

**HP Device as a Service (DaaS)**

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**HP Proactive Management   
with HP TechPulse   
Reporting Guide**

[Introduction 5](#_Toc530950713)

[Hardware Reports 5](#_Toc530950714)

[Security Reports 6](#_Toc530950715)

[Software Reports 6](#_Toc530950716)

[Incident Reports 7](#_Toc530950717)

[Reports by Proactive Management plan and platform 7](#_Toc530950718)

[Report Rules 9](#_Toc530950719)

[Roles 9](#_Toc530950720)

[Report Operations 11](#_Toc530950721)

[Report List 11](#_Toc530950722)

[Creating Reports 11](#_Toc530950723)

[Editing Reports 12](#_Toc530950724)

[Deleting Reports 12](#_Toc530950725)

[Duplicating Reports 13](#_Toc530950726)

[Previewing Reports 13](#_Toc530950727)

[Running Reports 13](#_Toc530950728)

[Filtering Criteria in Reports 14](#_Toc530950729)

[Scheduling Reports 14](#_Toc530950730)

[Report Preferences 15](#_Toc530950731)

[Finding, Filtering and Sorting Reports 17](#_Toc530950732)

[Reporting Layout and Navigation 18](#_Toc530950733)

[HTML Reports 18](#_Toc530950734)

[Report Name and Description 18](#_Toc530950735)

[Report Header 18](#_Toc530950736)

[Visualizations and Drilldowns 18](#_Toc530950737)

[Visualization Options 18](#_Toc530950738)

[PDF Reports 19](#_Toc530950739)

[Report Name and Description 19](#_Toc530950740)

[Report Header 19](#_Toc530950741)

[Visualizations and Drilldowns 19](#_Toc530950742)

[Excel Reports 19](#_Toc530950743)

[Report Name and Description 19](#_Toc530950744)

[Report Header 19](#_Toc530950745)

[Visualizations and Drilldowns 19](#_Toc530950746)

[Report Descriptions 20](#_Toc530950747)

[BIOS Inventory Report 20](#_Toc530950748)

[Summary 20](#_Toc530950749)

[Details Tab 20](#_Toc530950750)

[Battery Replacement Report 22](#_Toc530950751)

[Summary 22](#_Toc530950752)

[Battery Replacement Summary 22](#_Toc530950753)

[Battery Replacement Summary by Warranty 22](#_Toc530950754)

[By Device Manufacturer 24](#_Toc530950755)

[By Manufacture Year 24](#_Toc530950756)

[Details Tab 24](#_Toc530950757)

[Blue Screen Error Reports 26](#_Toc530950758)

[Blue Screen Errors – Details Report 26](#_Toc530950759)

[Details Tab 26](#_Toc530950760)

[Blue Screen Errors - Top Devices with Errors Report 26](#_Toc530950761)

[Summary Tab 27](#_Toc530950762)

[Details Tab 27](#_Toc530950763)

[Blue Screen Errors - Top Errors Report 27](#_Toc530950764)

[Monthly Summary 27](#_Toc530950765)

[Errors Summary 28](#_Toc530950766)

[Number of Blue Screen Errors 28](#_Toc530950767)

[Number of Devices 28](#_Toc530950768)

[Drivers Summary 28](#_Toc530950769)

[Number of Blue Screen Errors 28](#_Toc530950770)

[Number of Devices 28](#_Toc530950771)

[Details Tab 30](#_Toc530950772)

[Device Utilization Report 31](#_Toc530950773)

[High CPU utilization 31](#_Toc530950774)

[High memory utilization 33](#_Toc530950775)

[Summary 33](#_Toc530950776)

[CPU Utilization Summary 33](#_Toc530950777)

[Memory Utilization Summary 33](#_Toc530950778)

[By Manufacture Year 33](#_Toc530950779)

[CPU Utilization by Device Manufacture Year 33](#_Toc530950780)

[Memory Utilization by Device Manufacture Year 33](#_Toc530950781)

[Software Performance 34](#_Toc530950782)

[Applications Causing CPU Overutilization 34](#_Toc530950783)

[Applications Casing Memory Overutilization 34](#_Toc530950784)

[Details Tab 34](#_Toc530950785)

[Disk Capacity Planning Report 36](#_Toc530950786)

[Summary 36](#_Toc530950787)

[By Disk Size 36](#_Toc530950788)

[By Disk Model 38](#_Toc530950789)

[Details Tab 38](#_Toc530950790)

[Disk Replacement Report 39](#_Toc530950791)

[Summary 39](#_Toc530950792)

[Disk Replacement Summary 39](#_Toc530950793)

[Disk Replacement Summary by Warranty 39](#_Toc530950794)

[By Disk Size 41](#_Toc530950795)

[Devices by Disk Size 41](#_Toc530950796)

[Disk Replacement Summary by Disk Size 41](#_Toc530950797)

[By Device Manufacturer 41](#_Toc530950798)

[By Manufacture Year 42](#_Toc530950799)

[Details Tab 42](#_Toc530950800)

[Hardware Health Monthly Summary Report 43](#_Toc530950801)

[Health Summary 44](#_Toc530950802)

[Resource Health Summary 44](#_Toc530950803)

[Details Tab 44](#_Toc530950804)

[Hardware Inventory Reports 46](#_Toc530950805)

[Hardware Inventory - Details Report 46](#_Toc530950806)

[By Location 46](#_Toc530950807)

[By Device Configuration 46](#_Toc530950808)

[By Device Type 46](#_Toc530950809)

[By Device Manufacturer 46](#_Toc530950810)

[By Manufacture Year 46](#_Toc530950811)

[By Operating System 46](#_Toc530950812)

[Details Tab 47](#_Toc530950813)

[Hardware Inventory – Device Enrollment Status Report 48](#_Toc530950814)

[Monthly Summary 48](#_Toc530950815)

[Summary 48](#_Toc530950816)

[Details 48](#_Toc530950817)

[Hardware Inventory - Monthly Summary Report 49](#_Toc530950818)

[Summary 49](#_Toc530950819)

[Summary 49](#_Toc530950820)

[By Device Type 49](#_Toc530950821)

[By Device Manufacturer 49](#_Toc530950822)

[Details 49](#_Toc530950823)

[Hardware Replacement Report 51](#_Toc530950824)

[Summary 52](#_Toc530950825)

[Affected Devices 52](#_Toc530950826)

[Device Health Summary 52](#_Toc530950827)

[Details 52](#_Toc530950828)

[Hardware Warranty Report 54](#_Toc530950829)

[Summary 54](#_Toc530950830)

[By Manufacture Year 54](#_Toc530950831)

[By Device Manufacturer 54](#_Toc530950832)

[By Warranty Expiration 54](#_Toc530950833)

[Details Tab 55](#_Toc530950834)

[Mobility Factor Report 57](#_Toc530950835)

[Summary 57](#_Toc530950836)

[Details Tab 57](#_Toc530950837)

[Thermal Grading Report 58](#_Toc530950838)

[Summary 58](#_Toc530950839)

[Details Tab 58](#_Toc530950840)

[Company Security Compliance Reports 60](#_Toc530950841)

[Company Security Compliance - Monthly Summary Report 60](#_Toc530950842)

[Summary 61](#_Toc530950843)

[Details Tab 61](#_Toc530950844)

[Company Security Compliance - 24 Hour Summary Report 61](#_Toc530950845)

[Summary 63](#_Toc530950846)

[Details Tab 64](#_Toc530950847)

[Device Security Compliance Reports 65](#_Toc530950848)

[Device Security Compliance - Monthly Summary Report 65](#_Toc530950849)

[Summary 66](#_Toc530950850)

[Details Tab 66](#_Toc530950851)

[Device Security Compliance - 24 Hour Summary Report 67](#_Toc530950852)

[Antivirus Applications 69](#_Toc530950853)

[Firewall Applications 69](#_Toc530950854)

[Summary 69](#_Toc530950855)

[Details 69](#_Toc530950856)

[Device Compromised Report 72](#_Toc530950857)

[Summary 74](#_Toc530950858)

[Details Tab 74](#_Toc530950859)

