



Creating Reports and Exporting Data in HP Web Jetadmin

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Overview

HP Web Jetadmin provides advanced reporting and data exporting capabilities for the imaging and printing devices it manages. Collecting, extracting, and then analyzing usage data in your printing environment can help bring about a balanced deployment, increased productivity, and cost savings.

The **Reports** feature (Figure 1) allows you to generate reports based on historical data gathered over time. A variety of reports offer powerful insight into your printing environment. Report types include **Device Utilization** (page counts), **Supply Utilization** (consumables usage), **Device Inventory** and **Accessory Inventory**, **Event Log History** (Error Log and other events that occur on the device), and **Device Utilization by User** (what each user printed). These reports provide better insight into your print environment and help control costs. These reporting types can show color vs. black-and-white printing usage, simplex vs. duplex usage, media size usage, MFP usage (such as Copy, Scan, Digital Send, and Fax usage), toner cartridge usage (including forecasting usage and supplies ordering), and by-user usage (who uses color and how often they use it). Learn how many pages users print and which applications they use. Create reports to find out which devices are used most heavily and which have the greatest uptime. These reports can be generated on-the-fly or scheduled, and then emailed or saved to disk as needed. Both HTML and comma-separated value (CSV) formats are supported.

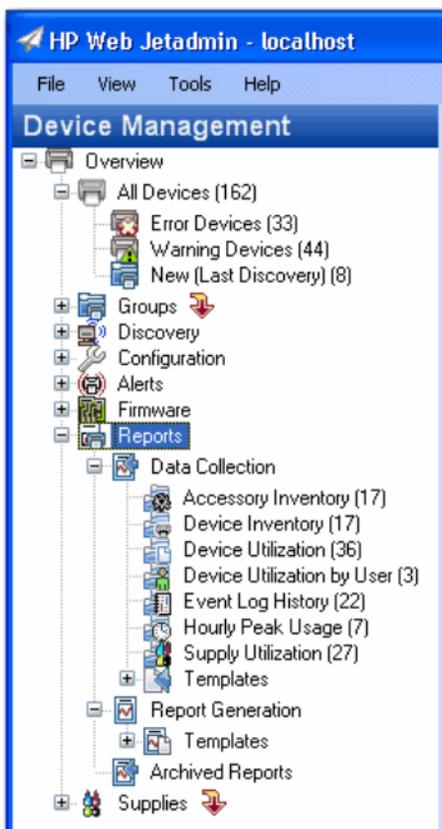


Figure 1: Reports navigation tree

Since there have been many changes and improvements made to the **Reports** feature in HP Web Jetadmin, the focus in this white paper is on the **Data Collection** and **Report Generation** functions. One change is that Charting (graphing ability) is no longer available. However, it should be fairly straightforward to create a report in CSV format, import it into Microsoft® Excel, and then use Excel to create a chart relative to the data.

You can use the **Export devices** feature (Figure 2) to extract real-time device data directly from the Microsoft SQL Server database that HP Web Jetadmin uses. Exports can be generated on-the-fly or scheduled, and then emailed or saved to disk as needed. Both CSV and XML formats are supported.



Figure 2: Export devices option

In general, reports are used to show historical usage over time, while exporting is used to show the device data that is valid at the time of the export. In certain situations, exporting this raw data from a device list layout to a CSV or XML file might be more useful than creating a report. Both methods (reporting and exporting) are provided to meet the various needs of HP Web Jetadmin administrators.

By using these features, you can better understand your printing environment, which allows you to better manage and deploy existing and future printing and imaging assets.

Create reports

There are two main steps to create any report in HP Web Jetadmin:

1. **Data collection:** This process gathers usage data from a device on a regular, manual, or per-job basis, and then stores that data in the HP Web Jetadmin database. Setting up a data collection is the first step and is required before any report can be generated.
2. **Report generation:** After data is collected, reports can be generated.

Data collection basics

The concept behind data collections is that you apply specific data collection types to capture the data you are interested in seeing. HP Web Jetadmin provides a rich set of data collection types (Figure 3). These data collection types allow device usage data to be captured and stored in the database. The data collection process occurs daily and cannot be changed. However, data collections can be triggered manually and the daily data collection default time (12:00 a.m.) can be changed. The collected data is then used to generate reports. Data collection can be enabled on a device-by-device basis or on a device group basis (based on HP Web Jetadmin device groups).

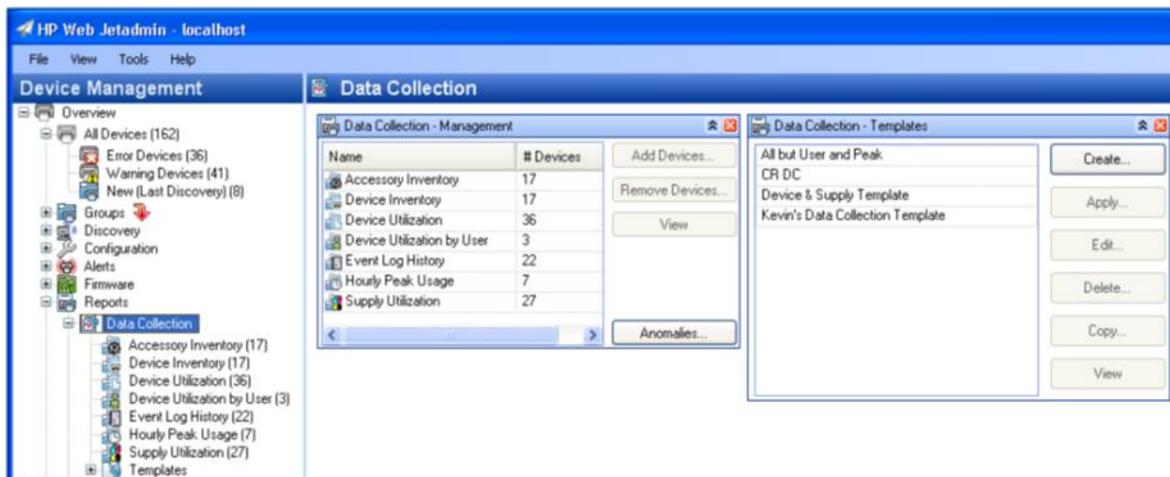


Figure 3: Data collection types

Keep in mind that in most cases, at least two data collections must occur on a device before a report can be generated for that device. This is because HP Web Jetadmin uses the differential between one page count or consumables usage and another to calculate usage over a period of time.

For data collections where the page counts remain the same, HP Web Jetadmin does not store the unchanged value. This feature helps minimize database growth.

Data collection types

Seven data collection types are defined in HP Web Jetadmin, each designed to capture specific data. Unless otherwise noted, each data collection is triggered by a daily schedule or by a trappable event, such as an end-of-job event for printing.

- **Accessory Inventory:** Captures information about what device accessories might be installed, including disk drive, installed RAM, duplexer, input trays, and analog fax.
- **Device Inventory:** Captures the device status and device communication state. This information can be used to monitor which devices are on the network.
- **Device Utilization:** Captures the page count usage information, including color, black-and-white, simplex, duplex, copy, scan, digital send, fax, and media size counts.
- **Device Utilization by User:** Captures the pages printed and applications used on a by-user basis. Collection occurs at the end of every print job (end-of-job trap event). This option requires an HP print driver or HP Universal Print Driver (UPD) in Microsoft Windows® environments only.

NOTE: Use the **Device Utilization by User** data collection sparingly. Since it invokes a real time data collection for every job sent to the device, this option is designed to be used on a small number of devices to help understand who is using a device and which devices they are using. This data collection type is not intended to be used on a fleet of printing devices.

- **Supply Utilization:** Captures the supplies usage information, including toner cartridges, fuser kits, drum kits, and transfer kits.

NOTE: Applying a data collection to any device or group of devices causes an immediate data collection to occur. This cannot be changed. This data collection establishes a base usage level

for the devices. All subsequent data collections occur on a daily basis at the user-defined time (default is 12:00 a.m.).

As data is collected, it is stored in tables in the HP Web Jetadmin database. Data retention can be set to a value between 1 and 5 years, by going to **Tools > Options > Shared > Server Maintenance > Reports**. By default, it is set to 1 year. The option to delete data from the database is also available on this page, with options for **All data**, **User data**, or **Device data**.

Report generation basics

Reports are generated from the collected data in the database and then formatted based on user-specified parameters. Reports can be generated in a summary format or a reporting-period format and scheduled to occur automatically. Various report types (Figure 4) that correspond to the data collection types defined previously are available.

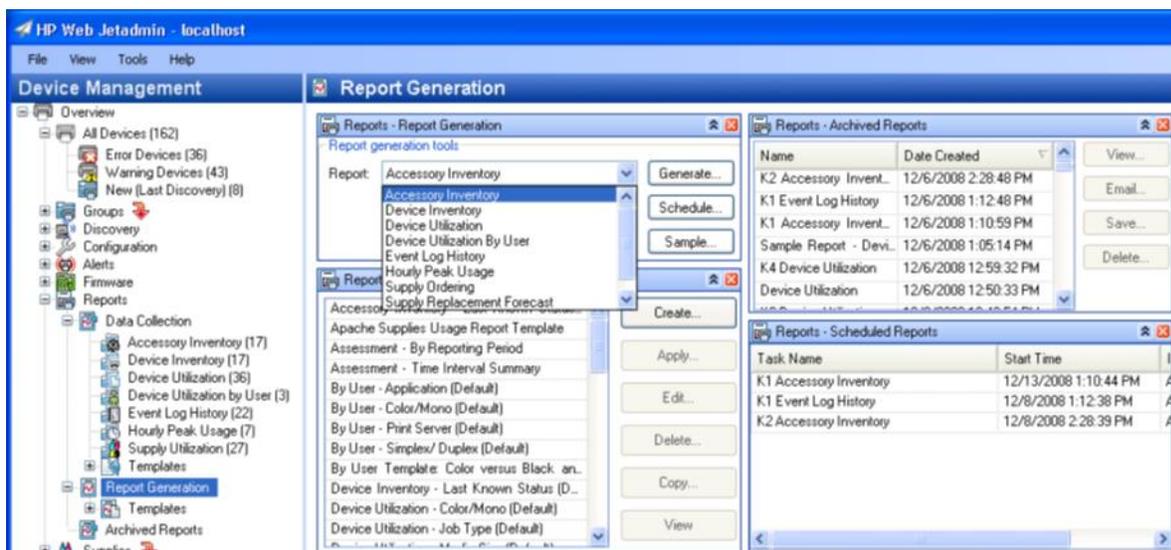


Figure 4: Report types

After reports are generated, they can be displayed in HP Web Jetadmin, emailed, scheduled to be emailed at regular intervals, or saved to an HTML or CSV file. All reports are archived in HP Web Jetadmin for a defined number of days. By default, a report is archived for 90 days.

Report types

Nine report types are defined in HP Web Jetadmin. They are easier to use now because each report type matches the data collection type it is associated with (Figure 4).

- **Accessory Inventory:** Tracks the device accessories.
- **Device Inventory:** Tracks the last known status of a device on the network.
- **Device Utilization:** Tracks the page count usage information.
- **Device Utilization By User:** Tracks the pages printed and applications used on a by-user basis.
- **Event Log History:** Tracks the device errors and their frequency, as logged by the device's Event Log.

- **Hourly Peak Usage:** Tracks the hourly page count usage information. This is similar to the Device Utilization reports except the data is displayed in hourly increments.
- **Supply Ordering:** Tracks the supplies usage information (toner cartridges, fuser kits, drum kits, transfer kits, and so on) and provides estimated replacement dates, which makes it easier to proactively order supplies.
- **Supply Replacement Forecast:** Tracks the supplies usage information and predicts how many supplies will be needed over a given time period.
- **Supply Usage:** Tracks the supplies usage information for showing supply usage rates.

Understand the Reports user interface

Navigation tree

The main reporting node in the navigation tree is titled **Reports**. Selecting **Reports** displays a summary page in the HP Web Jetadmin workspace that provides the major task-specific modules for reports (Figure 5). These include **Data Collection - Management, Reports - Report Generation, Reports - Scheduled Reports, and Reports - Archived Reports**.

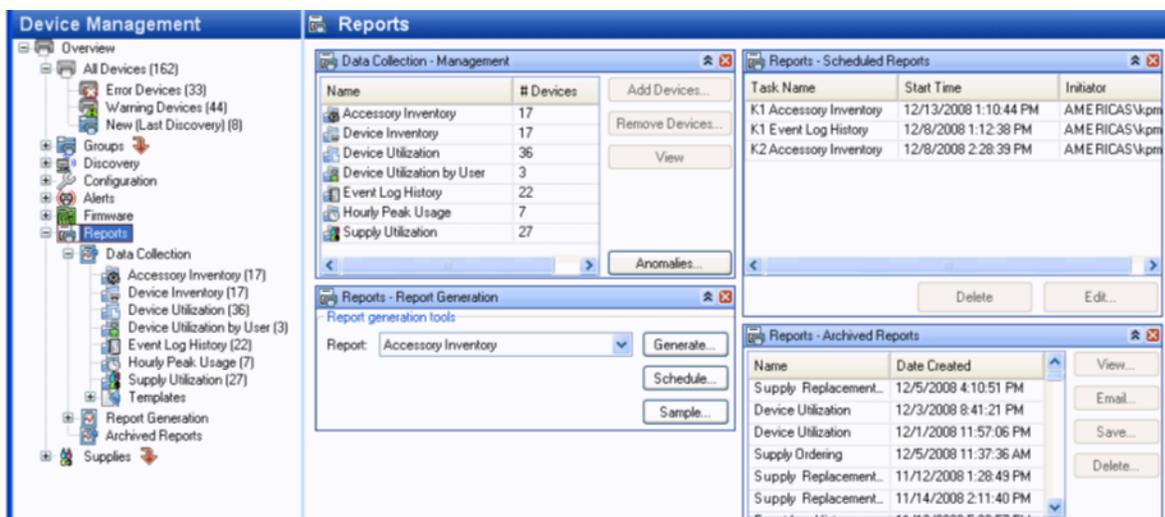


Figure 5: Navigation tree and the summary page in the workspace

Right-clicking **Reports** provides a list of the various tasks that are directly available for added convenience (Figure 6). Some of these tasks are: **Add devices to data collection, Generate report, Schedule report, Create data collection template, Edit data collection template, View archived reports, and Email archived report**. These tasks are also available from various task modules in the main workspace, depending on the **Reports** page being displayed.

