of Devices that has a software application installed.
- Total Devices. The number of total devices by operating system enrolled in HP TechPulse
- Installed %. $\text{Installed Devices} / \text{Total Devices} * 100$.
- [Location Level](#)

Software Updates Report

The Software Updates report:

- Provides information on the Microsoft Windows and Microsoft Office updates missing on the devices and the criticality type of the updates.
- Microsoft Office Updates report covers all updates for Microsoft Access, Excel, OneNote, Outlook, PowerPoint, Publisher, Visio, Word, InfoPath, Project, OneDrive, SharePoint, Teams, and Skype for Business products.
- Microsoft Windows Updates report covers all other updates that come through Windows Updates API, including non-Microsoft ones.
- Is available for both HP and non-HP devices.
- Is available for Microsoft Windows operating systems.
- Includes the following tabs: By Model, By OS Release, By Week, By Update, and Details.

The missing updates are categorized by severity: Critical, Important, Moderate, Low, and Unknown status. For more information on each of the severity types, see:

<https://www.microsoft.com/en-us/msrc/security-update-severity-rating-system>.

Reports can be filtered by:

- Devices missing critical updates`
- Devices missing important updates
- Devices missing moderate updates
- Devices missing low importance updates
- Device model
- KB code of the update
- OS Release

Note: A device missing more than one type of update is accounted for only once under the most critical missing update category. Example: If a device is missing a critical update, an important update, and a moderate update, the device is accounted for under the category of devices missing critical updates. It will not be accounted under the categories of devices missing important updates or devices missing moderate updates.

By Model tab

The bar chart displays the number of devices by device model and the category of the device.

Clicking any section of the bar chart results in a drill-down view of the missing updates for that criticality type and device model.

The visualization includes:

- X-axis: Number of devices by criticality type
- Y-axis: Device model
- Color by: Criticality

By OS Release tab

The bar chart displays the number of devices by OS release and the category of the device.

Clicking any section of the bar chart results in a drill-down view of the missing updates for that criticality type and OS release.

The visualization includes:

- X-axis: Number of devices by criticality type
- Y-axis: OS release
- Color by: Criticality

By Week tab

Number of devices by week for different device categories represented as a percentage of the total number of devices.

Clicking on any section of the chart results in a drill-down view of the device categories for the latest week only.

The visualization includes:

- X-axis: Week
- Y-axis: Share of the total number of devices (%)
- Color by: Criticality

By Update tab

Lists the missing updates across all devices in the organization. You can search for an update by name, KB code, severity type, or a string in the description text. The By Update tab helps in finding an update which is missing the most on the devices in your organization.

The list is sorted based on:

- Count of devices missing this update
- Percentage of total devices

Details tab

The Details tab provides the following details on the missing updates for the latest week:

- Serial Number
- [Device Details](#)
- OS Name
- OS Release
- Last Seen
- Missing Update KB Code
- Missing Update Criticality
- [Location Level](#)

Software Utilization Report

The Software Utilization report:

- Provides information on the top twenty-five software applications that are used across the enrolled devices across all months selected.
- Is available for both HP and non- HP devices.
- Is available for Android, and Microsoft Windows operating systems. For Android, only foreground software applications are considered.
- Includes the following tabs: Top Used Windows Applications, Top Used Android Applications, and Details.

Top Used Windows Applications tab

The Top Used Windows Applications tab shows Top Actively Used Apps (Monthly Summary) and Top Apps by Usage Time visualizations.

Top Actively Used Apps (Monthly Summary)

The Top Actively Used Apps (Monthly Summary) shows the percentage of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected, and is indicated as a percentage.

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices on which the software application is utilized across all selected months.

Top Apps by Usage Time (Monthly Summary)

The Top Apps by Usage Time (Monthly Summary) shows the total number of hours of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected.

The visualization includes:

- X-axis: Application Name.
- Y-axis: The total number of hours the software application is utilized across all selected months.

Top Used Android Applications tab

The Top Used Android Applications tab shows Top Actively Used Apps (Monthly Summary) and Top Apps by Usage Time visualizations.