[Lost Device Protection Reports 75](#_Toc530950860)

[Lost Device Protection – Details Report 75](#_Toc530950861)

[Summary 75](#_Toc530950862)

[Details 75](#_Toc530950863)

[Lost Device Protection - Top Devices Report 76](#_Toc530950864)

[Top Devices 76](#_Toc530950865)

[Details Tab 76](#_Toc530950866)

[Non-Reporting Devices Report 77](#_Toc530950867)

[Summary 77](#_Toc530950868)

[Details Tab 77](#_Toc530950869)

[Software Inventory Reports 78](#_Toc530950870)

[Software Inventory – Details Report 78](#_Toc530950871)

[Summary 79](#_Toc530950872)

[Details Tab 79](#_Toc530950873)

[Software Inventory - Recently Detected Applications Report 81](#_Toc530950874)

[Summary 82](#_Toc530950875)

[Details Tab 82](#_Toc530950876)

[Software Inventory – Summary Report 83](#_Toc530950877)

[Summary 83](#_Toc530950878)

[Details Tab 83](#_Toc530950879)

[Software Catalog Compliance Report 84](#_Toc530950880)

[Summary 84](#_Toc530950881)

[Details Tab 84](#_Toc530950882)

[Software Utilization Report 85](#_Toc530950883)

[Top Used Windows Applications 85](#_Toc530950884)

[Top Actively Used Apps (Monthly Summary) 85](#_Toc530950885)

[Top Apps by Usage Time (Monthly Summary) 85](#_Toc530950886)

[Top Used Android Applications 86](#_Toc530950887)

[Top Actively Used Apps (Monthly Summary) 86](#_Toc530950888)

[Top Apps by Usage Time (Monthly Summary) 86](#_Toc530950889)

[Details Tab 86](#_Toc530950890)

[Software Errors Reports 88](#_Toc530950891)

[Software Errors - 24 Hour Summary Report 88](#_Toc530950892)

[24 Hour Summary 88](#_Toc530950893)

[Software Errors - Top Devices with Errors Report 88](#_Toc530950894)

[Summary 89](#_Toc530950895)

[Details Tab 89](#_Toc530950896)

[Software Errors - Top Errors Report 89](#_Toc530950897)

[Monthly Summary 90](#_Toc530950898)

[Errors Summary 90](#_Toc530950899)

[Number of Software Errors 90](#_Toc530950900)

[Number of Devices 90](#_Toc530950901)

[Details Tab 90](#_Toc530950902)

[Incident Resolution Report 91](#_Toc530950903)

[Summary 91](#_Toc530950904)

[Incident Burndown 91](#_Toc530950905)

[Incident Response and Closure Time(s) 91](#_Toc530950906)

[Details Tab 91](#_Toc530950907)

[Appendix 93](#_Toc530950908)

[Device Country 93](#_Toc530950909)

[Device Location 93](#_Toc530950910)

# Introduction

The **HP Device as a Service Proactive Management with TechPulse** (*henceforth Proactive Management*), reports provide insightful analytics on planning and cost optimization and service management capabilities of devices enrolled in Proactive Management. The reports are divided into four different categories – Hardware, Security, Software and Incidents.

## Hardware Reports

The hardware category reports include all reports related to hardware insights. The following is the list of hardware reports from Proactive Management.

| Category Name | Description |
| --- | --- |
| BIOS Inventory | Provides BIOS information of devices enrolled in Proactive Management. |
| Battery Replacement | Provides information on battery replacement recommendation timeframes of devices enrolled in Proactive Management. |
| Blue Screen Errors | Provides information on devices experiencing blue screen and driver crashes for devices enrolled in Proactive Management. |
| 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 devices enrolled in Proactive Management. |
| 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. |
| Hardware Warranty | Provides an overall summary of warranty and/or care pack status of devices enrolled in Proactive Management. |
| Mobility Factor | 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 e.g., 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 a rank between 1 to 10 and is a relative ranking across all devices in Proactive Management. A ranking of 1 indicates device’s that are the least mobile and a ranking of 10 indicates device’s that are the most mobile. A ranking of -1 indicates that there is no location data for these devices. The mobility factor leverages device's real-time geolocation, for devices enrolled in Proactive Management, as opposed to any device location from any external sources. |
| Thermal grading | Provides information on when a device may need service to prevent a thermal incident. |

## Security Reports

The security category reports include all reports related to security insights and compliance. The following is the list of security reports from Proactive Management.

| Category Name | Description |
| --- | --- |
| Company Security Compliance | Provides company-wide monthly trends on the compliance status of antivirus and firewall endpoint protection across all devices within a company. |
| Device Security Compliance | Provides monthly trends on the compliance status of antivirus and firewall endpoint protection for each device within a company. |
| Device Compromised | Provides detailed information on the device compromised, device passcode compliance and device encryption status of devices enrolled in Proactive Management. |
| 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 Proactive Management. |

## Software Reports

The software category reports include all reports related to software insights and compliance. The following is the list of software reports from Proactive Management.

| Category Name | Description |
| --- | --- |
| 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:   * 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 Utilization | Provides information on the top twenty-five software applications that are most used across all devices. |

## Incident Reports

The incidents category reports include all reports related to incident management and resolution metrics. The following is the list of incident management reports from Proactive Management.

| Category Name | Description |
| --- | --- |
| Incident Resolution | 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).   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. |

## Reports by Proactive Management plan and platform

The following describes the reports by Proactive Management plan and platforms.

| **Category** | **Reports** | **Standard Plan\*** | | | **Enhanced Plan** | | **Premium Plan** | **DaaS for Apple** | **Microsoft Windows** | **Android** | **Apple MAC OS** | **Apple IOS** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Hardware | BIOS Inventory | |  |  | |  | |  |  |  |  |  |
| Hardware | Battery Replace-ment1 | |  |  | |  | |  |  |  |  |  |
| Hardware | Blue screen errors | |  |  | |  | |  |  |  |  |  |
| Hardware | Hardware replace-ment | |  |  | |  | |  |  |  |  |  |
| Hardware | Disk capacity planning | |  |  | |  | |  |  |  |  |  |
| Hardware | Disk replace-ment | |  |  | |  | |  |  |  |  |  |
| Hardware | Device Utilization | |  |  | |  | |  |  |  |  |  |
| Hardware | Hardware health monthly trends 2 3 4 | |  |  | |  | |  |  |  |  |  |
| Hardware | Hardware inventory | |  |  | |  | |  |  |  |  |  |
| Hardware | Hardware warranty1 | |  |  | |  | |  |  |  |  |  |
| Hardware | Mobility factor5 | |  |  | |  | |  |  |  |  |  |
| Hardware | Thermal grading | |  |  | |  | |  |  |  |  |  |
|  |  | |  |  | |  | |  | Continued | | | |
| Security | Company Security Compliance | |  |  | |  | |  |  |  |  |  |
| Security | Device Security Compliance | |  |  | |  | |  |  |  |  |  |
| Security | Device Compro-mised | |  |  | |  | |  |  |  |  |  |
| Security | Lost device protec-tion 6 | |  |  | |  | |  |  |  |  |  |
| Security | Non-reporting devices | |  |  | |  | |  |  |  |  |  |
| Software | Software Inventory | |  |  | |  | |  |  |  |  |  |
| Software | Application catalog compliance | |  |  | |  | |  |  |  |  |  |
| Software | Software errors | |  |  | |  | |  |  |  |  |  |
| Software | Software utilization | |  |  | |  | |  |  |  |  |  |
| Incidents | Incident Resolution |  | | |  | |  |  |  |  |  |  |

\* Standard plan does not available for iOS devices

 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 Intune.

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

\*\*Proactive Management 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 Intune licenses (if available as a part of their Windows 10 licensing agreement).

## Report Rules

The following rules apply:

1. The data in proactive management reports is refreshed daily (or once a day only).
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 Proactive Management roles:

1. IT Admin. This role is applicable to customers.
2. Report Admin. This role is applicable to customers.
3. Support Admin. This role is applicable to a HP Service Expert managing customer accounts.
4. Support Specialist. This role is applicable to HP Service Expert’s managing customer accounts.
5. Partner Admin. This role is applicable to partners managing customer accounts.
6. Partner Specialist. This role is applicable to partners managing customer accounts.