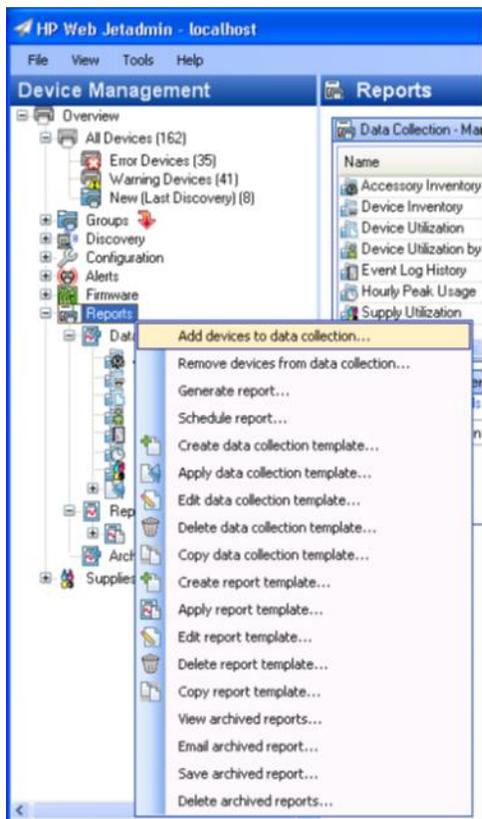


Figure 6: Right-click Reports

Two sub-nodes exist under **Reports** in the navigation tree: **Data Collection** and **Report Generation** (Figure 5). Selecting either one displays a summary page in the workspace that provides specific task modules. Right-clicking on either one also provides a list of various tasks that are directly available for added convenience.

Selecting **Data Collection** displays a summary page in the workspace dedicated to managing various data collection tasks. These tasks include managing data collections and data collection templates.

Under **Data Collection**, the various data collection types are available. Selecting a particular data collection type displays a workspace dedicated to managing devices in that specific collection type. The number in parentheses to the right of each data collection type indicates the number of devices that are currently being monitored by that type. Right-clicking any data collection type provides quick access for adding or removing devices from the data collection.

Selecting **Templates** under **Data Collection** displays the user-defined data collection templates. Although there are no predefined data collection templates, they are easy to create and are required when configuring a **Group Policy** for data collection. Right-clicking **Templates** provides quick access for creating and managing data collection templates.

Selecting **Report Generation** displays a summary page in the workspace dedicated to managing various report-related tasks. These tasks include generating a report, creating and managing report templates, viewing and managing archived reports, and managing scheduled reports.

Under **Report Generation**, **Templates** can be selected. Report templates can be used to customize and save settings from any of the baseline report types, saving the administrator's time when creating reports. Twenty-two predefined report templates are included. User-defined report templates can easily be created to provide custom report layouts. Right-clicking **Templates** provides

quick access for creating and managing report templates. The lock icon next to each predefined report template indicates that these templates cannot be edited. However, they can be copied to another template name, which can then be edited. They can also be deleted.

Archived Reports is the final reports node in the navigation tree. Selecting it displays all previously generated reports, giving users a way to view and manage these reports. Right-clicking **Archived Reports** provides quick access for managing these reports. By default, reports are archived for 90 days. This value can be changed during the report generation configuration process.

The next two sections provide further details about **Data Collection** and **Report Generation** and the workspaces in HP Web Jetadmin dedicated to each of these functions.

Data collection details

The first step in creating reports is to set up data collections on devices. After they are enabled, HP Web Jetadmin gathers device data and stores it in the database. Enabling data collections on devices can be done manually (from the **Data Collection** page or from other task modules) or automatically through the **Group Policies** feature. This section focuses on using the **Data Collection** page for creating data collections. Setting up automatic data collections using the **Group Policies** feature is discussed in Use Group Policies with data collection templates on page 17.

Add devices to data collections

When selecting **Data Collection** from the navigation tree, the data collection summary page is displayed. From this page, data collections can be defined and managed. Use the following steps to manually add devices to a data collection:

1. From the **Data Collection - Management** task module, select a data collection type.
2. Click **Add Devices**. The **Select collection time** page opens (Figure 7).

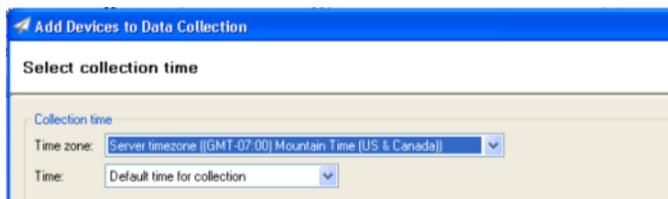


Figure 7: Select collection time page

3. Select the time zone and data collection time.
 - **Time zone:** Select the time zone where the HP Web Jetadmin server resides.
 - **Time:** Select the data collection time. This can be the default time (12:00 a.m.) or any other hour of the day. This setting can be changed later by going to **Tools > Options > Device Management > Reports > Data Collection Times**.
4. Click **Next**. The **Select devices** page opens (Figure 8).

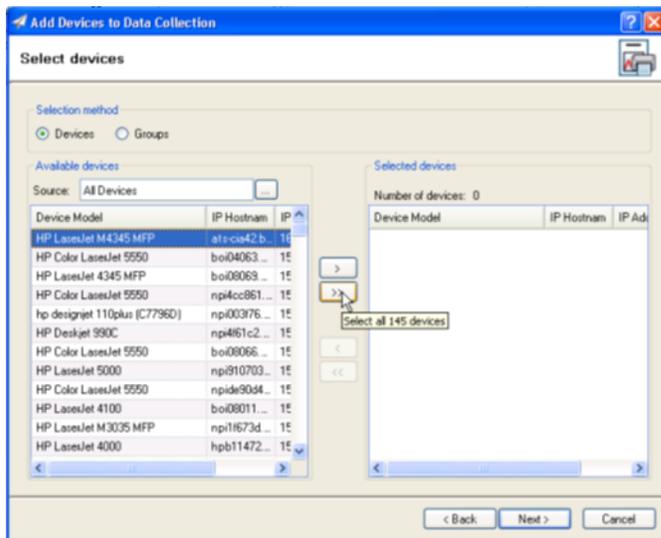


Figure 8: Select devices page

5. Select the devices to include in the data collection process.
 - Use the options under **Selection method** to select the individual devices or device groups.
 - Under **Available devices**, the **All Devices** list is displayed by default. Devices from the filtered device lists or device groups can also be displayed.
 - Devices already included in the data collection are not displayed.
 - Hold the cursor over the >, >>, <, and << buttons to display the number of devices (total devices and number of devices selected in either list, if greater than zero).
 - Click any column header to sort the device lists.
6. Click **Next**. The **Confirm** page opens (Figure 9).

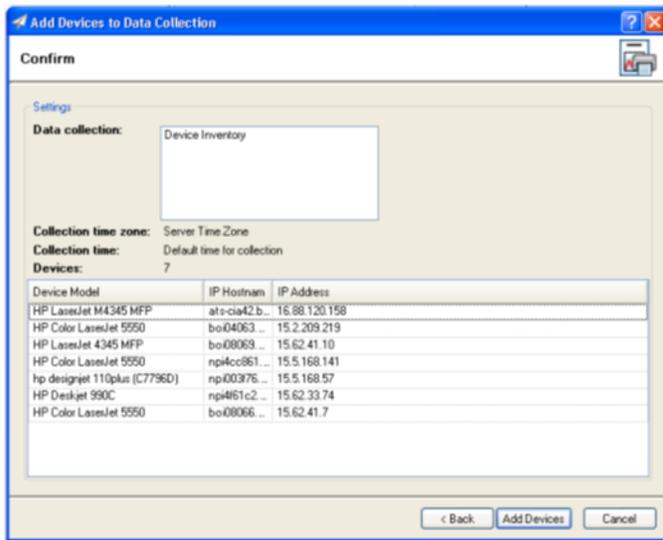


Figure 9: Confirm page

7. Click **Add Devices**. The **Results** page opens.
8. Click **Done**. If any failures occur, click **Details** to understand and troubleshoot the failure.

Devices can easily be removed from a data collection by selecting the data collection type, and clicking **Remove Devices**.

Data collections can also be viewed by selecting the data collection type and clicking **View**. This displays the specific data collection page along with additional collection details and functions (Figure 10).

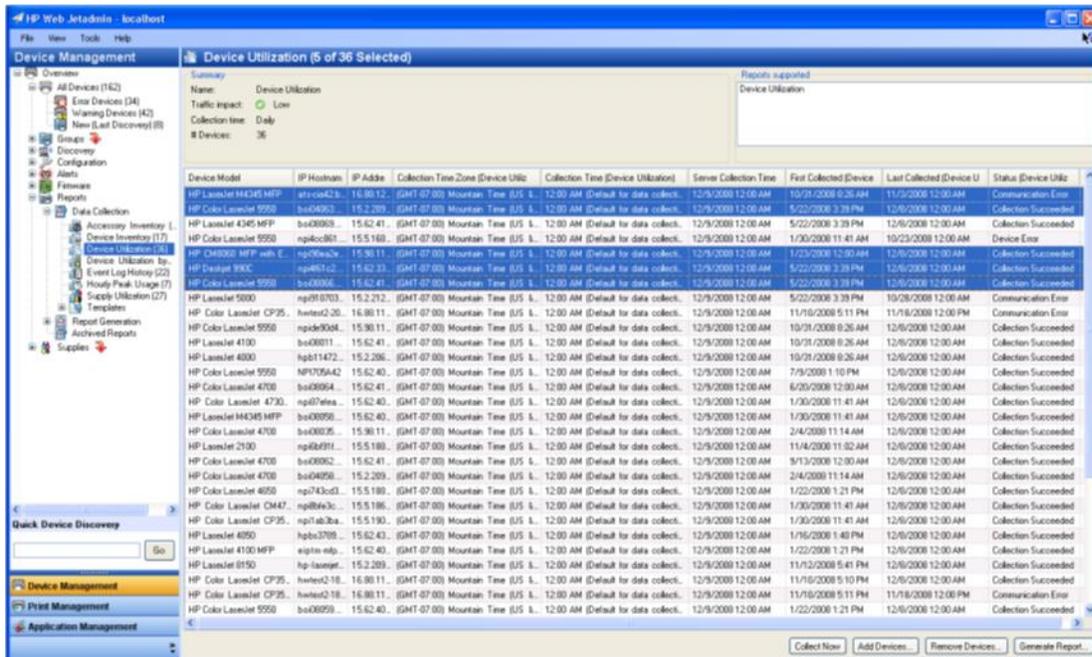


Figure 10: View data collection details

Available features on this page are:

- **Traffic impact:** Impact on network traffic for the data collection type being used, including:
 - **Accessory Inventory:** Low
 - **Device Inventory:** Low
 - **Device Utilization:** Low
 - **Device Utilization by User:** High
 - **Event Log History:** Low
 - **Hourly Peak Usage:** High
 - **Supply Utilization:** Moderate
- **# Devices:** Number of devices selected for this data collection type.
- **Collection Time Zone:** Time zone where the HP Web Jetadmin server is located.
- **Collection Time:** Time of day when the data collection occurs.
- **Server Collection Time:** Time for the next data collection.
- **First Collected:** Time of the first data collection.
- **Last Collected:** Time of last successful data collection.
- **Status:** Status of the previous data collection.
- **Collect Now** button: Launches an immediate data collection.
- **Add Devices** button: Adds new devices to the data collection.
- **Remove Devices** button: Removes devices from the data collection.
- **Generate Report** button: Generates a report immediately about any or all of the listed devices. This option is ideal for testing and confirming specific devices.

Device Utilization by User data collection—a special case

The Device Utilization by User data collection collects Personally Identifiable Information (PII). This data collection type attempts to capture the name of each user who sends each print job to the device along with the associated job information, such as printed pages (Color, Mono, Simplex, and Duplex Pages, plus Media Size), Copy Pages, Digital Send Pages, Incoming Fax Pages, and application used (Adobe PDF, Microsoft Excel, Microsoft PowerPoint, Microsoft Word, and webpages). Users and administrators should understand their own policies about PII before enabling the Device Utilization by User data collection on their devices.

Using the Device Utilization by User data collection to capture the print job's user name is supported only for HP printing devices and only in Windows environments. In addition, the print driver must be the device model's specific Windows driver from HP (not from Microsoft) or the HP UPD. The user name captured is the Windows user logon name in the format DOMAIN\USER. In all other operating system environments and Windows environments that do not use one of the supported print drivers, the user name is captured with the name Anonymous.

For a Device Utilization by User data collection to be successful, the device must also have a Job Information Table to hold the job information over time and an **SNMP Trap Destination Table** (Figure 11).

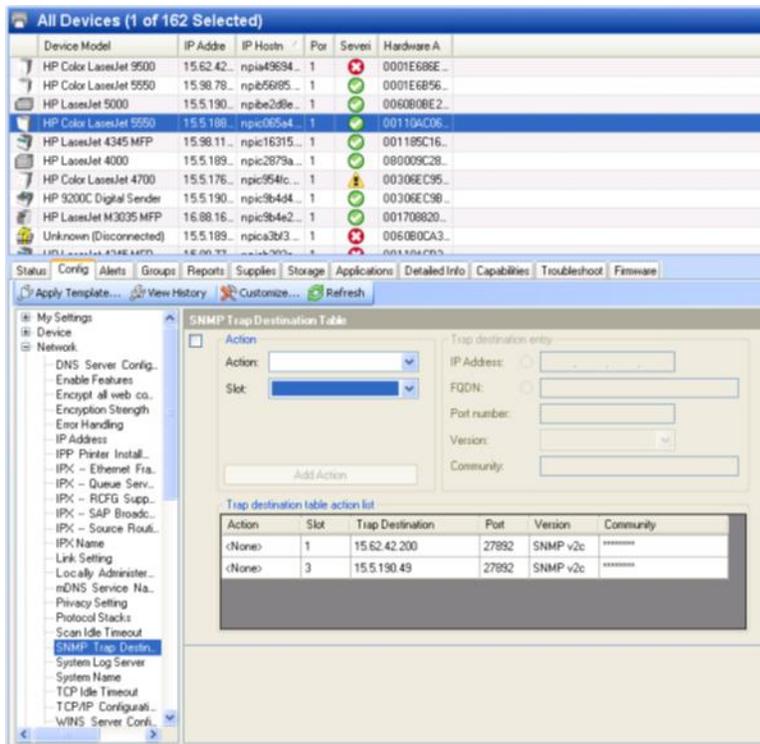


Figure 11: Config tab showing SNMP Trap Destination Table

To summarize, the requirements for a successful Device Utilization by User data collection are:

- Windows environment
- Use of HP print driver or HP UPD
- A device that supports Job Information Table (not supported on all HP printing devices)
- A device that supports SNMP Trap Destination Table (not supported on all HP printing devices)
- A device with the ability to send an end-of-job trap (not supported on all HP printing devices)

With these requirements in place, the Device Utilization by User data collection is the one type of data collection that does not depend on a regularly scheduled interval to collect data. HP Web Jetadmin must rely on gathering this data from the device's Job Information Table. Because different device models have different sized Job Information Tables and because HP Web Jetadmin does not know the length of each table, data must be collected after each print job. This process helps minimize the loss of any data as it rotates through the job table (the table has a first-in, first-out algorithm) before

HP Web Jetadmin can capture it. Job information can still be lost due to a spike in network traffic when the device receives many print jobs in a very short period of time.