Top Actively Used Apps (Monthly Summary)

The Top Actively Used Apps (Monthly Summary) shows the percentage of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected, and is indicated as a percentage.

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices on which the software application is utilized across all selected months.

Top Apps by Usage Time (Monthly Summary)

The Top Apps by Usage Time (Monthly Summary) shows the total number of hours of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected.

The visualization includes:

- X-axis: Application Name.

- Y-axis: The total number of hours the software application is utilized across all selected months.

Top Used macOS Applications tab

The Top Used macOS Applications tab shows Top Actively Used Apps (Monthly Summary) and Top Apps by Usage Time visualizations.

Top Actively Used Apps (Monthly Summary)

The Top Actively Used Apps (Monthly Summary) shows the percentage of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected, and is indicated as a percentage.

The visualization includes:

- X-axis: Application Name.
- Y-axis: The percentage of devices on which the software application is utilized across all selected months.

Top Apps by Usage Time (Monthly Summary)

The Top Apps by Usage Time (Monthly Summary) shows the total number of hours of software applications ranked by No. of Devices using the software applications (across all its versions) / total No. of Devices, across all months selected.

The visualization includes:

- X-axis: Application Name.
- Y-axis: The total number of hours the software application is utilized across all selected months.

Details tab

- The Details tab provides additional information on software applications utilization in a tabular format.
- Application Name. The friendly name and version of the software application.
- Application Version. The version of the software application.
- Application Rank (Application Usage (%)). The rank of the software application across all devices in across all months based on Application Usage (%).
- Application Usage (%). The total No. of Devices using the software application across all months / total No. of Devices.
- No. of Devices Using Application. The total No. of Devices using a software application across all months.
- Total No. of Devices. The total number of enrolled devices.
- Application Rank (Avg. Application Usage (hrs.)). The rank of the software application across all devices across all months based on Avg. Application Usage (hrs.).
- Application Usage (hrs.). The total number of hours that a software application is used across all devices across all months.
- Avg. Application Usage (hrs.). The total number of hours that the software application is used across all devices across all months / total number of enrolled devices.
- Operating System.
- [Location Level](#)

The details tab is sorted based on:

1. Application Rank (Application Usage (%)) in ascending order, followed by
2. Application Usage (%) in descending order.

Web Applications Report

The Web Applications report:

- Provides a detailed list of web application utilization on enrolled devices.
- Is available for Window devices running Google Chrome or Mozilla Firefox.
- Contains the following tabs: Utilization Summary and Details.
- Is not enabled by default. To enable the Web Applications report, navigate to **Settings > Preferences > Data Collection** and toggle **Web Application Usage**.

Utilization Summary tab

Depending on filter selection the Utilization Summary tab displays a tree-map or a bar chart visualization of web applications utilization.

A web application is defined as a specific domain and subdomain accessed via browser.

The bar chart is sorted by:

- The number of times a web application has been accessed
- The number of devices that have accessed the web application.

The bar chart helps when you have many users and devices.

The tree-map displays the number of times a web application has been accessed and the number of unique devices that have accessed the web application.

You can click on any domain URL to drill down for more details on the Web application.

Details tab

The Details tab provides additional information on web applications and the browsers and operating systems used to access them in a tabular format.

- Domain URL: The specific web application being accessed.
- Number of Hits: The number of times a web application has been accessed.
- Total No. of Devices: The number of unique devices that have accessed the web application.
- Browser Name: The name of the browser used to access the web application.
- Browser: The browser version used to access the web application.
- Operating System: The operating system used to access the web application.
- Start Month: The month and year that the application was first accessed.
- [Location Level](#)

Windows Startup/Shutdown Performance Report

The Windows Startup/Shutdown Performance Report provides diagnostic information related to Windows performance issues related to Startup Performance, Shutdown Performance, Wakeup Performance and Reboots.

- Is available for both HP and non-HP devices.
- Is available for devices on Microsoft Windows operating system.
- Provides information on Startup Performance, Shutdown Performance, Wakeup Performance and Reboots.
- Includes the following tabs: Startup Performance, Shutdown Performance, Wakeup Performance and Reboots and Details.