# Report Operations

## Report List

Proactive Management has a dedicated section for reporting that shows all information pertaining to reports.

To access the reporting section:

1. Login to Proactive Management portal and navigate to the **Reports** tab.
2. The **Reports** page shows three tabs:
   1. **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.
   2. **Custom**. The custom tab is empty for a new user and contains all the reports created by the user.
   3. **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.

## Creating Reports

Proactive Management allows creation of new reports.

To create a new report:

1. Login to Proactive Management portal and navigate to **Reports** tab.
2. Click the **Custom** tab.
3. 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.

1. In the **Default File Type** section, select the **Default File Type** as either HTML, PDF or XLSX. For e.g. select HTML.
   1. HTML file type creates the report in a new browser window.
   2. PDF and XLSX file types result in creation of a PDF and Excel file respectively.
2. In the **Preferences** section:
   1. Select **Show company details** to either show or hide the name of the Proactive Management company name in the report.
   2. Click on the **Make this a favourite report** to make this a favourite report.
3. 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.
4. Click **SAVE.**

**Note:** Proactive Management 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

Proactive Management 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 Proactive Management 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:** Proactive Management does not allow two reports with the same name within the same company for the same category, subcategory and options.

1. Change the Name, Filter Criteria, Default File Type, Preferences and click **Save.**

**Note:** Proactive Management does not allow changing Category, Subcategory and Option once the **SAVE** button is clicked.

1. Click **SAVE.**

**Note**: Proactive Management 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

Proactive Management 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 Proactive Management 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.

1. This will open the **Report Details** page.
2. Change the Name, Filter Criteria, Default File Type, Preferences.
3. Click **Save.**

## Duplicating Reports

Proactive Management allows duplicating existing reports under Standard and Custom tab that were created previously.

To duplicate an existing report:

1. Login to Proactive Management 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

Proactive Management allows previewing existing reports under Standard and Custom tab that were created previously.

To preview an existing report:

1. Login to Proactive Management portal and navigate to the **Reports** tab.
2. Click on the **Standard** or **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.

This will open the **Report Details** page.

1. Navigate to **Report Preview** section and click **RUN REPORT**.
   1. 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.
   2. 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.
2. Click **SAVE** or **DISCARD** to return to the **Reports** page.

## Running Reports

Proactive Management allows running existing reports under Standard and Custom tab that were created previously.

To run an existing report:

1. Login to Proactive Management 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.
   1. 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.
   2. 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.
   1. Click on **Download Report** button in the email from Proactive Management.
   2. If already logged in to Proactive Management 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

Proactive Management allows adding multiple filtering criteria’s to reports to narrow down to specific data.

To add filters to a new or an existing report:

1. Login to Proactive Management 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 drop down.

This will open the **Report Details** page.

1. 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.

1. 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.
   1. 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
   2. Multi-select options: Some reports like Software Inventory Details allow for searching and selection of multiple items at the same time.
2. Click the **+ Add Criteria** button to add additional filters.

**Note:** Multiple filters are added when reports are generated.

1. To delete a filter, select the cross mark next to the filter.
2. Click **SAVE.**

## Scheduling Reports

Proactive Management 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 Proactive Management 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 drop down.
4. This will open the **Report Details** page.
5. In the **Default File Type** section, select the **Default File Type** as either PDF or XLSX.
6. This will show the **Automatic Reports** section.
7. Select **Schedule periodic reports**:
   1. For once a day option:
      1. Select **Recurrence** as Once a Day.
      2. Select a time from the **At** drop down.
   2. For once a week option:
      1. Select **Recurrence** as Once a Week.
      2. Select a day from the **On** drop down.
      3. Select a time from the **At** drop down.
   3. For once a month option:
      1. Select **Recurrence** as Once a Month.
      2. Select a Start Date from the calendar.
      3. Select a time from the **At** drop down.
   4. For once a quarter option:
      1. Select **Recurrence** as Once a Quarter.
      2. Select a Start Date from the calendar.
      3. Select a time from the **At** drop down.
8. Optionally, to password protect the files from unauthorized access, in the **Security** section, select **Require password to open the document**.

Enter a password.

**Note:** The rules for password protection include:

1. The length of the password should be between 1 and 10 characters.
2. There’s no expiry date for the passwords.
3. Passwords for the previously generated reports can’t be updated.
4. Click **SAVE.**

## Report Preferences

Proactive Management allows the following preferences for each report.

* **Show company details** allows showing or hiding the name of the Proactive Management 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 2018, and a Month filter is chosen to show data for the last three months, i.e., April, March and February 2018.
  + As the report is generated in April 2018, the data for April, March and February 2018 is shown in reports when the report is generated.
  + If the same report is generated in May 2018, and if the Advance Months automatically is checked, the data for May, April and March 2018 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 favourite report** allows to make a report as a favourite.

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

1. Login to Proactive Management 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 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 favourite report.

1. Click **SAVE.**

## Finding, Filtering and Sorting Reports

Proactive Management 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 Proactive Management portal and navigate to the **Reports** tab.
2. Click on the **Standard** or **Custom** tab.
3. Select the inverted funnel icon.
   1. 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
   2. Select one or multiple report categories or subcategories under any category to see the reports belonging to the subcategory in the Reports page.
   3. 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 Proactive Management portal and navigate to the **Reports** tab.
2. Click on the **Standard** or **Custom** tab.
3. Select the sort by options from the **Sort by** drop down.
   1. Recent: Reports are shown sorted in descending order by last time the reports were edited.
   2. Favorites. Favorite reports are shown first followed by non-favourite reports.
   3. Format. Reports are shown sorted by file types. HTML reports are shown first, followed by PDF, followed by XLSX.
   4. Category. Reports are shown sorted by category names in ascending order.
   5. All (Alphabetical). Reports are shown sorted by report names in ascending order.

# Reporting Layout and Navigation

Proactive Management 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:

* 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.
* 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:

* Print Chart
* Print PNG image
* Print JPEG image
* Print PDF document
* 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.

Report Descriptions

# BIOS Inventory Report

The BIOS Inventory report provides detailed BIOS information of devices enrolled in Proactive Management. 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. Includes the following tabs: Summary, and Details.

## Summary

The number of devices ~~varies~~ by various BIOS versions and by device manufacturer.

The visualization includes:

* X-axis: BIOS version.
* Y-axis: No. of Devices.
* Color by: Device manufacturer.

The visualization is sorted based on:

1. The number of devices with the most device manufacturer, followed by
2. The BIOS versions in alphabetical order.

## Details Tab

The Details tab provides additional detailed information on device and BIOS.

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Device Type. Type of device.
4. Device Manufacturer. Manufacture of the device.
5. Device Model. Model of the device.
6. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
7. Last Seen. Last online date of the device.
8. BIOS Manufacturer. The manufacturer of the BIOS.
9. BIOS Version. The version of the BIOS.
10. BIOS Date. The date that the BIOS was updated on the device.
11. EC Firmware Version. The EC firmware version on the device.

The details tab has a default sorting order of:

1. Device Manufacturer in ascending order, followed by
2. BIOS Manufacturer in ascending order, followed by
3. BIOS Version in ascending order, followed by
4. Device Name in ascending order.

# Battery Replacement Report

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

The battery replacement report:

1. Only shows devices that are classified with device type as Notebook in Proactive Management
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 Microsoft Windows operating system.
4. Leverages HP proprietary battery data attributes (for example 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. Includes the following tabs: Summary, By Device Manufacturer, By Manufacture Year, and Details.

The battery replacement recommendation timeframe (i.e. the battery replacement timeframe) is categorized as:

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

## Summary

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

### Battery Replacement Summary

The number 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 care packs.
* 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 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

The number of devices by various battery replacement categories by device manufacturer.

The visualization includes:

* X-axis: Battery Replacement Timeframe.
* Y-axis: The number of Devices.