To capture data in real time, HP Web Jetadmin implements the following process: When adding a device to the Device Utilization by User data collection, the user is first prompted to acknowledge that PII will be captured. The following is displayed:

NOTE: By enabling By User Tracking data collection, Personal Identifiable Information, PII, is retrieved from devices and stored in the HP Web Jetadmin database for reporting purposes. The user of such information should adhere to privacy standards of your organization or region. By offering this capability HP Web Jetadmin Reports features empower your organization to better assess how your HP and other devices are utilized. HP assumes no responsibility on the way this PII is handled, distributed, and used.

After the user acknowledges that this type of data collection is acceptable, HP Web Jetadmin checks to see if the device has an **SNMP Trap Destination Table**. If it does, HP Web Jetadmin checks to see if it has an available entry. If it does, HP Web Jetadmin writes its IP address and trap listener port to the entry. This process allows the device to send an end-of-job SNMP trap to the HP Web Jetadmin server at the end of a print job, triggering a Device Utilization by User data collection, which collects the device's Job Information Table. HP Web Jetadmin parses out any new entries from the Job Information Table and stores them in the Microsoft SQL Server database.

If the **SNMP Trap Destination Table** is full, HP Web Jetadmin does not automatically overwrite an entry. Instead, the user is prompted to select an entry to overwrite, clear the **SNMP Trap Destination Table** altogether and add the new entry, or skip adding this device to the **SNMP Trap Destination Table**, and thus skip adding this device to the Device Utilization by User data collection (Figure 12).

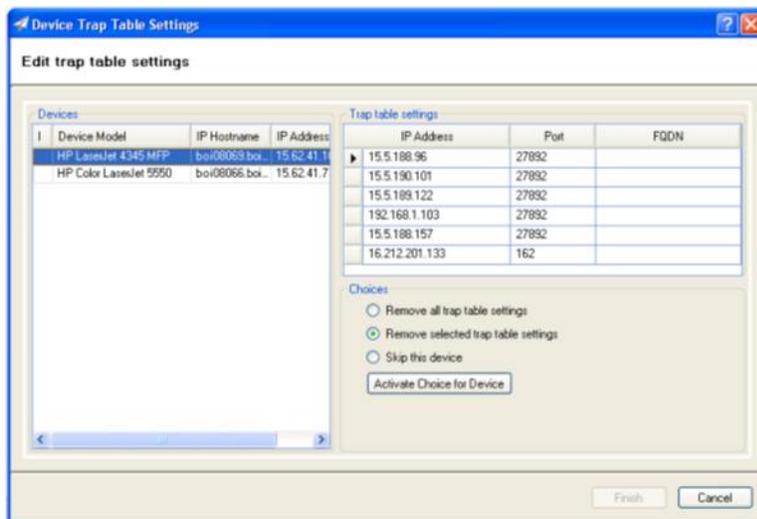


Figure 12: Edit trap table settings

HP Web Jetadmin uses trap listener port 27892. This is the same port that HP Web Jetadmin uses for configuring Alerts.

In addition to this real-time data collection process, a daily data collection also occurs at the user-defined time (default is 12:00 a.m.). This process helps minimize the loss of job information as it rotates through the Job Information Table before HP Web Jetadmin can access it. The Device Utilization by User data collection and its associated reporting should never be used as a substitute for job accounting. HP Web Jetadmin reports are designed for tracking trends and fleet analysis.

NOTE: The HP Web Jetadmin Installation/Migration or Installation/Upgrade process attempts to resolve conflicts between the SNMP Trap Destination Table IP address and the trap listener port number. A migration attempts to find open trap table entry points and establish the new HP Web Jetadmin server IP address. An upgrade converts the HP Web Jetadmin server address/port number to xxx.xxx.xxx.xxx:27892 in the same entry point. If the trap table is full during a migration, device configuration is logged. The administrator should note these failed items and resolve them with a manual configuration.

Data Collection Anomalies log

Another feature on the main **Data Collection** page is the ability to view the **Anomalies** log (Figure 13). To do this, click **Anomalies** in the **Data Collection - Management** task module. The **Anomalies** log captures specific issues that prevent a data collection from occurring or cause a data collection to be suspect.

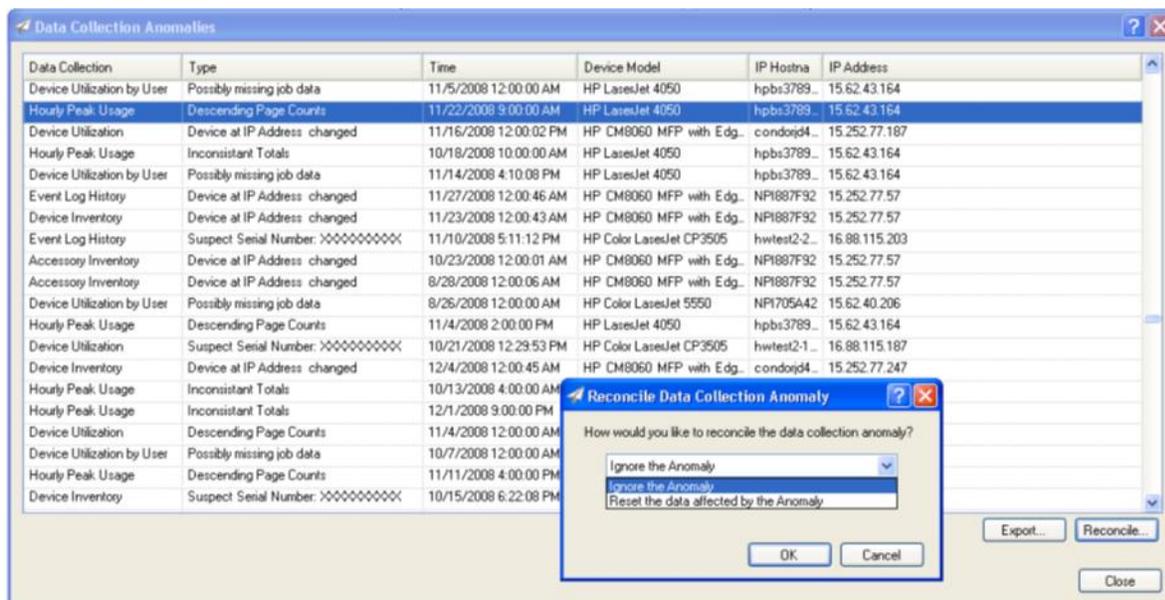


Figure 13: Anomalies log

Listed here are the various anomalies that might occur during a data collection with the possible actions to take (see the online Help for additional details about anomalies):

- **Device at IP Address changed:** The device is a different device than what was subscribed to. The user can choose to ignore the anomaly (remove it from the **Anomalies** log) or reset the data (delete all the data stored for the device).
- **Suspect Serial Number:** The serial number is not unique (for example, serial numbers with xxxxxxxxxx). This error often occurs when swapping one formatter for another. The user can choose to ignore the anomaly (remove it from the **Anomalies** log). If the device is ever assigned a unique serial number, all the current data becomes inaccessible because the device is no longer associated with the data collected when it had a suspect serial number. HP Web Jetadmin treats the device as brand new with no historical data.

List of invalid serial numbers		
000000000	AAAA00000	AAAAAAAAA
AAXXY9999	S4601LXXXX	YYYA00000

List of invalid serial numbers		
XXXXXXXXXX	Y4601LXXXXX	ZYYYYX0SYX
XXXXXXXXXX		

- **Inconsistent Totals:** The page counts do not reconcile (for example, the page count total is other than the sum of the color and mono page counts). The user can choose to ignore the anomaly (remove it from the **Anomalies** log) or reset the data (delete the data for the given data collection).
- **Abnormal Increasing Page Counts:** The page counts collected were over 10,000 pages for a given collection period. The user can choose to ignore the anomaly (remove it from the **Anomalies** log), reset the data (delete the data for the given data collection), or change the data (subtract the abnormally large number of pages from the count).
- **Descending Page Counts:** The collected page count decreased and is treated as if no pages were printed on the device. The user can choose to ignore the anomaly (remove it from the **Anomalies** log), reset the data (delete the data for the given data collection), or change the data (subtract the actual negative pages from the collection).
- **Possibly missing job data:** HP Web Jetadmin detected that print jobs might have been missed because the device did not send traps for the jobs. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Removed from trap table:** The HP Web Jetadmin server was removed from the device's trap table. Traps for completed jobs are not received. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Device is not unique:** HP Web Jetadmin could not obtain sufficient data to uniquely identify the device. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Not supported by device:** The device does not support the requirements of the data collection. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Device is under contract:** HP Web Jetadmin could not complete the report subscription for the device because it is under contract. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Failed to connect to device:** HP Web Jetadmin could not communicate with the device. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **SNMP trap table is full on device:** HP Web Jetadmin could not complete the collection subscription for the device because the device's trap table is full. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Device does not support required SNMP trap:** HP Web Jetadmin could not complete the collection subscription for the device because the device does not support the required SNMP trap. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).
- **Credentials are required to subscribe to device:** HP Web Jetadmin needs credentials for the device before the report subscription can be completed. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).

- **Subscription was skipped for device:** During an upgrade, the user skipped the collection subscription request for this device. The user can choose to ignore the anomaly (remove it from the **Anomalies** log).

Data collection templates

Data collection templates are defined to include one or more data collection types. After the template is created, it can be applied to devices in the same way as individual data collection types. For templates that include multiple data collection types, devices can be added to all of them using a single configuration process instead of having to manually add devices to each data collection type as separate configuration processes.

Although no predefined data collection templates are included with HP Web Jetadmin, they are easy to create. On the main **Data Collection** page, there is a **Data Collection - Templates** task module. From here, you can **Create, Apply, Edit, Delete, Copy,** and **View** data collection templates ([Figure 14](#)).

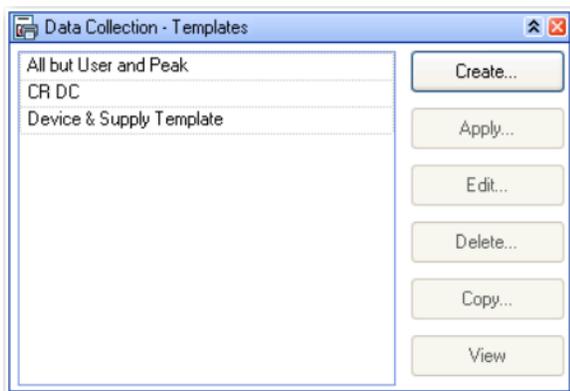


Figure 14: Data Collection - Templates task module

The **Copy** template feature provides the ability to leverage an existing template to create a new template without having to start from scratch.

Use Group Policies with data collection templates

Data collection templates are required when using **Group Policies** to automatically add devices to data collections. The **Group Policies** feature is a powerful automation tool that saves users time when configuring devices and HP Web Jetadmin settings. A device group has a property known as **Group Policy**. One policy that can be added to any device group's properties is **Enable Data Collection**. When activating the **Enable Data Collection** option on a device group, the user must select a template from the list of existing data collection templates.

A trigger must be specified that enables the configuration to take place when the device is added to the group or when the device is removed from the group ([Figure 15](#)). Multiple **Enable Data Collection** policies can exist for a single device group.

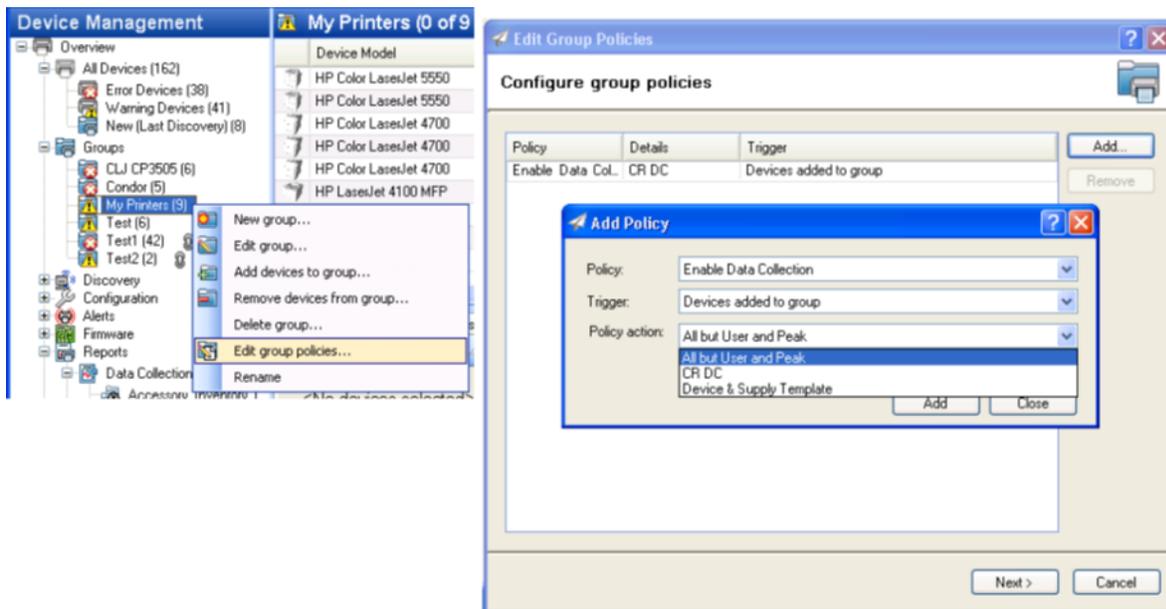


Figure 15: Enable Data Collection policy for device groups

Additional points of interest about data collections

- Adding devices to data collections can also be done using the Windows drag-and-drop functionality. By selecting any number of devices from any device list or device group, the devices can be dragged and dropped onto any **Data Collection Type** or **Data Collection Template** listed in the **Reports** section of the navigation tree.
- All data collection times are initially set to 12:00 a.m. However, each data collection time can be configured to any hour of the day. This can be done by going to **Tools > Options > Device Management > Reports > Data Collection Times** (Figure 16).