Startup Performance tab

Startup Performance of the Devices (area chart)

This chart gives you a summary of the startup performance of devices over the last 12 weeks' time trend broken down by the following clickable filters: More than 5 minutes, 3-5 minutes, 1-3 minutes, Less than 1 minute, and No Performance.

- What classifies a device startup? The moment a user presses the power button until completion of the post-boot activity. In other words, the desktop is shown, and the CPU and disk remain 80% idle for 10 seconds. **More than 5 minutes:** Events occurring on the device that is causing the boot time to be over 5 minutes. Action needs to be taken on these devices and models to see what is causing the slowdown.

Refer to the **Top Slowdown Reasons** table to see what application, driver, or policy is causing the issue.

Similarly, you can act on devices that fall under 3-5 minutes, 1-3 minutes, and Less than 1 minute.

- **No Performance:** During bootup, there were no issues with events. The device is performing as expected on startup, and there is no slowdown reason to act on.

The visualization includes:

- X-axis: Week.
- Y-axis: The number of devices.
- Color by: Performance.

The visualization is sorted based on the earliest to latest week (from left to right).

Clicking on any time node on the chart for the most recent week will display a drill down bar chart for that time category by every device model. This feature is only available for the most recent week.

Bar Chart by Model

Clicking any "area" section of the chart will drill down to the details for that category by every device model impacted for the most recent week - startup performance of devices by specific model.

Top Slowdown Reasons (for the most recent week)

The Top Slowdown Reasons provides details on the top slowdown reasons for the current week in tabular format. Each row represents aggregated data across the fleet for a single slowdown reason. This visualization is sorted based on Severity Rank, ascending.

If the slowdown reason is not available in the Windows events, then the slowdown reason is listed as **Unknown**. If the slowdown reason is known, but additional details are not available in the Windows events, then **N/A** is displayed under the respective columns.

- Top Slowdown Reason: Name of the service or application causing the slowdown
- Type: Name of the event type that is causing the slow startup: application, device, driver, service, session manager, unknown, and user policy
- Description: Description, if available, for the slowdown

- **Publisher:** The publisher of the service or application causing the slowdown
- **Version:** Version information of the service or application causing the slowdown, if available
- **Severity Rank:** Calculated for each slowdown reason as the total number of slowdown incidents per week divided by the total number of devices
- **Device Impacted:** Number of devices with the specific slowdown reason
- **Share of total number of devices:** Number of devices impacted by a slowdown cause divided by number of devices in the company
- **Weekly Trend** – A visualization showing the number of devices impacted by the slowdown reason over Last 12 weeks.

Shutdown Performance tab

Shutdown Performance of the Devices (area chart over time)

This chart gives you a summary of the shutdown performance of devices over the last 12 weeks' time trend broken down by the following clickable filters: More than 5 minutes, 3-5 minutes, 1-3 minutes, Less than 1 minute, and No Performance.

- **More than 5 minutes:** Events occurring on the device that is causing the shutdown time to be over 5 minutes. Action needs to be taken on these devices and models to see what is causing the slowdown. Refer to the **Top Slowdown Reasons** table to see what application, driver, or policy is causing the issue. Similarly, you can act on devices that fall under 3-5 minutes, 1-3 minutes, and Less than 1 minute.
- **No Performance:** During shutdown, there were no issues with events. The device is performing as expected on shutdown, and there is no slowdown reason to act on.

The visualization includes:

- X-axis: Week.
- Y-axis: The number of devices.
- Color by: Performance.

The visualization is sorted based on the earliest to latest week (from left to right).

Clicking on any time node on the chart for the most recent week will display a drill down bar chart for that time category by every device model. This feature is only available for the most recent week.

Bar Chart by Model

Clicking any "area" section of the chart will drill down to the details for that category by every device model impacted for the most recent week - shutdown performance of devices by specific model.

Top Slowdown Reasons (for the most recent week)

The Top Slowdown Reasons provides details on the top slowdown reasons for the current week in tabular format. Each row represents aggregated data across the fleet for a single slowdown reason. This visualization is sorted based on Severity Rank, ascending.