Color by: Device Manufacturer.

### By Manufacture Year

The number 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: The number 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.

1. Battery Replacement Timeframe.
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Device Type. Type of device.
5. Device Manufacturer. Manufacture of the device.
6. Device Model. Model of the device.
7. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
8. Last Seen. Last online date of the device.
9. Battery Serial Number. Serial number of the battery.
10. [Country](#_Device_Country). The country assigned to the device based on region & language settings.
11. 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 (for e.g., 6 months, 1 year, 2 years, 3 years). The Battery Warranty Status is only available for HP manufactured devices.
12. CT Number. CT number of the battery. Only available for HP battery’s.
13. Device Warranty Status. The overall Warranty/Care pack status of the device.
14. Device Warranty Date. The overall end date of the warranty and care pack combined.

The details tab has a default sorting order of:

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

# Blue Screen Error Reports

The Blue Screen Errors reports provide information on devices experiencing blue screen and driver crashes for devices enrolled in Proactive Management. 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:

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

### Details Tab

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

1. Date Occurred. The date the blue screen error occurred on the device
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Operating System.
5. Last Seen. Last online date of the device.
6. 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.
7. Bug Check Description. The friendly name of the bug check code as provided by Microsoft.
8. Driver. The driver causing the blue screen error.
9. Driver Version. The version of the driver.
10. [Country](#_Device_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:

1. Provides a monthly break down of the top devices experiencing blue screen errors.
2. Provides information on blue screen error code, description, Microsoft knowledge base (KB) article, driver (if any) causing the blue screen error.
3. Is available for both HP and non- HP devices.
4. Is available for Microsoft Windows operating system.
5. 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 most number of blue screen errors.

### Details Tab

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

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Operating System.
4. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
5. Last Seen. Last online date of the device.
6. Month.
7. 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.
8. Bug Check Description.
9. Driver. The driver causing the blue screen error.
10. The number of Blue Screen Errors.re

## Blue Screen Errors - Top Errors Report

The Blue Screen Errors Top Errors report:

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

### Monthly Summary

The monthly summary tab visualizations show a monthly break down of number of blue screen errors and number of devices experiencing blue screen errors.

The visualization includes:

* X-axis: Month.
* Y-axis: The number of Blue Screen Errors and the number of Devices.
* Color by: The number of Blue Screen Errors and the number of Devices.

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

### Errors Summary

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.

#### Number of Devices

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

The visualization includes:

* X-axis: The number of Devices.
* Y-axis: Bug Check Description.
* Color by: Month.

### Drivers Summary

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.

#### Number of Devices

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

The visualization includes:

* X-axis: The number 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.

1. 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.
2. Bug Check Description.
3. Month.
4. Driver. The driver causing the blue screen error.
5. Operating System. Major operating system along with the version information. The operating system feature release information is shown for Microsoft Windows 10 operating system.
6. Serial Number. Serial number of the device. Clicking on the device name hyperlink allows navigation to the device details page.
7. The number of Errors.

# Device Utilization Report

The Device Utilization report:

1. Provides information on devices that have high CPU and memory utilization.
2. Provides information on software applications causing high CPU and memory utilization.
3. Is applicable to HP and non-HP devices.
4. Is applicable to devices that have Microsoft Windows operating system.
5. Includes the following tabs: Summary, By Manufacture Year, Software Performance and Details.

## High CPU utilization

Proactive Management with TechPulse corelates data across many processor parameters to categorize a device as overutilized, underutilized, normal or unknown based on processor usage data. 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.

For simplification, it is to be assumed that Proactive Management leverages CPU time (or process time) to categorize a device as overutilized, underutilized, normal or having an unknown status. The CPU time is the amount of time for which a central processing unit (CPU) was used for processing instructions of a computer program or operating system. The CPU time is measured in clock ticks or seconds. However, often it is 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 Proactive Management 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. Proactive Management with 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, Proactive Management by TechPulse can have up to a maximum of twenty-four aggregated samples in a given day.

Proactive Management with TechPulse categorizes a device as:

* Overutilized, if on a given day, the CPU usage is more than 50 percent for at least one aggregation period.
* Normal, if on a given day, the CPU usage is between 20-50 percent for at least one aggregation period and all other aggregation periods are underutilized.
* Underutilized, if on a given day, the 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

Proactive Management with TechPulse corelates 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.

For simplification, it is to be assumed that Proactive Management with TechPulse leverages memory percent to categorize a device as overutilized, underutilized, normal or unknown.

Proactive Management with TechPulse categorizes a device as:

* Overutilized, if on a given day, the memory percent is more than 85 percent for at least one aggregation period.
* Normal, if on a given day, the 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 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.

## Summary

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

### CPU Utilization Summary

The number of devices by CPU utilization.

### Memory Utilization Summary

The number of devices by Memory utilization.

## By Manufacture Year

The By Manufacture Year tab shows a visualization each for The number 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: The number 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: The number of Devices.
* Color by: Memory Utilization.

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

## Software Performance

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.

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Device Type. Type of device.
4. Device Manufacturer. Manufacture of the device.
5. Device Model. Model of the device.
6. Manufacture Year. Manufacture year of the device. The device manufacture year is only available for HP devices.
7. Last Seen. Last online date of the device.
8. Processor. The processor found on the device.
9. Memory. The memory found on the device.
10. 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 e.g., 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 additional16 GB.
11. CPU Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
12. Memory Utilization. The categorization of the device with respect to CPU utilization as Overutilized, Normal, Underutilized, or Unknown.
13. ~~Software Applications. The names of top five software applications with the CPU and memory usage.~~
14. Apps causing High CPU Usage. The names of up to five software applications causing high CPU utilization. **Note**: Software applications not present in the top-25 applications listed in the Applications Causing CPU Overutilization visualization are also shown.
15. Apps causing High Memory Usage. The names of up to five software applications causing high memory utilization. **Note**: Software applications not present in the top-25 applications listed in the Applications Causing Memory Overutilization visualization are also shown.

The details tab has a default sorting order of:

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

# Disk Capacity Planning Report

The Disk Capacity Planning report:

1. 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%.
2. 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:
   1. Immediate. The remaining disk space has reached the threshold
   2. Within 1 month. The disk space will reach the threshold within 1 month
   3. Within 2 months. The disk space will reach the threshold within 2 months
   4. Within 3 months. The disk space will reach the threshold within 3 months
   5. 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
   6. 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.
3. Is available for HP and non-HP devices.
4. Is applicable to all devices that have Android, Apple IOS, Apple MAC and Microsoft Windows operating system.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

## Summary

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: The number 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:

1. Disk Space Status.
2. Additional Status.
3. Disk Capacity.
4. Disk Model. The model of the disk.
5. The number of Disks.

## Details Tab

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

1. Disk Space Status.
2. Additional Status.
3. Disk Capacity. The Disk Size category.
4. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
5. Serial Number. Serial number of the device.
6. Device Type. Type of device.
7. Device Manufacturer. Manufacture of the device.
8. Device Model. Model of the device.
9. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
10. Disk Serial Number. Serial number of the disk.
11. Disk Model. The model of the disk
12. Disk Capacity (GB). The raw capacity of the disk.
13. Disk Used (GB). The amount of space used on the disk.

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 devices enrolled in Proactive Management.

The disk replacement report:

1. Only includes devices that are classified as Desktop and Notebook in Proactive Management and Is available for both HP and non-HP devices
2. Is applicable to devices that have Microsoft Windows operating system.
3. Only recommends disk replacement timeframe for hard disk drives (HDD) and solid-state devices (SSD).
4. 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.
5. Includes the following tabs: Summary, By Disk Size, By Device Manufacturer, By Manufacture Year, and Details.

The recommended disk replacement timeframe is categorized as:

* Needs Action. Disk is expected to require replacement in 1 month
* Early Detection. Disk is expected to require replacement in 2-3 months.
* OK. Disk is not expected to require replacement in the next 3-6+ months.
* N/A. Unable to determine if a disk needs replacement. This can happen if HP Proactive Management is unable to determine the health of the disk at the moment.