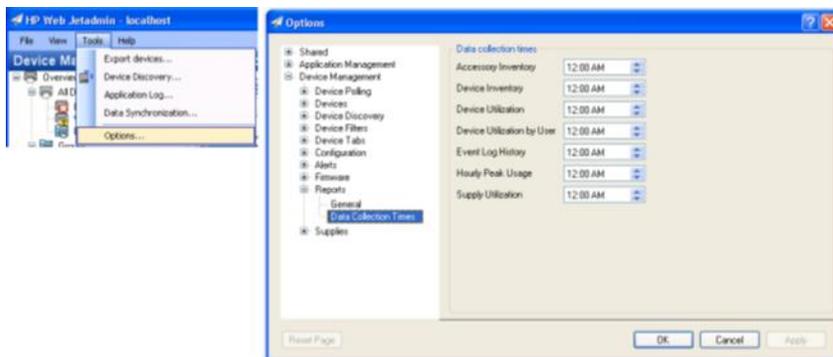


Figure 16: Data Collection Times option

- In order to maintain historical data on devices, HP Web Jetadmin tries to uniquely identify each device, primarily using the device's serial number. HP Web Jetadmin can manage and maintain historical data on devices without unique serial numbers to a certain degree, but issues might occur when multiple devices in HP Web Jetadmin appear to be the same device. HP recommends that you make sure devices are unique before enabling data collection for them. The **Unique** column is available when listing devices for this specific purpose. If a device is uniquely identified, its value is **Yes**. If a device is not uniquely identified, its value is **No**. It might be useful to also display the **Serial Number** column to confirm this value (Figure 17).

The screenshot shows the HP Web Jetadmin interface. On the left is a navigation tree with categories like Overview, Groups, Discovery, Configuration, Alerts, Firmware, and Reports. The main area displays a table titled 'My Printers (0 of 9 Selected)'. The table has the following columns: Device Model, IP Address, IP Hostname, Serial Number, Unique, MultiHomed, Severi, and Engine Cycle Count. The data rows show various HP printer models with their respective IP addresses, hostnames, serial numbers, and cycle counts. Some devices have warning icons in the 'Severi' column, while others have green checkmarks.

Device Model	IP Address	IP Hostname	Serial Number	Unique	MultiHomed	Severi	Engine Cycle Count
HP Color LasesJet 4700	15.62.41...	boi08062...	XXXXXXXXXX	No	No	Warning	46,171
HP Color LasesJet 4650	15.5.188...	npi743cd3...	XXXXXXXXXX	No	No	Warning	433
HP Color LasesJet 5550	15.62.40...	NPI705A42	JFFC57D008	Yes	No	Warning	33,155
HP Color LasesJet 4700	15.98.11...	boi08035...	JPGLB08064	Yes	No	Warning	148,546
HP LasesJet 4050	15.62.43...	hpbs3789...	USQF022207	Yes	No	Warning	31,904
HP Color LasesJet 5550	15.62.40...	boi08059...	JFFC5CK033	Yes	No	Warning	85,010
HP LasesJet 4100 MFP	15.62.40...	eiptm-mlp...	USLGY03046	Yes	No	OK	21,855
HP Color LasesJet 4700	15.2.209...	boi04058...	JPJLC02530	Yes	No	OK	48,681
HP Color LasesJet 4700	15.62.41...	boi08064...	JPGLB07964	Yes	No	OK	33,690

Figure 17: Unique and Multihomed data columns

- If data collection occurs on a device with an invalid serial number and the administrator then assigns a valid serial number to the device, the historical data associated with the device while it had an invalid serial number becomes unavailable. To prevent this situation, take steps to make sure that all the devices have valid serial numbers before enabling data collection for them.
- Multihomed printing devices are HP devices connected to two HP Jetdirect devices and, therefore, have two IP addresses. A multihomed device can affect the page count information. When a multihomed printing device is added to a data collection, both IP addresses for the device are added, increasing the data collection count by two because there are two IP addresses. When one multihomed device is removed from a data collection, both entries for the device are removed and the data collection count is decreased by two. If a multihomed device is part of a data collection and is deleted from the database, only that one device is removed from the data collection. The other IP address remains in the data collection. If both IP addresses of a multihomed device are included in a page count report, the device is counted twice. HP does not recommend including both IP addresses of a multihomed device in the same report. To assist in this effort, the **MultiHomed** column is available when listing devices (Figure 17). Multihomed devices are designated by **Yes**.

Report generation—generate and view reports

In most cases, after data collection occurs at least twice, reports can be generated. Selecting **Report Generation** (under **Reports**) from the navigation tree displays the workspace for generating and viewing reports (Figure 18).

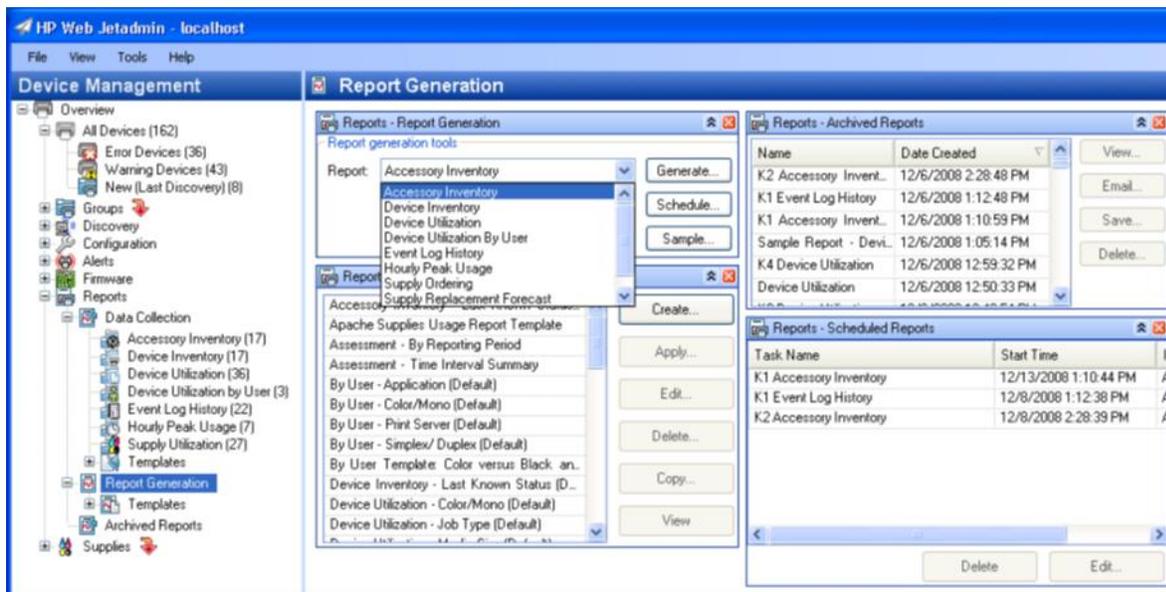


Figure 18: Report types

Generate a report

Use the following steps to generate a report:

1. From the **Reports - Report Generation** task module, select a report type from the **Report** list.
2. Click **Generate**. The **Select devices** page opens (similar to the data collection page with the same name).
3. Select the devices to include in the report.
 - Use the options under **Selection Method** to select the individual devices or device groups.
 - Under **Available devices**, the **All Devices** list displays by default. Devices from the filtered device lists or device groups can also be displayed.
 - Only devices that have had data collected are listed.
 - Hold the cursor over the **>**, **>>**, **<**, and **<<** buttons to display the number of devices (total devices and number of devices selected in either list, if greater than zero).
 - Click a column header to sort the device lists.
4. Click **Next**. The **Specify report settings** page opens (Figure 19).

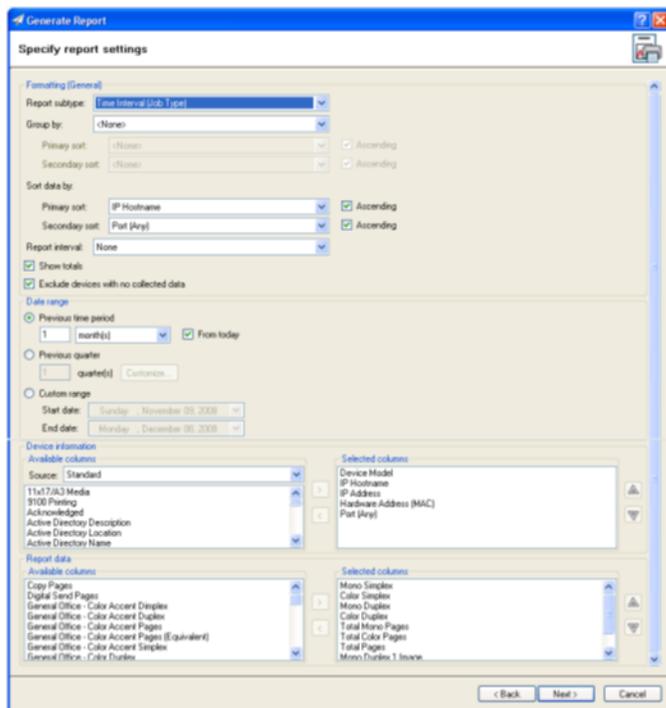


Figure 19: Specify report settings page

5. Many of the options and settings that are available on this page are specific to the report type selected. Details about each report type are provided in Report type definitions on page 22. To accept the default settings, click **Next**. The **Specify destination options** page opens.
6. Select where to send the report.
 - **Archive only** (selected by default): Saves the report in the **Archived Reports** list.
 - **Email**: Sends the report via email. The file format can be HTML or CSV.
7. Enter the report name that is used in the **Archived Reports** list and the number of days to archive the report (default is 90 days). To accept the default settings, click **Next**. The **Confirm** page opens.
8. Confirm the settings. Click **Back** to change the settings, or click **Cancel** to abort this task. Click **Generate Report** to create the report. The **Report Generation Complete** page opens (Figure 20).

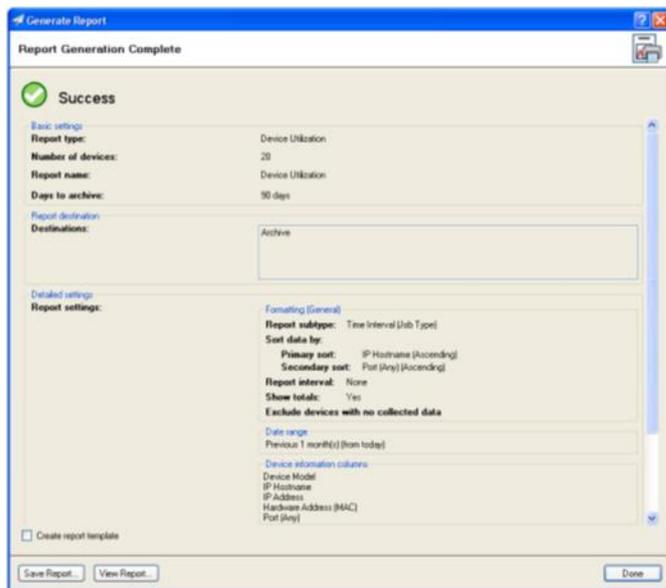


Figure 20: Report Generation Complete page

9. The **Success** message is displayed. The following options are available on this page:
 - **Save Report:** Saves the report in HTML or CSV format.
 - **View Report:** Displays the report immediately.
 - **Done:** Closes this page without displaying the report. The report is automatically saved in the **Archived Reports** list.
 - **Create report template:** Creates and saves a report template based on the specified settings.

This page might display the message **The report could not be generated**. This typically means that not enough data is available to create the report.

10. Click **Done** to complete the process.

This is the generic process to generate a report. Because all reports have both common and unique configuration settings, the next section describes these settings and how they are used to create various reports.

Report type definitions

Accessory Inventory report

This report shows the accessories that are specific to a device and the status of the accessory (Figure 21). It is useful for determining what accessories were installed or removed over a defined time period.

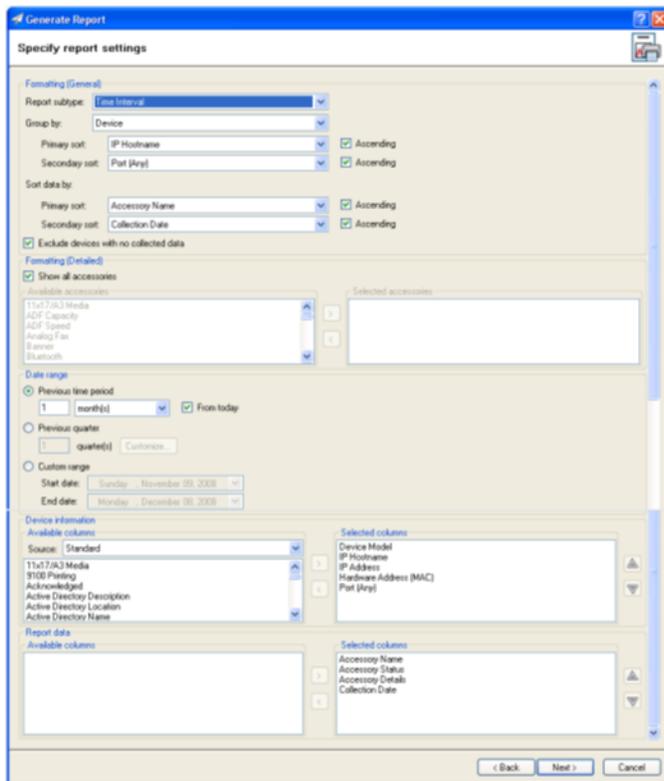


Figure 21: Accessory Inventory report settings

- **Report subtype** has two options:
 - **Time Interval:** Shows the accessory status over time. This option is used to create a report that shows each device with the following information: **Accessory Name, Accessory Status, Accessory Details, and Collection Date.**
 - **Last Known Status:** Shows the date and time when the status of an accessory last changed.
- **Group by** defines the overall grouping of the devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Accessory Name** groups the devices according to accessory, listing the accessory and then each device with data collected for that accessory.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists devices according to device group, with single-line entries for each device in that group.
 - Others are self-explanatory.
- **Primary sort** determines how the list is initially sorted, but is only valid if **Group by** is set to **Device**.
 - **Primary sort** options available are: **<None>, Asset Number, Contact Person, Device Groups, Device Location, Device Model, Device Name, Hardware Address (MAC), IP Address, IP Hostname, Jetdirect Port, Port (Any), Serial Number, System Contact, and System Location.**

- **Secondary sort** determines an additional sort order after the list is sorted according to the **Primary sort** value.
 - For example, **Primary sort** might be set to **Device Model** while **Secondary sort** might be set to **IP Address**. This causes the list to be initially sorted by the device model. If there are multiple devices with the same model name, those devices are then sorted by IP address.
 - **Secondary sort** options are the same as those for **Primary sort**.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - **Primary sort** options include: <None>, **Accessory Name**, **Accessory Status**, and **Collection Date**.
 - **Secondary sort** options are the same as those for **Primary sort**.
- **Exclude devices with no collected data** is used to simplify a report by eliminating any devices that have no data to show from the report. This option is selected by default.
- Under **Formatting (Detailed)**, the **Show all accessories** check box is selected by default. This includes all known accessories in the report. To manually select specific accessories, clear the **Show all accessories** check box, and then select the accessories.
- For **Date range**, there are three interval options:
 - **Previous time period** specifies a range of past dates to include in the report.
 - Time periods available are: **days**, **weeks**, **months**, and **years**.
 - **Previous time period** also has an option called **From today**, which causes the previous time period to include today's date as the end date. For example, if 1 month is selected and today's date is November 15, the previous time period used for the report is October 16 through November 15, which includes data up to the current date. If **From today** is not selected, the previous time period is October 1 through October 31, which uses the last complete month as the time period. This option is selected by default.
 - **Previous quarter** creates reports on a quarterly basis. Click **Customize** to configure the starting date of the company's fiscal year. Quarterly reports are based on this initial date. The **Customize** button is a shortcut that goes to **Tools > Options > Device Management > Reports > General** where the user can configure this option.
 - **Custom range** allows any date range to be selected.
- Under **Device information**, select the device details to show in the report. Because there are so many items to select from, three levels of device information are available: **Favorites**, **All**, or **Obsolete**. Each level provides more options to select. Because the list of items is very long, only the more common options are defined here.