If the slowdown reason is not available in the Windows events, then the slowdown reason is listed as **Unknown**. If the slowdown reason is known, but additional details are not available in the Windows events, then **N/A** is displayed under the respective columns.

- **Top Slowdown Reason:** Name of the service or application causing the slowdown.
- **Type:** Name of the event type that is causing the slow shutdown: application, device, driver, service, session manager, unknown, and user policy
- **Description:** Description, if available, for the slowdown
- **Publisher:** The publisher of the service or application causing the slowdown
- **Version:** Version information of the service or application causing the slowdown, if available

- **Severity Rank:** Calculated for each slowdown reason as the total number of slowdown incidents per week divided by the total number of devices
- **Device Impacted:** Number of devices with the specific slowdown reason
- **Share of total number of devices:** Number of devices impacted by a slowdown cause divided by number of devices in the company
- **Weekly Trend:** A visualization showing the number of devices impacted by the slowdown reason over last 12 weeks.

Wakeup Performance tab

The Wakeup Performance tab shows the Wakeup Performance of the Devices and Top Slowdown Reasons visualizations. The wakeup performance is calculated for devices that are in Modern Standby state.

Wakeup Performance of the Devices (area chart over time)

This chart gives you a summary of the wakeup performance of devices over the last 12 weeks' time trend broken down by the following clickable filters: More than 5 minutes, 3-5 minutes, 1-3 minutes, Less than 1 minute, and No Performance.

- **More than 5 minutes:** Events occurring on the device that is causing the wakeup time to be over 5 minutes. Action needs to be taken on these devices and models to see what is causing the slowdown.
Refer to the **Top Slowdown Reasons** table to see what application, driver, or policy is causing the issue.
Similarly, you can act on devices that fall under 3-5 minutes, 1-3 minutes, and Less than 1 minute.
- **No Performance:** During shutdown, there were no issues with events. The device is performing as expected on shutdown, and there is no slowdown reason to act on.

The visualization includes:

- X-axis: Week.
- Y-axis: The number of devices.
- Color by: Performance.

The visualization is sorted based on the earliest to latest week (from left to right).

Clicking on any time node on the chart for the most recent week will display a drill down bar chart for that time category by every device model. This feature is only available for the most recent week.

Bar Chart by Model

Clicking any "area" section of the chart will drill down to the details for that category by every device model impacted for the most recent week – wakeup performance of devices by specific model.

Top Slowdown Reasons (for the most recent week)

The Top Slowdown Reasons provides details on the top slowdown reasons for the current week in tabular format. Each row represents aggregated data across the fleet for a single slowdown reason. This visualization is sorted based on Severity Rank, ascending.

If the slowdown reason is not available in the Windows events, then the slowdown reason is listed as **Unknown**. If the slowdown reason is known, but additional details are not available in the Windows events, then **N/A** is displayed under the respective columns.

- **Top Slowdown Reason:** Name of the service or application causing the slowdown.
- **Type:** Name of the event type that is causing the slow shutdown: application, device, driver, service, session manager, unknown, and user policy
- **Description:** Description, if available, for the slowdown
- **Publisher:** The publisher of the service or application causing the slowdown
- **Version:** Version information of the service or application causing the slowdown, if available

- **Severity Rank:** Calculated for each slowdown reason as the total number of slowdown incidents per week divided by the total number of devices
- **Device Impacted:** Number of devices with the specific slowdown reason
- **Share of total number of devices:** Number of devices impacted by a slowdown cause divided by number of devices in the company
- **Weekly Trend:** A visualization showing the number of devices impacted by the slowdown reason over last 12 weeks.

By Model tab

The By Model tab shows visualization of every device model impacted for the following states:

- Startup
- Shutdown
- Wakeup

The visualization includes:

- X-axis: Time in minutes
- Y-axis: Device model

Reboots tab

The Reboots tab shows visualization of the number of devices by time since last reboot for the current week. Devices that have not been seen in the past 3 months are counted in the >4 Weeks category.

Number of Devices Since Last Reboot

- X axis shows time periods since last reboot: Previous Week, > 1 week, > 2 weeks, > 3 weeks, and > 4 weeks
- Y axis shows number of devices

The visualization is sorted based on the latest to earliest week category (from left to right).