## Summary

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

### Disk Replacement Summary

The number of devices by various disk replacement timeframe categories.

### Disk Replacement Summary by Warranty

The number 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 care packs.
* 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: The number of Devices.

Color by: Device Warranty Status.

## By Disk Size

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

### Devices by Disk Size

The number 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.
* More than 12 TB – Disk size more than 12,228 GB.

The visualization includes:

* X-axis: Disk Size.
* Y-axis: The number of Devices.

### Disk Replacement Summary by Disk Size

The number of devices by various disk size by various disk replacement timeframe.

The visualization includes:

* X-axis: Disk Size.
* Y-axis: The number of Devices.
* Color by: Disk replacement timeframe.

## By Device Manufacturer

The number of devices by various disk replacement timeframe categories by device manufacturer.

The visualization includes:

* X-axis: Disk Replacement Timeframe.
* Y-axis: The number of Devices.
* Color by: Device Manufacturer.

## By Manufacture Year

The number 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: The number 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 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.
* Last Seen. Last online date of the device.
* Disk Serial Number. Serial number of the disk.
* Drive Type. The type of the drive
* Disk Model. The model of the disk
* Disk Capacity. The raw capacity of the disk.
* Disk Capacity (GB). The capacity of the disk categorized as 1 TB, 256 GB, 512 MB etc
* [Country](#_Device_Country). The country assigned to the device based on region & language settings.
* Device Warranty Status. Warranty/Care pack status of the device.
* Device Warranty Date. The overall end date of the warranty and care pack combined.

The details tab has a default sorting order of:

* Disk Replacement Timeframe, followed by,

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 |
| 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:

1. Provides an overall health summary for a device in any given month.
2. Is available for HP and non- HP devices.
3. Is available for Android, Apple IOS, Apple MAC, and Microsoft Windows operating systems.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

1. 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** | **Android** | **Apple MAC OS** | **Apple IOS** |
| Battery Health |  |  |  |  |
| Blue Screen Errors |  |  |  |  |
| CPU Utilization |  |  |  |  |
| Disk Health |  |  |  |  |
| Graphics health |  |  |  |  |
| Memory Utilization |  |  |  |  |
| Thermal Health |  |  |  |  |
| Storage Space |  |  |  |  |

## Health Summary

The number of devices by overall health summary by month.

The visualization includes:

* X-axis: Month.
* Y-axis: The number of Devices.
* Color by: Health Summary.

The chart is sorted based on Months in ascending order.

## Resource Health Summary

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

The visualization includes a:

* X-axis: Month.
* Y-axis: The number 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 Type. Type of device.
* Device Manufacturer. Manufacture of the device.
* Device Model. Model of the device.
* Manufacture Year. Manufacture Year of the device. The device manufacture year is only available for HP devices.
* Last Seen. Last online date of the device.
* Device Warranty Status. Warranty/Care pack status of the device.
* Device Warranty End Date. The overall end date of the warranty and care pack combined.

# Hardware Inventory Reports

The hardware inventory reports provide detail information on the hardware information of enrolled devices and includes two reports – Hardware Inventory Details and Hardware Inventory Monthly Summary.

## Hardware Inventory - Details Report

The Hardware Inventory Details report:

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

### By Location

The number 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

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

#### By Device Type

The number of devices by various device types (i.e. Notebook, Desktop, Tablet, Smartphone etc.).

#### By Device Manufacturer

The number of devices by various device manufacturer. The visualization is sorted by device manufacturers with the most The number of Devices to least The number of Devices.

The visualization includes:

* X-axis: Device Manufacturer.
* Y-axis: The number of Devices.

Color by: Device Manufacturer.

#### By Manufacture Year

The number 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 latest device manufacture year.

The visualization includes:

* X-axis: Device Manufacture Year.
* Y-axis: The number of Devices.

### By Operating System

The number 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, Windows 8, Windows 7, Android 8, Android 9, IOS 10, IOS 11, MAC 10 etc. Clicking on any section in the chart, 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 (for e.g., 1703, 1709 etc.). For all other operating systems, the operating system version is displayed (for e.g., 6.1.7601, 7601.23694 etc.)

### Details Tab

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

* 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.
* Operating System. The operating system on the device. For e.g., Windows 10, Windows 8, Windows 7, Android 8, Android 9, IOS 10, IOS 11, MAC 10 etc.
* Operating System Release. For Windows 10 operating system, the operating system release information is categorized based on the major operating system release (for e.g., 1703, 1709 etc.). For all other operating systems, the operating system version is displayed (for e.g., 6.1.7601, 7601.23694 etc.)
* Operating System Build No. Detailed information of the operating system version.
* Last Seen. Last online date of the device.
* Memory. The memory found on the device.
* Graphics. The graphics found on the device.
* Processor. The processor found on the device.
* Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
* Enrolled Date. The date the device was enrolled in Proactive Management.
* Device Warranty Status. Warranty/Care pack status of the device. This is only available for
* Device Warranty End 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 care packs.
* 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.

## Hardware Inventory – Device Enrollment Status Report

The Hardware Inventory Device Enrollment Status report:

1. Includes devices across all device manufacturer’s and operating systems.
2. Shows the number of devices by the month in which the devices where enrolled, unenrolled or removed from Proactive Management.
3. Includes the following tabs: Monthly Summary, Summary, and Details.

### Monthly Summary

The Monthly Summary tab shows the number of devices enrolled, unenrolled or removed from Proactive Management by month.

The visualization includes:

* X-axis: Device enrolment status.
* Y-axis: No. of Devices.
* Color by: Device Enrolment Status.

### Summary

The Summary tab shows the number of devices enrolled, unenrolled or removed from Proactive Management in current month.

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

### Details

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

1. Serial Number. Serial number of the device.
2. Asset Tag. The asset tag of the device (imported via device import).
3. Alias. The alias of the device (imported via device import).
4. State. The enrolment status of the device.
5. Location. The physical location of the device (imported via device import).
6. Department. The department associated with the location of the device (imported via device import).
7. Cost Center. The cost center associated with the device (imported via device import).

The details tab has a default sorting order of:

1. Serial Number in ascending order.

## Hardware Inventory - Monthly Summary Report

The Hardware Inventory Details report:

1. Includes devices across all device manufacturer’s and operating systems.
2. Shows the number of devices by the month in which the devices where enrolled in Proactive Management.
3. Includes the following tabs: Monthly Summary, and Details.

### Summary

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

#### Summary

The number of devices by the month in which the devices where enrolled in Proactive Management.

The visualization includes:

* X-axis: Device enrolment month.
* Y-axis: The number 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

The number of devices by the month in which the devices where enrolled in Proactive Management by device type (i.e. Notebook, Desktop, Tablet, Smartphone etc.).

The visualization includes:

* X-axis: Device Enrolment Month.
* Y-axis: The number 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

The number of devices by the month in which the devices where enrolled in Proactive Management by device manufacturer.

The visualization includes:

* X-axis: Device Enrolment Month.
* Y-axis: The number 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

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

1. Enrolled Month. The month in which the device was enrolled in Proactive Management.
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Device Type. Type of device.
5. Device Manufacturer. Manufacture of the device.
6. Device Model. Model of the device.
7. Operating System. The operating system on the device. For e.g., Windows 10, Windows 8, Windows 7, Android 8, Android 9, IOS 10, IOS 11, MAC 10 etc.
8. Last Seen. Last online date of the device.
9. Memory. The memory found on the device.
10. Graphics. The graphics found on the device.
11. Processor. The processor found on the device.
12. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
13. Enrolled Date. The date the device was enrolled in Proactive Management.
14. Device Warranty Status. Warranty/Care pack status of the device. This is only available for HP devices.
15. Device Warranty End Date. The overall end date of the warranty and/or care pack combined. This is only available for HP 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 care packs.
* 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:

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

# Hardware Replacement Report

The Hardware Replacement report:

1. Provides guidance on phased replacement of devices as the current devices reach their end of life.
2. Builds upon the hardware health report by looking at monthly trends of each performance metric in the hardware health report.
3. Is available for HP and non- HP devices.
4. Is available for Microsoft Windows operating systems.
5. 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 a given 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 |
| ~~Blue Screen Errors~~ | ~~At least one blue screen error~~ |
| CPU Utilization | High CPU utilization for 10% 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 10% 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.