NOTE: Page count column names that started with **Any Duplex**, **Any Simplex**, and **Any Total** in previous versions of HP Web Jetadmin have been changed to **All Duplex**, **All Simplex**, and **All Total** to better reflect their values.

- Self-explanatory items: **Device Location, Device Model, Device Name, Hardware Address (MAC), IP Hostname, IP Address, Serial Number, System Contact, System Location, and System Name.**
- Frequently used items:
 - **All Duplex Count:** The total double-sided page count as tracked by the printer engine.
 - **All Simplex Count:** The total single-sided page count as tracked by the printer engine.
- **All Total Count:** The total number of pages printed as tracked by the printer engine. This number is expressed as the equivalent number of Letter/A4 pages based on the multiplier values. Letter/A4 is the standard unit and has an assigned value of 1.0. Each of the other media types has a multiplier value that represents a percentage of surface area in comparison to the Letter/A4 size. These multiplier values are listed in the following table.

Media type	Multiplier
Letter	1.0
A4	1.0
Legal	1.3
11x17	2.0
A3	2.0
Executive	0.8

Media type	Multiplier
A5	0.5
Com 10	0.4
Envelope #10	0.4
Custom	1.0
Other	1.0

- **All Total Count Color:** The total number of color pages printed as tracked by the printer engine. This number is expressed as the equivalent number of Letter/A4 pages (see the previous table).
- **All Total Count Mono:** The total number of black-and-white pages printed as tracked by the printer engine. This number is expressed as the equivalent number of Letter/A4 pages (see the previous table).
- **Copy Pages:** The total copy page count as tracked by the printer engine.
- **Digital Send Pages:** The total number of digital send pages (sent to emails, folders, or faxes) as tracked by the printer engine.
- **Engine Cycle Count:** The total page count as tracked by the printer engine.
- **General Office:** The general office color quality page counts tracked by the HP Edgeline devices (HP CM8060/CM8050 Color MFPs).
- **Install Date:** The date the HP device first came online and communicated with a time server, thus establishing an installation date and time.
- **Last Communication:** The date and time HP Web Jetadmin last communicated with the device.
- **MultiHomed:** The devices that are connected to multiple HP Jetdirect devices simultaneously in use.

- **Professional:** The professional color quality page counts tracked by the HP Edgeline devices (HP CM8060/CM8050 Color MFPs).
- **Scan Pages:** The total number of scans as tracked by the printer engine.
- **Total Color Page Count:** The total color page count as tracked by the printer engine.
- **Total Digital Copy Usage:** The total number of digital copy pages printed as tracked by the printer engine. This number is expressed as the equivalent number of Letter/A4 pages (see the previous table).
- **Total Printer Usage:** The total number of pages printed as tracked by the printer engine. This number is expressed as the equivalent number of Letter/A4 pages (see the previous table). This is equivalent to All Total Count.
- **Unique:** The devices that have a valid serial number and can be uniquely identified by HP Web Jetadmin.
- Under **Report Data**, select the specific data relating to accessories that appears as columns in the report ([Figure 22](#)). This data includes:
 - **Accessory Name:** The name of the device accessory (such as **Hard disk, Duplexer, Input Tray, Total Memory, Copier, and Analog Fax**).
 - **Accessory Status:** The last known status of the device accessory (such as **Installed** or **Not Installed**).
 - **Accessory Details:** The specific details about the device accessory (such as **Yes** for Installed or **1,024** for Total Memory).
 - **Collection Date:** The last data collection date and time, which indicates when HP Web Jetadmin last checked for the status of the device accessory.

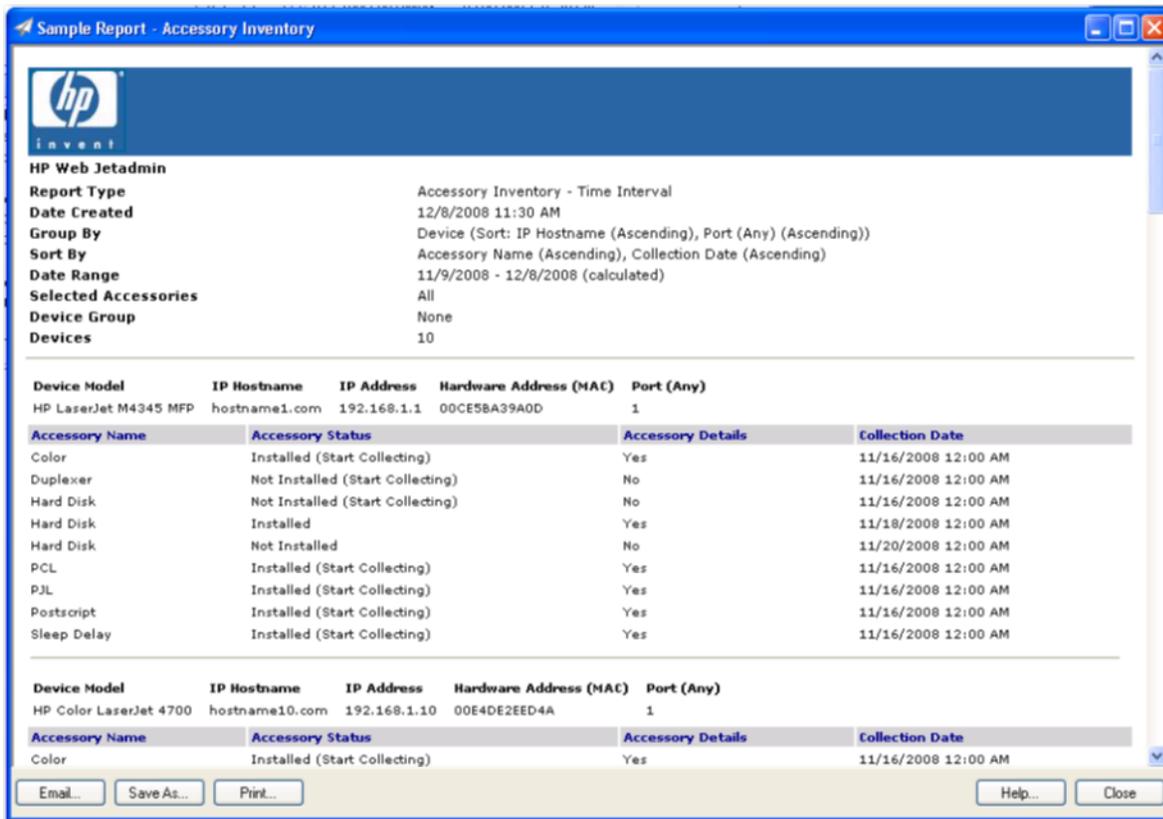


Figure 22: Accessory Inventory report

Device Inventory report

This report shows a Lost or Found status for devices on the network (Figure 23). It is useful for showing whether a device is on the network over a period of time. It is also useful for determining what devices were added to or removed from the network over a period of time.

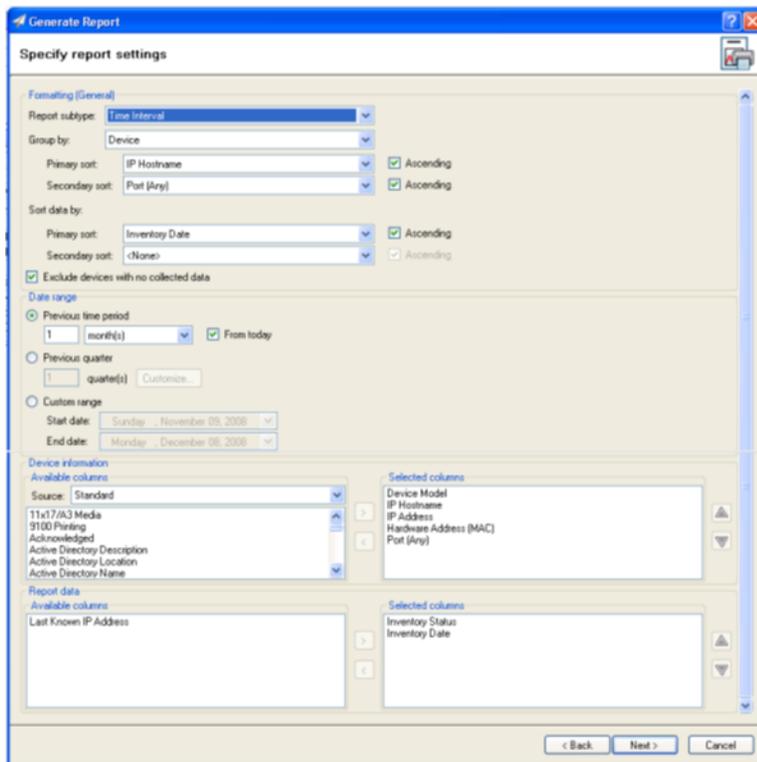


Figure 23: Device Inventory report settings

- **Report subtype** has three options:
 - **Time Interval:** Displays the status of a device over a defined time period, showing each device with the following information: **Inventory Status**, **Inventory Date**, and **Last Known IP Address**. Each change in status during the defined time period of the report is displayed as a new line item with the new information associated with it. This provides an historical overview of how the device’s status changed over time.
 - **Last Known Status (Details):** Displays a single line item for each device, showing only the last change in **Inventory Status**. Also displayed are the **Inventory Date** and **Last Known IP Address** of the device when the status changed.
 - **Last Known Status (Summary):** Displays the last known **Inventory Status (Lost or Found)** and the **Inventory Status Count** for each device model based on when the report ran.
- **Group by** defines the overall grouping of the devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists devices according to the device group with single-line entries for each device in that **Group**.
 - **Inventory Status** shows the status of the device when the data was collected on the **Inventory Date**. Values can be: **Lost**, **Lost (No Change)**, **Found**, **Found (No Change)**, **Found (Start Collecting)**, or **IP Address Changed**.

- Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page [22](#).
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - **Primary sort** options include:
 - **Inventory Date:** The date when the **Inventory Status** for the device changed. This value might be a scheduled data collection time or a time when HP Web Jetadmin polled the device and detected a status change. When selecting the **Last Known Status (Details)** for **Report subtype**, this value indicates the last time HP Web Jetadmin successfully communicated with the device.
 - **Inventory Status:** This is defined previously under **Group by**.
 - **Secondary sort** options are the same as those for **Primary sort** options.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- **Date range** is defined in Accessory Inventory report on page [22](#).
- **Device Information** is defined in Accessory Inventory report on page [22](#).

Under **Report Data**, select the specific data relating to **Device Inventory** that appears as columns in the report ([Figure 24](#)). This data includes:

- **Inventory Status:** This is defined previously under **Group by**.
- **Inventory Date:** This is defined previously under **Sort data by**.
- **Last Known IP Address:** The last known IP address when the status changed.
- **Inventory Status Count:** The number of devices with a **Found** or **Lost** status at the time the report ran. This value is only valid if **Last Known Status (Summary)** is selected from **Report subtype**.

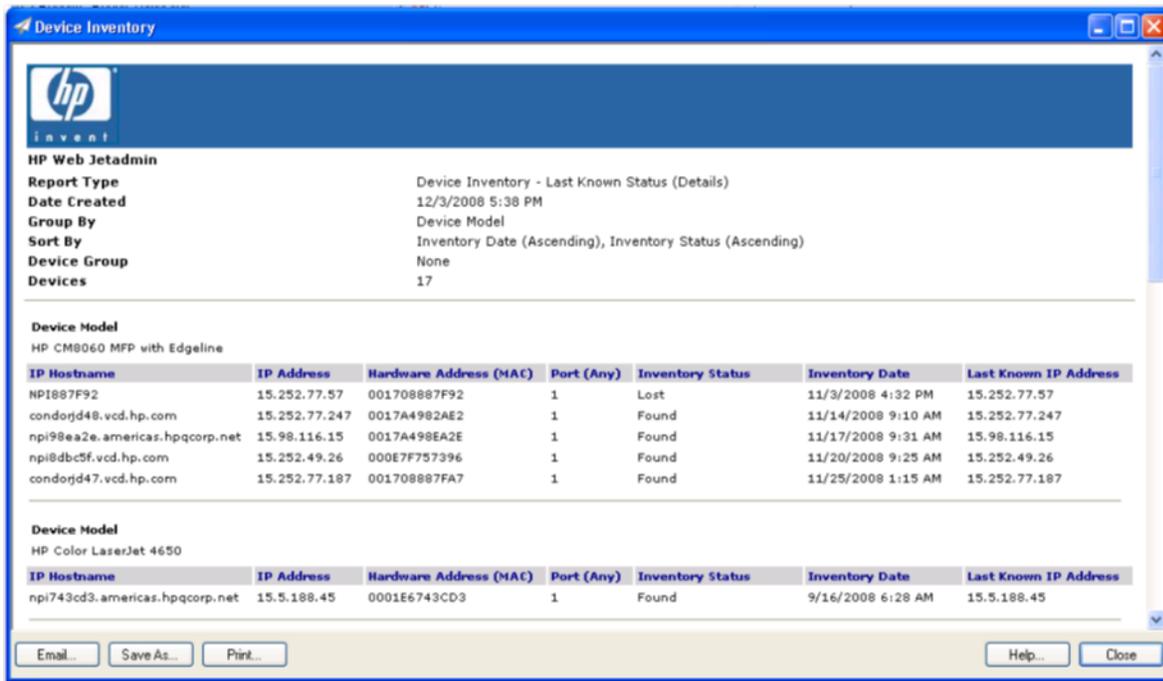


Figure 24: Device Inventory report

Device Utilization report

This report shows a device's page count information (Figure 25). It is helpful in determining the deployment of devices by tracking how they are being used. Information comparing color vs. black-and-white printing, simplex vs. duplex printing, job-type printing (such as copy, scan, and fax), and media size printing (such as Letter, Legal, A3, and A4) can be captured and tracked with this report.