Details tab

Table displaying all reporting devices with variable content. The Details Report can be displayed from all previous tabs and will display the devices relevant for that report. Refresh the page to display the entire fleet.

The Details tab can be sorted by any column.

Columns Displayed:

- [Device Details](#)
- **Last Restart Date:** Displays the date of the last restart for that device. Devices that have not been restarted in the last 90 days will not display a last restart date.
- **Event Type:** The type of performance event.
- **Current Week Performance (minutes):** The average for all events of this event type during the current week
- **Current Week Main Path Boot Time (minutes):** The average time from when the device begins start-up (Windows logo appears) until the user's desktop or log on prompt is visible.
- **Current Week Post On/Off Boot Time (minutes):** The average time from when the user's desktop or log on prompt is visible until the device is usable (the device has reached 80% idle).
- **Current Week Slowdown Reasons:** The cause of the slowdown
- **Performance Previous Week (minutes):** The average for all events of this event type during the previous week.
- **Performance Two Weeks Ago (minutes):** The average for all events of this type two weeks ago.

d. [Location Level](#)

Subscription – Seats Entitled By Device Enrollment

The Seats Entitled by Device Enrollment report:

- Provides information on:
 - Monthly and weekly subscription seats entitled vs. enrolled devices.
 - Monthly and weekly adoption rate.
 - Details of subscription expiration status
 - Details of subscription conversion status
- Is available for all roles.
- Includes the following tabs: Monthly Summary, Weekly Summary, and Details.

Monthly Summary tab

Seats Entitled By Device Enrollment bar chart

- X-axis: Month / Year
- Y-axis: (Left) Maximum Seats Entitled for a given month
(Right) Maximum Enrolled Devices for a given month
- Color by: Subscription Type (Trial, SKU, Arrear)

Adoption Percentage bar chart

- X-axis: Month/Year
- Y-axis: Maximum Adoption Percentage for a given month (Number of enrolled devices/Number of seats entitled).
- Color by: Subscription Type (Trial, SKU, Arrear)

Weekly Summary tab

Seats Entitled By Device Enrollment

- X-axis: Week / Year
- Y-axis: (Left) Maximum Seats Entitled for a given week
(Right) Maximum Enrolled Devices for a given week
- Color by: Subscription Type (Trial, SKU, Arrear)

Adoption Percentage

- X-axis: Week / Year
- Y-axis: Maximum Adoption Percentage for a given week (Number of enrolled devices/Number of seats entitled).
- Color by: Subscription Type (Trial, SKU, Arrear)

Details tab

The Details tab provides additional information on each subscription:

- Subscription Type: Trial, SKU, and Arrear
- Subscription Name
- Subscription Key (if applicable)
- Subscription Description
- SKU Code

- SKU Order Number
- Status
- Start Date: Subscription start date.
- Expiration Date: Subscription end date.
- Seats Entitled: Number of seats entitled per subscription
- Subscription Term: The term of subscription in days.
- Country: The country of the customer.
- Region: The region of the customer.
- Billing Model

Subscription Expiration Report

The Subscription Expiration report:

- Provides information on:
 - Monthly and weekly subscription seats entitled vs. enrolled devices, and monthly/weekly adoption rate. The weekly adoption rate will be used in Value Reminder Adoption rate.
 - Overall view for partners to understand the subscription expiration status of their customer base.
 - An overview of subscription conversion status for HP and partners.
- Is only available to Partners and MSPs.
- Includes the following tabs: Summary and Details.

Summary

The Summary tab shows the Subscription Expiration Status visualization.

- X-axis: Subscription Expiration Status.
- Y-axis: No. Of Companies.
- Color by: Subscription Status.

Details tab

The Details tab provides additional information on each subscription .

- Product.
- Subscription Key.
- Start Date.
- Expiration Date.
- Term.
- Seats.

Appendix

Device Country

The country information in all reports (except the mobility factor report) is the assigned country of the device based on Region & language settings associated with the user context on the device.