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

* Replace Now.
  1. 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.
  2. 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.
  1. The manufacture year of the device is unknown or less than two years and anyone of the performance metrics is unhealthy in current month.
  2. 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

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

### Affected Devices

The number of devices by replace now and replace soon hardware replacement and device type.

By default, the visualization shows the number of devices by replace now and device type. Click on replace soon section in the bar visualization to see number of devices by replace soon and device type.

### Device Health Summary

The number of devices by hardware replacement.

## Details

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

1. Hardware Replacement. The overall hardware replacement (i.e. replace now, replace soon, OK, N/A)
2. Affected Resources. The performance metric experiencing the issue. Multiple values are comma separated.
3. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
4. Serial Number. Serial number of the device.
5. Device Type. Type of device.
6. Device Manufacturer. Manufacture of the device.
7. Device Model. Model of the device.
8. Manufacture Year. Manufacture Year of the device. The device manufacture year is only available for HP devices.
9. Last Seen. Last online date of the device.
10. Operating System.
11. Device Warranty Status. Warranty/Care pack status of the device.
12. Device Warranty End Date. The overall end date of the warranty and care pack combined.

# Hardware Warranty Report

The Hardware Warranty report:

1. Provides an overall summary of warranty and/or care pack status of devices enrolled in Proactive Management.
2. 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 care packs.
   * 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.

1. Includes the following tabs: Summary, and Details.

## Summary

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

The number 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: The number of Devices.
* Color by: Device Warranty Status.

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

### By Device Manufacturer

The number of devices by the overall device warranty and/or care pack status by device manufacturer.

The visualization includes:

* X-axis: Device Manufacturer.
* Y-axis: The number of Devices.
* Color by: Device Warranty Status.

### By Warranty Expiration

The number 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. Proactive Management 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: The number 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

1. Device Warranty Status. The overall device warranty and/or care pack status
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Device Manufacturer. Manufacture of the device.
5. Device Model. Model of the device.
6. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
7. 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 Proactive Management.
8. Type. Indicates if the latest information on warranty and/or care pack status is a warranty or a care pack.
9. Warranty Type. Indicates if the latest information on warranty and/or care pack status is a factory warranty, bundled warranty.
10. End Date. The end date of the overall device warranty and/or care pack.
11. Title. The title of the overall device warranty and/or care pack.
12. Expiry. The expiry status of the overall device warranty and/or care pack.
13. Days Remaining. The number of days remaining for the overall device warranty and/or care pack.

The details tab has a default sorting order of:

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

# 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 behaviors patterns. For e.g., 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 a rank between 1 to 10 and is a relative ranking across all devices in Proactive Management. A ranking of 1 indicates device’s that are the least mobile and a ranking of 10 indicates device’s that are the most mobile. A ranking of -1 indicates that there is no location data for these devices. The mobility factor leverages [device's real-time geolocation](#_Device_Location), for devices enrolled in Proactive Management, as opposed to any device location from any external sources.

**Note:** Proactive Management provides customers the flexibility to either enable or disable real-time geolocation services across all their devices, that are enrolled in Proactive Management. 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, Proactive Management does not allow for collection of real-time device geolocation for any devices classified as employee-owned or personal devices (within the Proactive Management portal).

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 Proactive Management 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, Apple MAC and Microsoft Windows operating system.
3. Includes the Summary and Details tabs:

## Summary

The Summary tab provides the number of devices by mobility factor.

## Details Tab

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

1. Mobility Factor
2. User. The name of the user associated with the device
3. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
4. Serial Number. Serial number of the device.
5. Device Type. The type of device.
6. Start Duration.
7. End Duration.
8. Total Distance Covered (miles). The total distance covered in miles between start and end duration.
9. The number of unique 100-mile area covered. The number of unique 100-mile areas covered by the device.
10. The number of times distance is more than 500 miles. The number of times the device covers more than 500 miles.

# 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. Proactive Management corelates thermal data across multiple sensors – all processors (CPU), fan and system – and spanning multiple days to categorize the device as Ok or needing maintenance and repair. Even though Proactive Management 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 is categorized as:

* OK. Device is not experiencing any thermal issues.
* Maintenance. Device requires cleaning by checking vents for blockage.
* ~~Repair. Device requires repairs by checking vents for blockage.~~
* Unknown. Unable to determine if the thermal condition of the device. This can happen if HP Proactive Management is unable to determine the thermal condition of the device at the moment.

The thermal grading report:

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

## Summary

The number of devices by various thermal conditions.

## Details Tab

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

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Device Type. Type of device.
4. Device Manufacturer. Manufacture of the device.
5. Device Model. Model of the device.
6. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
7. Last Seen. Last online date of the device.
8. Thermal Condition. The thermal condition of the device.

The details tab has a default sorting order of:

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

# Company Security Compliance Reports

## Company Security Compliance - Monthly Summary Report

Proactive Management 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 (for 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. For 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. For 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 devices 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.
* **The number of Devices**. The number of unique devices within a company that are in any of the compliance status categories (for 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 e.g., 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:

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

### Summary

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 The number 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.

1. Month.
2. Compliance Type.
3. Compliance Status.
4. The number of Devices. The number of unique devices within a company that are in any of the compliance status categories (for e.g. Compliant, Not Compliant, Not Monitored), in any given month.
5. Total Time. The total time across all devices that were found enrolled within a company within a given month.
6. Time (hrs). The amount of time all the devices within a company spent in each compliance status (for e.g. Compliant, Not Compliant, Not Monitored) within a given month.
7. Time %. Time (hrs) / Total Time (for any given month, compliance type and compliance status category)

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

Proactive Management 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 last 24 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 (for e.g. Compliant, Not Compliant, Not Monitored) within the last 24 hours.
  + The time(hrs) is calculated based on the difference between each of the compliance status categories. For e.g., during the last 24 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 24-hour time-period. For e.g., during the last 24 hours, if at time 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. 16 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.
* **The number of Devices.** The number of unique devices within a company that are in any of the compliance status categories (for e.g. Compliant, Not Compliant, Not Monitored), in any given month. During the last 24 hours, a device can be in all compliance status categories. For e.g., during the last 24 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 last 24 hours, 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 24 Hour Summary report:

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

### Summary

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

The visualization includes:

1. X-axis: Month.
2. Y-axis: Time (hrs) and The number of Devices.
3. 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.

1. Month.
2. Compliance Type.
3. Compliance Status.
4. The number of Devices. The number of unique devices within a company that are in any of the compliance status categories (for e.g. Compliant, Not Compliant, Not Monitored), during the last 24 hours.
5. Total Time. The total time across all devices that were found enrolled within a company during the last 24 hours.
6. Time (hrs). The amount of time all the devices within a company spent in each compliance status (for e.g. Compliant, Not Compliant, Not Monitored) during the last 24 hours.
7. Time %. Time (hrs) / Total Time (for any given month, compliance type and compliance status category).

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 Reports

## Device Security Compliance - Monthly Summary Report

Proactive Management 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 (for 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 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. For 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 devices 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.
* **The number of Instances**. The number of times (i.e. instances), that devices within a company are in any of the compliance status categories (for 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 e.g., 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 counted multiple times 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 Device Security Compliance Monthly Summary report:

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

### Summary

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 The number 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.

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Last Seen. Last online date of the device.
3. Month.
4. Compliance Type.
5. Compliance Status.
6. Total Time. The total time across all devices that were found enrolled within a company within a given month.
7. Time (hrs). The amount of time all the devices within a company spent in each compliance status (for e.g. Compliant, Not Compliant, Not Monitored) within a given month.
8. Time %. Time (hrs) / Total Time (for any given month, compliance type and compliance status category)
9. 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

Proactive Management 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 status on the **compliance status** of antivirus and firewall endpoint protection (i.e. the **compliance type**) across all devices within a company during the last 24 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 (for e.g. Compliant, Not Compliant, Not Monitored) within the last 24 hours.
  + The time(hrs) is calculated based on the difference between each of the compliance status categories. For e.g., during the last 24 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 24-hour time-period. For e.g., during the last 24 hours, if at time 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. 16 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.
* **The number of Instances**. The number of times (i.e. instances), that devices within a company are in any of the compliance status categories (for 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 e.g., 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 counted multiple times 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 Device Security Compliance 24 Hour Summary report:

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

### Antivirus Applications

The number of devices by the month by antivirus application names.