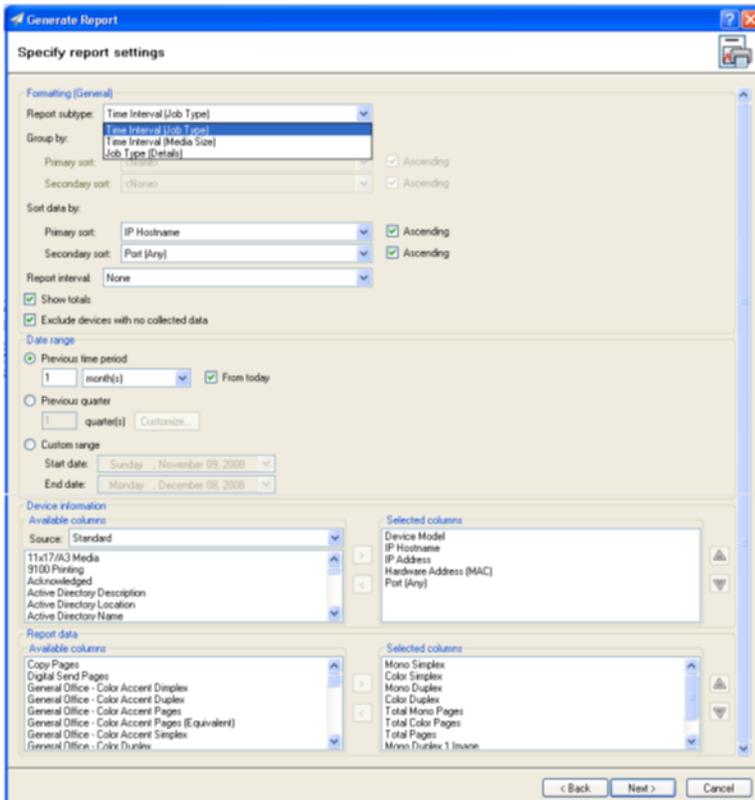


Figure 25: Device Utilization report settings

- **Report subtype** has three options:
 - **Time Interval (Job Type)**: Displays the page counts according to the job type for the selected devices. These include: **Total Pages, Total Color Pages, Total Mono Pages, Total Simplex Pages, Total Duplex Pages, Copy Pages, Digital Send Pages, and Scan Pages**. It does not include media size page counts.
 - **Time Interval (Media Size)**: Displays the media size page counts for the selected devices. These include: **Letter, Legal, 11x17, A3, A4, Envelope, and Total**. It does not include job type page counts.
 - **Job Type (Details)**: Displays the report in a format similar to the Usage Page from the device's HP Embedded Web Server (EWS) page. Keep in mind that the totals in this report will not match the totals of the Usage Page because this report shows the values over a period of time while the Usage Page shows the overall totals.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single-line entries for each device in that group.
 - **Interval** groups devices according to the interval value (**Daily, Weekly, or Monthly**). For example, if a 1-month report has a weekly interval, the devices are grouped in weekly blocks.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page 22.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - **Primary sort** options include device information (such as **Asset Number, Device Model, IP Address, and Serial Number**) and report data (such as **Copy Pages, Fax Pages, Total Pages, and Total Pages (Equivalent)**).
 - **Secondary sort** options are the same as those for **Primary sort**.
- **Report interval** specifies the unit of time used in the report for the date range selected. Values available are: **None, Daily, Weekly, or Monthly**. For example, if the date range selected is the previous month, the interval can be **Daily** to show data for each day of the month, **Weekly** to show data for each week of the month, or **Monthly** to show data as one value for the whole month. This option is not available when **Job Type (Details)** is selected for **Report subtype**.
- **Show totals** shows the column subtotals per device and the overall totals for the selected devices in the report.

- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- Under **Formatting (Detailed)**, the **Show all media sizes** check box is selected by default. This includes all known media sizes in the report. To manually select specific sizes, clear the **Show all media sizes** check box, and then select the specific sizes. This option is available only when the **Job Type (Details)** is selected for **Report subtype**.
- **Date range** is defined in Accessory Inventory report on page [22](#).
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- Under **Report Data**, select the specific data relating to **Device Utilization** that appears as columns in the report ([Figure 26](#)). All page counts are totals within the date range of the report. The following are some of the more frequently used job types and media sizes.
 - **Job Type:**
 - **Copy Pages:** The number of pages output using the copy function. The **Copy Pages** value is equal to the number of pages that are scanned multiplied by the number of copies printed for each scanned page. The actual scanned pages from copying are included in the **Scan Pages** count.
 - **Digital Send Pages:** The number of pages that have been digitally scanned and sent to another location, such as email, folder, or fax. **Digital Send Pages** do not include any printed page counts. However, each scanned digital send page is also included in the **Scan Pages** count.
 - **General Office:** The **General Office** color quality page counts tracked by the HP Edgeline devices (HP CM8060/CM8050 Color MFPs).
 - **Incoming Fax Pages:** The number of pages that have been received using the fax function. After the **Incoming Fax Pages** are received and printed, the counts are also included in the **Total Pages** count.
 - **Outgoing Fax Pages:** The number of pages scanned and sent by the fax module to a fax number. **Outgoing Fax Pages** counts do not include any printed page counts, but are also included in the **Scan Pages** count.
 - **Professional:** The **Professional** color quality page counts tracked by the HP Edgeline devices (HP CM8060/CM8050 Color MFPs).
 - **Scan Pages:** The number of pages scanned using the scan function. Every time the scanner moves across the glass, a **Scan Page** count is captured. The **Scan Pages** count does not include any printed page counts. The **Scan Pages** count increases when copying pages, digitally sending pages (to a folder or email), and sending outgoing faxes.
 - **Total Color Pages:** The total number of color pages printed.
 - **Total Duplex:** The total number of two-sided pages printed. To determine the total number of sides printed, multiply this value by 2.

- **Total Duplex 1 Image:** The number of times a page was sent through the device's duplexer and was printed on only one side as a result of being the last page of an odd-numbered, duplexed print job. Some devices can determine odd-numbered, duplexed print jobs ahead of time and send the last page through the normal path (non-duplexed) of the printer engine. In this case, the **Total Duplex 1 Image** count does not increase. Instead, the count is captured by the **Total Simplex** count. **Total Duplex 1 Image** counts apply only to the last page of a document. Not all devices can report **Total Duplex 1 Image** counts. For those that cannot, the last page of an odd-numbered, duplexed print job is captured as a duplexed page count under **Total Duplex**. The count for **Total Duplex 1 Image** is included in the count for **Total Duplex**.
- **Total Mono Pages:** The total black-and-white pages printed.
- **Total Pages:** The total number of pages printed. This value is the sum of the **Total Color Pages** and **Total Mono Pages** for the particular time period. It is also the sum of **Total Simplex** and 2 x **Total Duplex**.
- **Total Pages (Equivalent):** The equivalent number of Letter/A4 pages printed based on the multiplier values in the following table.

Media type	Multiplier
Letter	1.0
A4	1.0
Legal	1.3
11x17	2.0
A3	2.0
Executive	0.8

Media type	Multiplier
A5	0.5
Com 10	0.4
Envelope #10	0.4
Custom	1.0
Other	1.0

- **Total Simplex:** The total number of one-sided pages printed.
- **Media Sizes:**
 - 11x17, A3, A4, Legal, and Letter are a few of the more common sizes.
 - **Total:** The total pages printed. This value is equivalent to **Total Pages** under **Job Type**. It is the sum of all the media sizes.

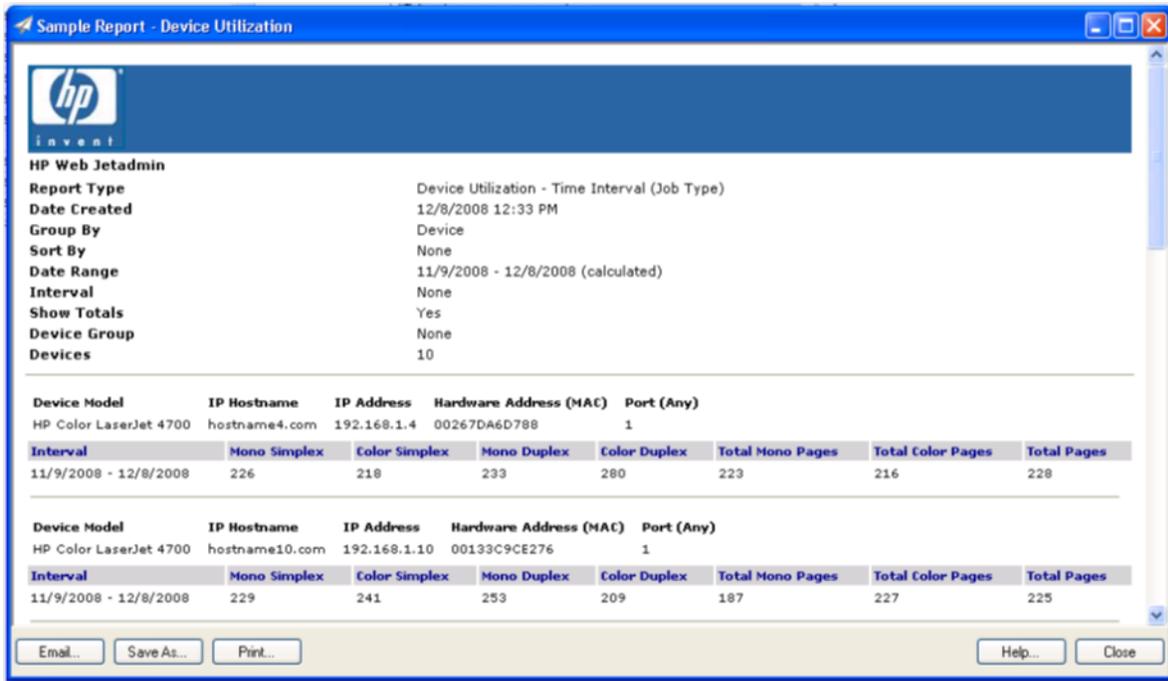


Figure 26: Device Utilization report

Device Utilization by User report

This report displays a user's name (Windows credentials) along with page counts and job types from every job sent to the devices included in the data collection (Figure 27). This report is helpful for tracking printing behaviors, such as who is printing in color, who is printing simplex (when duplex is preferred), who is printing on what media size, who is using the copy/scan/fax features, and who is using what application.

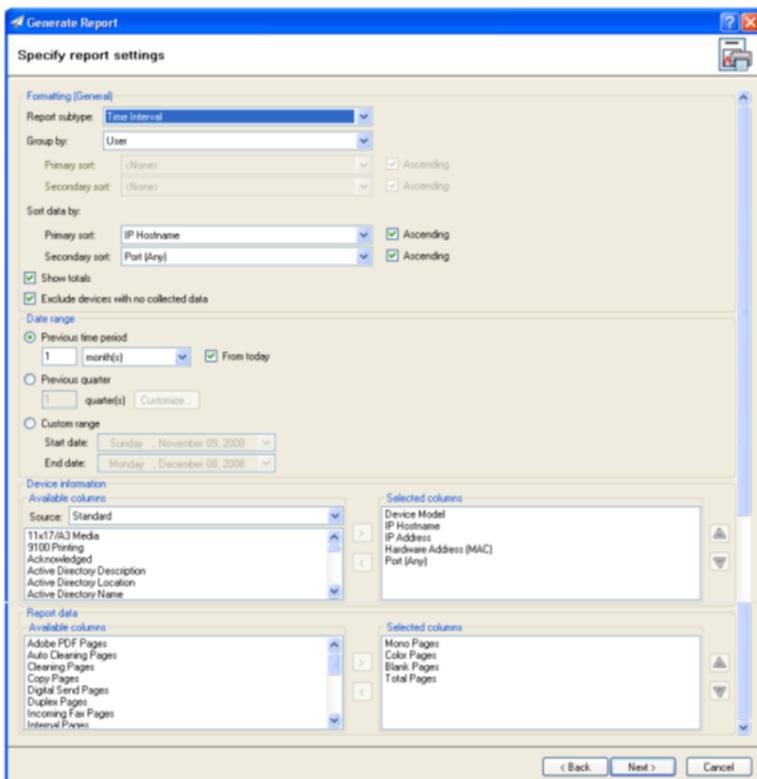


Figure 27: Device Utilization by User report settings

- **Report subtype** has two options:
 - **Time Interval:** Displays the page counts according to the job type and application for the selected devices. The job type counts include: **Total Pages, Color Pages, Duplex Pages, and Mono Pages**. The application page counts include **Adobe PDF Pages, MS Excel Pages, MS PowerPoint Pages, MS Word Pages, and Web Pages**. It does not include the media size page counts.
 - **Time Interval (Media Size):** Displays the media size page counts for the selected devices. These include: **Letter, Legal, 11x17, A3, A4, Envelope, and Total Pages**, to name a few of the more common sizes. It does not include job type page counts.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of the devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single-line entries for each device in that **Group**.
 - **User** groups the devices according to the users who sent the print jobs to them.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page [22](#).
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - **Primary sort** options include the device information (such as **Asset Number, Device Model, IP Address, and Serial Number**) and report data (such as those listed above under **Time Interval**), among others.
 - **Secondary sort** options are the same as those for **Primary sort**.
- **Show totals** shows the column subtotals per device and the overall totals for the selected devices in the report.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- **Date range** is defined in Accessory Inventory report on page [22](#).
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- Under **Report Data**, select the specific data relating to **Device Utilization by User** that appears as columns in the report ([Figure 28](#)). The page counts are specific to the displayed **User** and the **Date Range** selected. The following are some of the more frequently used job types and media sizes.
 - **Job Type:**

- **Adobe PDF Pages:** The total number of PDF pages printed.
- **Color Pages:** The total number of color pages printed.
- **Copy Pages:** The number of pages output using the copy function. The **Copy Pages** value is equal to the number of pages scanned multiplied by the number of copies printed for each scanned page. The actual scanned pages from copying are included in the **Scan Pages** count.
- **Digital Send Pages:** The number of pages digitally scanned and sent to another location, such as email or folder. **Digital Send Pages** does not include any printed page counts. However, each scanned digital send page is also included in the **Scan Pages** count.
- **Duplex Pages:** The total number of double-sided pages printed. To determine the total number of sides printed, multiply this value by 2.
- **Incoming Fax Pages:** The number of pages received using the incoming fax function. After the incoming fax pages are received and printed, the counts are also included in the **Total Pages** count.
- **MS Excel Pages:** The total number of pages printed from Microsoft Excel.
- **MS PowerPoint Pages:** The total number of pages printed from Microsoft PowerPoint.
- **MS Word Pages:** The total number of pages printed from Microsoft Word.
- **Mono Pages:** The total black-and-white pages printed.
- **Print Pages:** The total number of pages printed (versus pages copied or scanned).
- **Simplex Pages:** The total number of one-sided pages printed.
- **Total Pages:** The total number of pages printed. This value is the sum of the **Color Pages** and **Mono Pages** for the particular time period. It is also the sum of **Simplex Pages** and 2 x **Duplex Pages**.
- **Web Pages:** The total number of HTML pages and other web file formats printed.
- **Media Sizes:**
 - 11x17, A3, A4, Legal, and Letter are a few of the more common sizes.
 - **Total Pages:** The total number of pages printed. This is equivalent to **Total Pages** under **Job Type**. It is the sum of all the media sizes.