To view the Region & language settings on Microsoft Windows operating system:

1. On a device launch Settings application
2. In the Settings dialog, search for Region & language settings
3. The Region & language settings has two settings:
 - Country or region, and
 - Languages > Windows display language.
4. HP TechPulse leverages the Country or region as the first preference to report the country of the device. If for any reason, the Country of region is blank, then HP TechPulse leverages the Languages > Windows display language to indicate the country of the device.

Note: The country information is not based on real-time geolocation services on Proactive Insights and Proactive Endpoint Management and hence does not leverage the Location settings in HP TechPulse portal.

Device Location (geolocation)

The mobility factor leverages device's geolocation, for enrolled devices, as opposed to any device location from any external sources.

Note: HP TechPulse provides customers the flexibility to either enable or disable real-time geolocation services across all their devices, that are enrolled in HP TechPulse. The real-time geolocation service is disabled by default for all new customers and an option is provided to view and either enable or disable the real-time geolocation of all devices at any given time. Even in case of real-time geolocation service being turned on, HP TechPulse does not allow for collection of real-time device geolocation for any devices classified as employee-owned or personal devices (within the HP TechPulse portal).

To view or edit the HP TechPulse Location settings:

1. Login to the HP TechPulse portal and navigate to Settings > Preferences > Data Collection section.
2. If the Location settings is Disabled, no real-time device geolocation is captured, and mobility factor report will show the mobility factor as -1 for all devices.
3. If the Location settings is Enabled, real-time device geolocation data is captured and used in mobility factor report.

HP TechPulse leverages multiple software libraries and technologies like Wi-Fi, GPS, cell towers and IP address to determine the most appropriate real-time geolocation of the device. The real-time device geolocation information may come from estimating a position from beacons like Wi-Fi access points and cell towers, from device's IP address, or it may come from other sources like GNSS or GPS (if available).

For desktop and notebook device type's using Wi-Fi networks, the real-time device geolocation is interpreted using Wi-Fi network card or the router connected with the device. The router location is obtained either using near-by cell tower or internet service provider. mobile devices, the GSM radio based on cell networks is used for interpreting the real-time geolocation.

Device Details

Most reports show the following device information on the Details tab.

- Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
- Serial Number. Serial number of the device.
- Device Type. Type of device.
- Device Manufacturer. Manufacture of the device.
- Device Model. Model of the device.
- Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
- Operating System. The operating system on the device. For example, Windows 10, Android 8, Android 9, IOS 10, IOS 11, MAC 10 etc.
- Last Seen. Last online date of the device.
- [Location Level](#). Location of the device that is assigned using the registry key path.

Device Warranty Details

Most reports show the following device warranty information in Details tab.

- Device Warranty Status. The overall Warranty/Care pack status of the device.
- Device Warranty Date. The overall end date of the warranty and care pack combined.

Note: The device warranty status provides a combined overall status of all warranty and/or care pack of a device as a singular value, categorized as:

- In warranty. The device has an active warranty and/or carepack.
- Out of warranty. The device does not have any active warranty and/or care packs.
- Not applicable. The device is not a HP manufactured device.
- Unknown. Unable to determine if the HP device has warranty and/or care packs.

Note: The device warranty and care pack information are only available for HP devices

The details tab has a default sorting order of Device Name in ascending order.

Threat Kill Chain Details

Sure Click Pro now supports the ability to view threat bundles. This report summarizes the threats seen, categories, severity, malware family, and MITRE ATT&CK™ framework techniques seen (and protected against). These can be accessed from the **Sure Click Pro Security** report under the **Threat Protection Details** tab by clicking the **View Details** link.

The link will take the user to a threat bundle Summary tab. For each threat, the threat Summary tab shows any MITRE ATT&CK™ techniques used in the attack. From the right panel in the Summary tab, the viewer can drill into the MITRE attack details for more information and link to various 3rd party sources for the latest information for a given behavior associated with the threat.

Threat Intelligence: Graph, Files, Behavioral, and Network Tabs

Additional tabs have been added to the threat bundle page, which provides a view to all of the files and hashes related to an attack, a complete behavioral analysis of the threat using the unique micro-VM introspection technology and a comprehensive list of the network activity captured during the time of the attack. These tabs can be stepped through to gain a better understanding of the intent of the malware.



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