The visualization includes:

* X-axis: Antivirus Application.
* Y-axis: The number of Devices.

The visualization is sorted based on:

* The Antivirus Application found on the largest number of Devices to the least.

### Firewall Applications

The number of devices by the month by firewall application names.

The visualization includes:

* X-axis: Firewall Application.
* Y-axis: The number of Devices.

The visualization is sorted based on:

* The Antivirus Application found on the largest The number of Devices to the least.

### Summary

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 The number of Devices
* Color by: Compliance Status.

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

### Details

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

* Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
* Last Seen. Last online date of the device.
* Month.
* Compliance Type.
* Compliance Status.
* Total Time. The total time across all devices that were found enrolled within a company during the last 24 hours.
* Time (hrs). The amount of time all the devices within a company spent in each compliance status (for e.g. Compliant, Not Compliant, Not Monitored) during the last 24 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 last 24 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 devices enrolled in Proactive Management.

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 Intune.

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

This is applicable to both VMWare Workspace ONE and Microsoft Intune.

* MAC devices
  + VMWare Workspace ONE: This is always set to Not Compromised.
  + Microsoft Intune: 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 Intune: 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 Intune).
* Not Compliant. The device is not confirming to the passcode policies 9set in either VMWare Workspace ONE or Microsoft Intune).
* Unknown.
  + VMWare Workspace ONE: The device is offline or failed to communicate with VMWare Workspace ONE.
  + Microsoft Intune: The device is offline or failed to communicate with Microsoft Intune or Azure Active Directory for any reasons.
* Error. This is available only with Microsoft Intune. The device failed to communicate Microsoft Intune or Azure Active Directory and received an error.
* Conflict. This is available only with Microsoft Intune. This indicates that two or more conflicting passcode policy settings are applied to the device and Microsoft Intune is unavailable to resolve the conflict.

The passcode complaints status functions in the same manner across all different platforms and across VMWare Workspace ONE and Microsoft Intune.

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 Intune.

The Device Compromised report:

1. Is available for both HP and non-HP devices
2. Is applicable to devices that have Android, Apple iOS, Apple MAC and Microsoft Windows operating system.
3. Includes the following tabs: Summary, and Details.

## Summary

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

## Details Tab

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

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Device Type. Type of device.
4. Last Seen. Last online date of the device.
5. Enrolled Date. The date the device was enrolled in Proactive Management.
6. [**Country**](#_Device_Country). The country assigned to the device based on region & language settings.
7. Compromised. The device compromised status.
8. Passcode. The passcode compliance status.
9. 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 Reports

## Lost Device Protection – Details Report

The Lost Device Protection Details report:

1. Provides information on the device wipe operations initiated on devices.
2. Is available for both HP and non- HP devices.
3. Is available for Android, Apple iOS, Apple MAC and Microsoft Windows operating system.
4. In only available with VMWare Workspace ONE only.
5. Includes the following tabs: Summary, and Details.

### Summary

The number 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

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

1. Month. The month in which the device wipe operation was initiated.
2. Date Initiated. The date time a device wipe operation was initiated.
3. Date Completed. The date time a device wipe operation was completed.
4. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
5. Serial Number. Serial number of the device.
6. Last Seen. Last online date of the device.
7. Operation. This is set to Wipe.
8. Status. Indicates if the device wipe operation completed successfully or not.
9. 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:

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

### Top Devices

Devices having the most number of device wipe operations by

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 most 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.

1. Month. The month in which the device wipe operation was initiated.
2. Date Initiated. The date time a device wipe operation was initiated.
3. Date Completed. The date time a device wipe operation was completed.
4. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
5. Serial Number. Serial number of the device.
6. Last Seen. Last online date of the device.
7. Operation. This is set to Wipe.
8. Status. Indicates if the device wipe operation completed successfully or not.
9. 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 Proactive Management software on the device regularly communicates to Proactive Management 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 Proactive Management portal. The Non –Reporting devices report:

1. Provides the hardware inventory of devices by last seen status in Proactive Management.
2. Is available for both HP and non-HP devices.
3. Is available for Android, Apple iOS, Apple MAC and Microsoft Windows operating system.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

1. Includes the following tabs: Summary, and Details.

## Summary

The number of devices by various last seen status categorized as:

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

## Details Tab

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

1. Last Seen. The last seen status category.
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Device Type. Type of device.
5. Device Manufacturer. Manufacture of the device.
6. Last Seen. Last online date of the device.
7. Device Enrolled Date. The date the device was enrolled in Proactive Management.

The details tab has a default sorting order of:

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

# 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:

1. Are available for both HP and non- HP devices.
2. Are available for Android, Apple iOS, Apple MAC and Microsoft Windows operating system.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

1. Do not include Microsoft Windows store software applications and Apple iOS factory default applications.

## Software Inventory – Details Report

The Software Inventory Details report:

1. Provides information on software applications by device by application state (installed/updated and/or uninstalled)
2. Is available for both HP and non- HP devices.
3. Is available for Android, Apple IOS, Apple MAC, and Microsoft Windows operating systems.

**Note:** Apple IOS is only available in Proactive Management Enhanced and Premium plans

1. 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. Proactive Management is unable to get the installed/updated or uninstalled date. This usually occurs for Apple IOS devices enrolled in either VMWare Workspace ONE or Microsoft Intune.

**Note**: If a software application is installed on a device prior to installation of Proactive Management software on the device, the application detected date defaults to the first date that the application was detected on the device by Proactive Management.

### Summary

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 most 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.

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Application Detected.
3. Application Name. The friendly name of the software application.
4. Application Version. The version information of the software application.
5. Operating System. The major operating system found on the device
6. Application State.

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:

1. 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).
2. Is available for both HP and non- HP devices.
3. Is available for Android, Apple IOS, Apple MAC, and Microsoft Windows operating systems.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

1. 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. Proactive Management is unable to get the installed/updated or uninstalled date. This usually occurs for Apple IOS devices enrolled in either VMWare Workspace ONE or Microsoft Intune.

**Note**: If a software application is installed on a device prior to installation of Proactive Management software on the device, the application detected date defaults to the first date that the application was detected on the device by Proactive Management.

### Summary

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.

1. Application Detected.
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Application Name. The friendly name of the software application.
4. Application Version. The version information of the software application.
5. Operating System. The major operating system found on the device
6. Application State.

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:

1. Provides a summary of software applications installed across all devices by operating system.
2. Is available for both HP and non-HP devices.
3. Is available for Android, Apple IOS, Apple MAC, and Microsoft Windows operating systems.

**Note**: Apple IOS is only available in Proactive Management Enhanced and Premium plans.

1. Includes the following tabs: Summary, and Details.

The report 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 the number of devices that has a software application installed / the number of total devices enrolled in Proactive Management 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

The Summary tab provides a summary of software applications installed by operating system.

The visualization includes:

* X-axis: Application Name.
* Y-axis: The number of Devices.
* Color by: Operating System.

The visualization is sorted based on:

* Application Name’s found on most number 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. The number of devices that has a software application installed.
* Total Devices. The number of total devices by operating system enrolled in Proactive Management.
* Installed %. Installed Devices / Total Devices \* 100.

# Software Catalog Compliance Report

The Software Catalog Compliance report:

1. Provides information on the compliance status of software applications that are published to the device from either VMWare Workspace ONE and/or Microsoft Intune.
2. Is available for both HP and non- HP devices.
3. Is available for Android, Apple IOS, Apple MAC, and Microsoft Windows operating systems.
4. 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

The number of devices by software application name by status.

The visualization includes:

* X-axis: Application Name.
* Y-axis: The number of Devices
* Color by: Status.

## Details Tab

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

1. Status.
2. Type. The type of software application.
   1. For VMWare Workspace ONE, the possible values include: Mandatory or Optional
      1. Mandatory. The software application is mandatory on the device.
      2. Optional. The software application is optional on the device.
   2. For Microsoft Intune, the possible values include: N/A
      1. N/A – Microsoft Intune does not support this setting.
3. Application Name. The friendly name of the software application.
4. Application Version. The version information of the software application.
5. Application Publisher. The publisher information of the software application.
6. Application Size (MB). The size of the software application in MB.
7. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
8. Serial Number. The serial number of the device.
9. Device Type. The type of device.
10. Last Seen. Last online date of the device
11. Enrolled Date. The date the device was enrolled in Proactive Management
12. [Country](#_Device_Country). The country assigned to the device based on region & language settings.
13. Date. The datetime of the last update received from VMWare Workspace ONE or Microsoft Intune.
14. Operating System.

# Software Utilization Report

The Software Utilization report:

1. Provides information on the top twenty-five software applications that are used across the enrolled devices across all months selected.
2. Is available for both HP and non- HP devices.
3. Is available for Android, and Microsoft Windows operating systems. For Android, only foreground software applications are considered.
4. Includes the following tabs: Top Used Windows Applications, Top Used Android Applications, and Details.

## Top Used Windows Applications

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 the number of devices using the software applications (across all its versions) / total number 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 the number of devices using the software applications (across all its versions) / total number 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

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 the number of devices using the software applications (across all its versions) / total number 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 the number of devices using the software applications (across all its versions) / total number 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.

1. Application Name. The friendly name and version of the software application.
2. Application Version. The version of the software application.
3. Application Rank (Application Usage (%)). The rank of the software application across all devices in across all months based on Application Usage (%).
4. Application Usage (%). The total number of devices using the software application across all months / total number of devices.
5. No. of Devices Using Application. The total number of devices using a software application across all months.
6. Total No. of Devices. The total number of enrolled devices.
7. Application Rank (Avg. Application Usage (hrs)). The rank of the software application across all devices across all months based on Avg. Application Usage (hrs).
8. Application Usage (hrs). The total number of hours that a software application is used across all devices across all months.
9. 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.

The details tab is sorted based on:

1. Application Rank (Application Usage (%)) in ascending order, followed by
2. Application Usage (%) in descending order.

# Software Errors Reports

The Software Errors reports provide information on devices and software applications experiencing software errors. There are three reports for software errors – 24 Hour Summary, Top Devices with Errors and Top Errors.

## Software Errors - 24 Hour Summary Report

The Software Errors, 24 Hour Summary report:

1. Provides the devices experiencing software errors in the last 24 hours.
2. Includes software application crashes only (and does not include software hangs).
3. Includes only software errors from desktop applications (and no web applications).
4. Is available for both HP and non- HP devices.
5. Is available for Microsoft Windows operating system.
6. Includes the following tabs:24 Hour Summary.

### 24 Hour Summary

The 24-Hour Summary tab provides information on device and software applications, versions and modules experiencing software errors in the last 24 hours in a tabular format.

1. Date Occurred. The date of occurrence of the software error.
2. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
3. Serial Number. Serial number of the device.
4. Operating System.
5. Manufacture Year. Manufacture year of the device. The device manufacture year is only available for HP devices.
6. Last Seen. Last online date of the device.
7. Application Name. The name of the software application experiencing software errors.
8. Version. The version of the software application.
9. Module. The module within the software application experiencing software errors.
10. Level. Indicates if the error is critical or error.
11. The number of Errors. The number of software errors on the device in the last 24 hours.

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:

1. Provides a monthly break down of the top devices experiencing software errors.
2. Includes software application crashes only (and does not include software hangs).
3. Includes only software errors from desktop applications (and no web applications).
4. Is available for both HP and non- HP devices.
5. Is available for Microsoft Windows operating system.
6. Includes the following tabs: Summary, and Details.

### Summary

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

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

The visualization is sorted based on the devices experiencing most number of software errors.

### Details Tab

The Details tab provides additional information on device and software applications experiencing software errors in a tabular format.

1. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
2. Serial Number. Serial number of the device.
3. Operating System.
4. Manufacture Date. Manufacture date of the device. The device manufacture date is only available for HP devices.
5. Last Seen. Last online date of the device.
6. Month.
7. Application Name. The name of the software application experiencing software errors.
8. Version. The version of the software application.
9. Module. The module within the software application experiencing software errors.
10. The number of Errors.

## Software Errors - Top Errors Report

The Software Errors, Top Errors report:

1. Provides a monthly break down of number of software application errors and number of unique devices experiencing software errors.
2. Includes software application crashes only (and does not include software hangs).
3. Includes only software errors from desktop applications (and no web applications).
4. Is available for both HP and non- HP devices.
5. Is available for Microsoft Windows operating system.
6. Includes the following tabs: Monthly Summary, Errors Summary, and Details.

### Monthly Summary

The monthly summary tab visualizations show a monthly break down of number of software errors and number of devices experiencing software errors.

The visualization includes:

* X-axis: Month.
* Y-axis: The number of Software Errors and The number of Devices.
* Color by: The number of Software Errors and The number of Devices.

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

### Errors Summary

The errors summary tab visualizations show a monthly breakdown of top software applications experiencing software error.

#### Number of Software Errors

The number of software errors visualization shows a monthly 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: Month.

#### Number of Devices

The number of devices visualization shows a monthly break down of the number of devices by top software applications experiencing errors.

The visualization includes:

* X-axis: The number of Devices.
* Y-axis: Application Name.
* Color by: Month.

### Details Tab

The Details tab provides additional information on device and software applications experiencing software errors in a tabular format.

1. Application Name. The name of the software application experiencing software errors.
2. Module. The module within the software application experiencing software errors.
3. Month.
4. Operating System.
5. The number of Errors.
6. The number of Devices.

# Incident Resolution Report

The incident Resolution report:

1. Provides information on:
   1. Incident Burndown Rate (i.e. the number of open vs. closed incidents),
   2. Average Incident Initial Response Time (i.e. The time taken to respond to an incident, averaged across incident types and subtypes by week), and
   3. 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.
2. Includes the following tabs: Summary and Details.
3. 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 Proactive Management.

## Summary

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.

1. Week.
2. ID. The incident ID associated with the incident.
3. Type. The type of incident.
4. Subtype. The subtype of the incident.
5. Created On. The date the incident is created.
6. Priority. The priority of the incident.
7. Status. The Status of the incident
8. Device Name. Name of the device. Clicking on the device name hyperlink allows navigation to the device details page.
9. Serial Number. Serial number of the device.
10. Device Type. Type of device.
11. Device Manufacturer. Manufacture of the device.
12. Device Model. Model of the device.
13. Last Seen. Last online date of the device.
14. Device Warranty Status. Warranty/Care pack status of the device.
15. Device Warranty Date. The overall end date of the warranty and care pack combined.
16. Initial Incident Response Time (hrs).
17. Incident Closure Time (hrs).

The details tab has a default sorting order of:

1. Week in descending order, followed by
2. Type in ascending order, followed by
3. Subtype in ascending order, followed by
4. Created On in ascending order, followed by
5. Status in descending order, followed by
6. Device Serial Number in ascending order.

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:
   1. Country or region, and
   2. Languages > Windows display language.
4. Proactive Management 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 Proactive Management 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 Management and hence does not leverage the Location settings in Proactive Management portal.

# Device Location

The mobility factor leverages device's geolocation, for devices enrolled in Proactive Management, as opposed to any device location from any external sources.

**Note**: Proactive Management provides customers the flexibility to either enable or disable real-time geolocation services across all their devices, that are enrolled in Proactive Management. 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, Proactive Management does not allow for collection of real-time device geolocation for any devices classified as employee-owned or personal devices (within the Proactive Management portal).

To view or edit the Proactive Management Location settings:

1. Login to the Proactive Management portal and navigate to **Settings > Preferences > Data Capture** 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

Proactive Management 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.

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