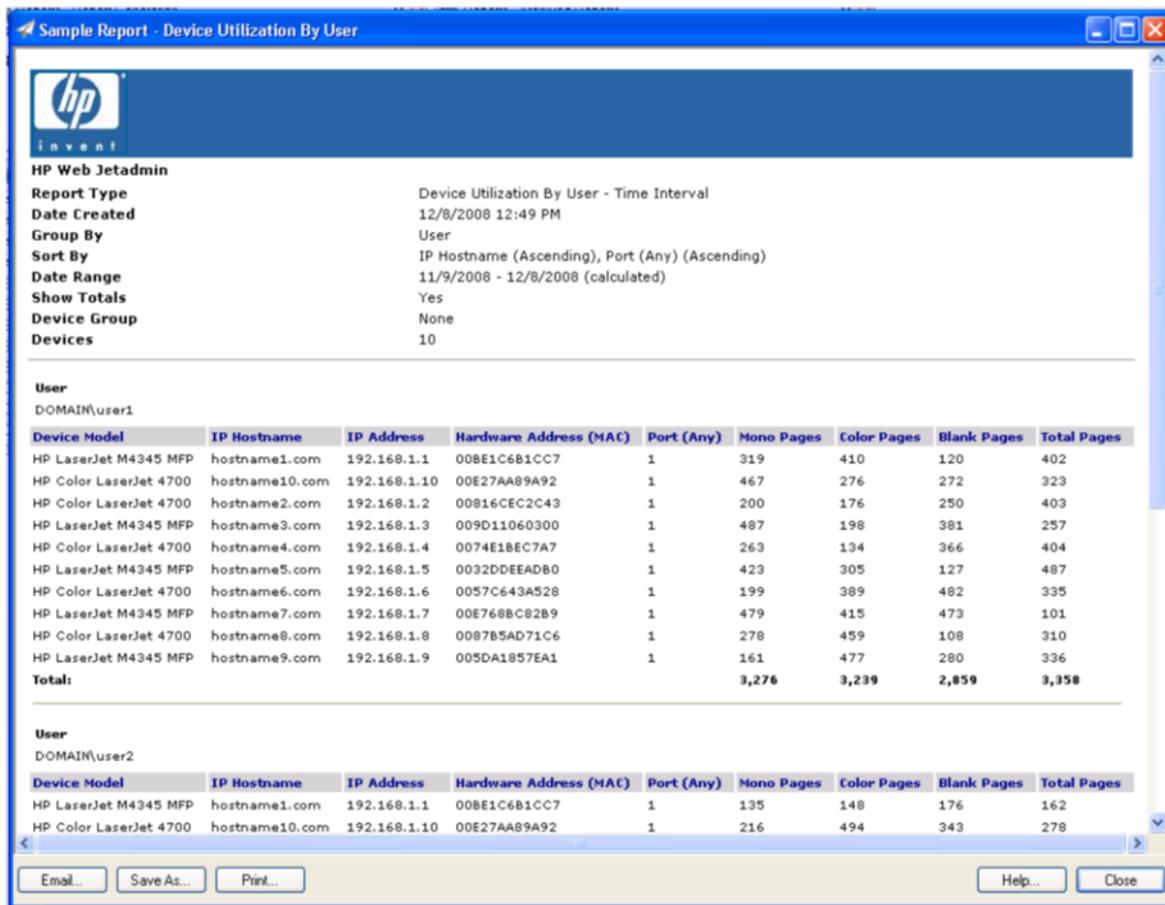


Figure 28: Device Utilization By User report

Event Log History report

This report tracks various device events (Figure 29). It is helpful for tracking types of errors and monitoring error trends.

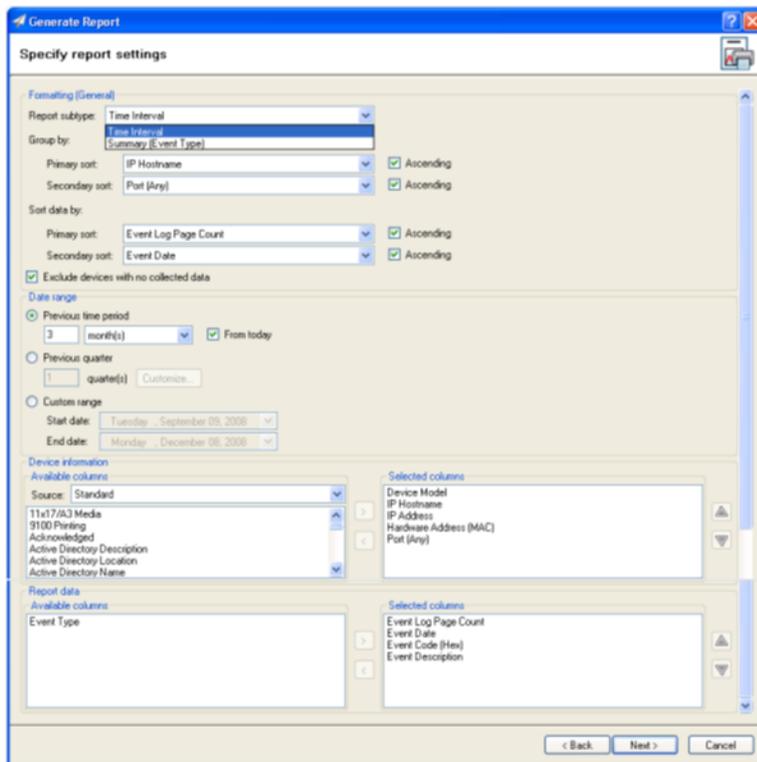


Figure 29: Event Log History report settings

- **Report subtype** has two options:
 - **Time Interval:** Displays the **Event Log History** based on the selected date range. Specific information displayed for each event includes the **Event Code** (in hexadecimal), **Event Date**, **Event Description**, **Event Type**, and **Event Log Page Count** (at the time of the event).
 - **Summary (Event Type):** Displays the **Event Log History** in a summary format based on the selected date range and interval. Overall totals of **Device Errors**, **Paper Jam Errors**, **Information Events**, and **Other Events** are displayed.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single-line entries for each device in that group.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page 22.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**. No **Sort data by** options are available if **Summary (Event Type)** is selected from **Report subtype**.

- **Primary sort** options include the following event information: **<None>**, **Event Code (Hex)**, **Event Date**, **Event Description**, **Event Log Page Count**, and **Event Type**.
- **Secondary sort** options are the same as those for **Primary sort**.
- **Report interval** specifies the unit of time used in the report for the date range selected. Values available are: **None**, **Daily**, **Weekly**, or **Monthly**. For example, if the date range selected is the previous month, the interval can be **Daily** to show data for each day of the month, **Weekly** to show data for each week of the month, or **Monthly** to show data as one value for the whole month. This option is only visible if **Summary (Event Type)** is selected from **Report subtype**.
- **Show totals** shows the column subtotals per device and the overall totals for the selected devices in the report. This option is only visible if **Summary (Event Type)** is selected from **Report subtype**.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- **Date range** is defined in Accessory Inventory report on page [22](#). By default, the previous 3 months are selected.
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- **Under Report Data**, select the specific data relating to the event log that appears as columns in the report ([Figure 30](#)). All the values are defined by the **Date range** selected. The following are the available items:
 - **Time Interval:**
 - **Event Log Page Count:** The page count when the event occurred.
 - **Event Date:** If the device supports this value, it is the date when the event occurred. If the device does not support this value, it is the date of the last HP Web Jetadmin data collection.
 - **Event Code (Hex):** The actual event code in hexadecimal.
 - **Event Description:** A description of the event.
 - **Event Type:** The event type can be: **Device Error**, **Other**, or **Paper Jam**.
 - **Summary (Event Type):**
 - **Device Errors:** The total number of device errors.
 - **Paper Jam Errors:** The total number of paper jams.
 - **Information Events:** The total number of information events.
 - **Other Events:** The total number of all other events.

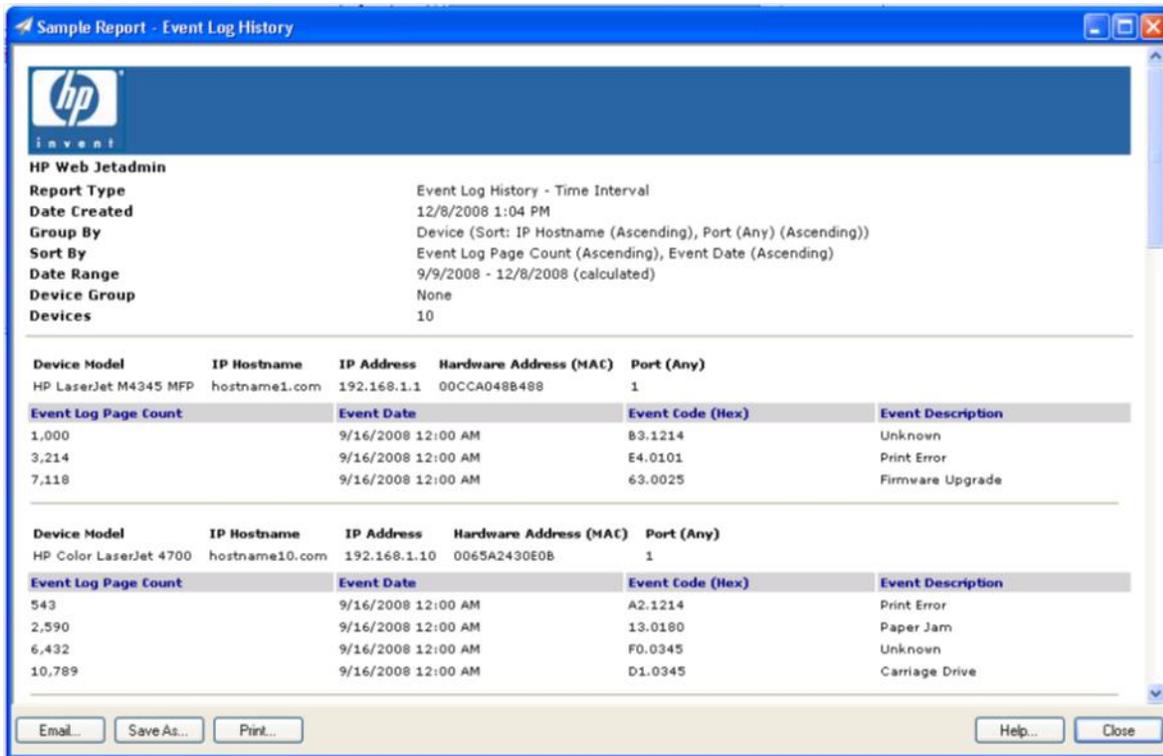


Figure 30: Event Log History report

Hourly Peak Usage report

This report displays the hourly usage of devices (Figure 31). It is useful in understanding how devices are being used on a daily basis and determining if there are any peak usage times creating bottlenecks. This might provide insight on future printing needs. This report type (and data collection type) is not designed for an entire fleet of devices. It is designed to monitor a small number of devices (ideally no more than 100) over a limited time period (a few weeks up to one month).

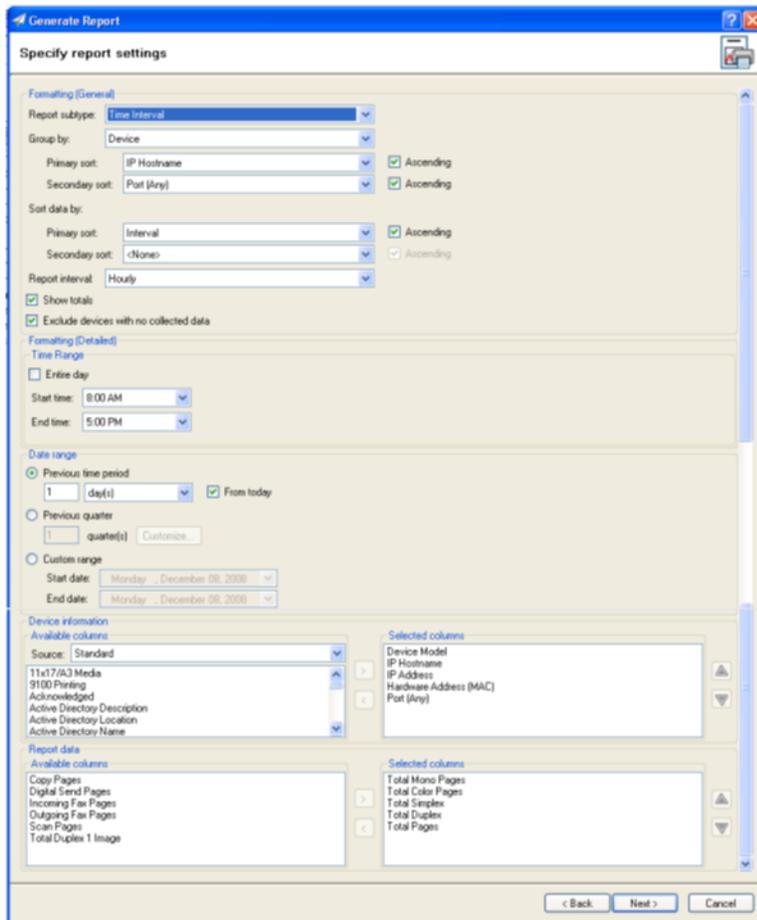


Figure 31: Hourly Peak Usage report settings

- **Report subtype** has one option:
 - **Time Interval:** Displays the page counts according to the job type for the selected devices. These include: **Total Pages**, **Total Color Pages**, **Total Mono Pages**, **Total Simplex Pages**, **Total Duplex Pages**, **Copy Pages**, **Digital Send Pages**, and **Scan Pages**. It does not include media size page counts.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single-line entries for each device in that group.
 - **Interval** groups devices according to the interval value (**Daily**, **Weekly**, or **Monthly**). For example, if a 1-month report has a weekly interval, the devices are grouped in weekly blocks.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page 22.

- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - **Primary sort** options include the report data (such as **Copy Pages**, **Incoming Fax Pages**, **Total Color Pages**, and **Total Pages**), among others.
 - **Secondary sort** options are the same as those for **Primary sort** options.
- **Report interval** is set to **Hourly** and cannot be changed.
- **Show totals** shows the column subtotals per device and the overall totals for the selected devices in the report.
- **Exclude devices with no collected data** is defined in in Accessory Inventory report on page [22](#).
- Under **Formatting (Detailed)**, the **Time Range** options available are **Entire Day** or a specific **Start time** and **End time**.
- **Date range** is defined in Accessory Inventory report on page [22](#).
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- Under **Report Data**, select the specific data relating to the hourly usage that appears as columns in the report ([Figure 32](#)). All page counts are totals within the date range of the report. These values (defined in Accessory Inventory report on page [22](#)) include:
 - **Copy Pages**
 - **Digital Send Pages**
 - **Incoming Fax Pages**
 - **Outgoing Fax Page**
 - **Scan Pages**
 - **Total Color Pages**
 - **Total Duplex**
 - **Total Duplex 1 Image**
 - **Total Mono Pages**
 - **Total Pages**
 - **Total Simplex**

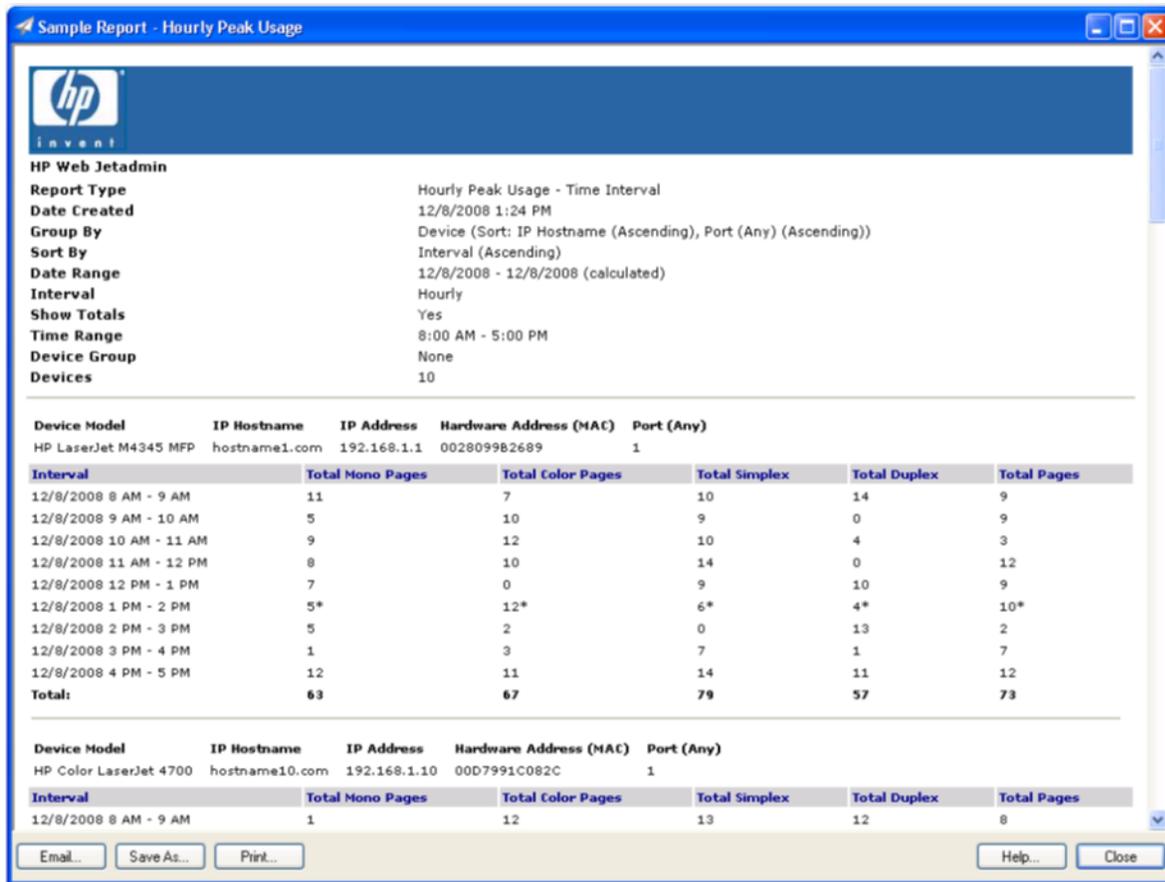


Figure 32: Hourly Peak Usage report

Supply Ordering report

This report is useful for monitoring the device supply needs (Figure 33). It provides the estimated replacement dates for supplies that are low, thus allowing for proactive ordering and replacement. The estimated replacement dates are based on the collected supplies levels, page counts, and other related details. The report contains a link to HP SureSupply. The HP SureSupply webpage is prepopulated with the appropriate HP supplies directly from the report.

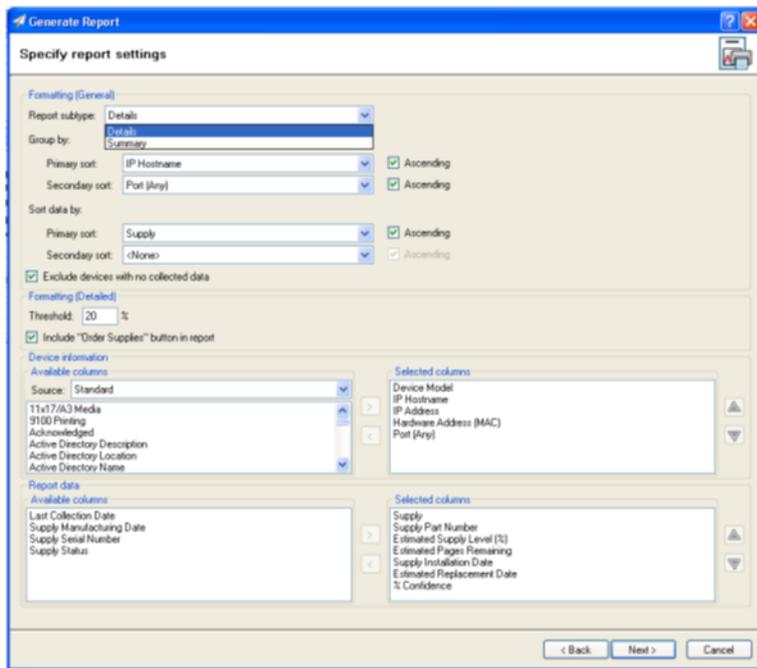


Figure 33: Supply Ordering report settings

- **Report subtype** has two options:
 - **Details:** Displays all the supplies for the devices selected that are at or below the user-specified threshold and provides an estimated replacement date based on the historical usage. The device's supplies are listed according to the grouping parameter selected along with the part number, current estimated supply level, and estimated pages remaining for the supply.
 - **Summary:** Displays a summary listing of all the supplies for the devices selected that are at or below the user-specified threshold. The supply part number, supply, and supply count are displayed according to the grouping parameter selected.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single line entries for each device in that group.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page 22. When the **Summary** is selected from **Reports subtype**, **Primary sort** and **Secondary sort** are not available.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.

- When **Details** is selected from **Reports subtype**, **Primary sort** options include the following: **<None>**, **% Confidence**, **Estimated Pages Remaining**, **Estimated Replacement Date**, **Estimated Supply Level (%)**, **Supply**, **Supply Part Number**, and **Supply Status**.
- When **Summary** is selected from **Reports subtype**, **Primary sort** options include the following: **<None>**, **Supply**, **Supply Count**, and **Supply Part Number**.
- **Secondary sort** options are the same as those for **Primary sort**.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- Under **Formatting (Detailed)**, the following options are available:
 - **Threshold**: Determines the supplies to include in the report. Values can be **0%** to **100%**. Any supply that is at or below this threshold number is included in the report. The default value is **20%**.
 - **Include "Order Supplies" button in report**: Includes a **Shop for Supplies** button in the report. When this button is clicked, the HP SureSupply webpage opens with the Shopping list prepopulated with the supplies from the report, thus simplifying the replacement ordering process. By default, this check box is selected. Clearing this check box removes the button from the report. This configuration option can also be removed entirely. To do this, go to **Tools > Options > Device Management > Supplies > Supplies Re-ordering**. Clear the **Include shop for supplies link in reports** check box. When selecting **Summary** from **Report subtype**, this option is not available.
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- Under **Report Data**, select the specific data relating to supply ordering that appears as columns in the report ([Figure 34](#)). The following are the available items:
 - **Details**:
 - **Estimated Pages Remaining**: The number of pages the supply can expect to print using a standard 5% coverage rate per page (returned by the supply to HP Web Jetadmin).
 - **Estimated Replacement Date**: The HP Web Jetadmin estimation of when the supply will run out (based on historical usage data).
 - **Estimated Supply Level (%)**: An estimated percent remaining of the supply (returned by the supply to HP Web Jetadmin).
 - **Last Collection Date**: The date when HP Web Jetadmin last performed a data collection on the device with this supply.
 - **Supply**: The name of the supply.
 - **Supply Installation Date**: The date when the supply was installed in the device. For this value to be supported, the supply must be an HP Smart Print Cartridge.
 - **Supply Manufacturing Date**: The date when the supply was manufactured. For this value to be supported, the supply must be an HP Smart Print Cartridge.

- **Supply Part Number:** The HP part number of the supply.
- **Supply Serial Number:** The serial number of the supply. For this value to be supported, the supply must be an HP Smart Print Cartridge.
- **Supply Status:** Indicates whether the supply is a genuine HP supply.
- **% Confidence:** Indicates how confident HP Web Jetadmin is in providing the **Estimated Replacement Date**. This percent value is based on the amount of historical data HP Web Jetadmin has gathered on the supply.
- **Summary:**
 - **Supply:** The name of the supply.
 - **Supply Count:** The number of supplies at or below the threshold limit.
 - **Supply Part Number:** The HP part number of the supply.

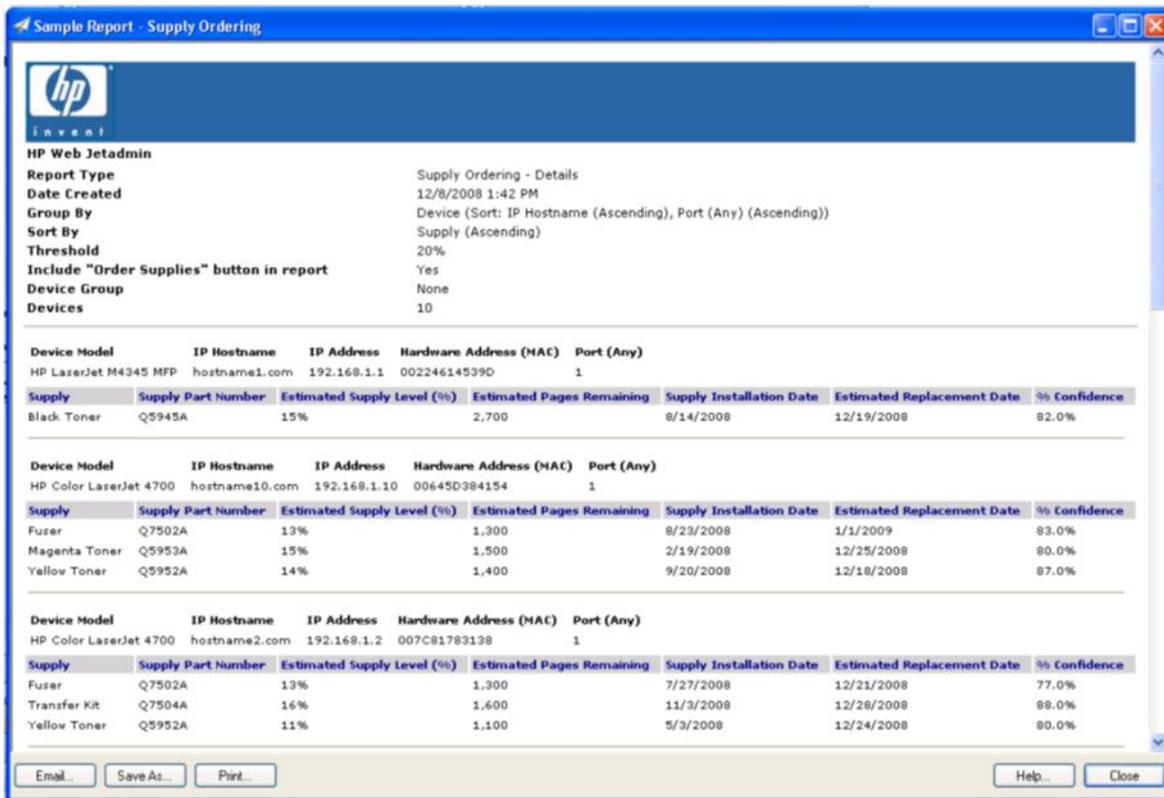


Figure 34: Supply Ordering report

Supply Replacement Forecast report

This report estimates the number of supplies that will be needed for specific devices over a future time period (Figure 35). This prediction is calculated based on the historical data HP Web Jetadmin gathered.

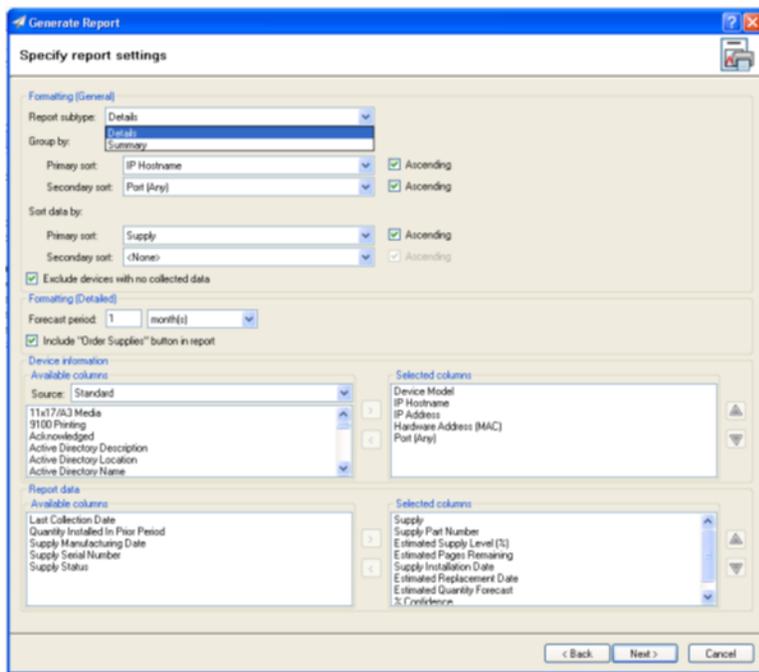


Figure 35: Supply Replacement Forecast report settings

- **Report subtype** has two options:
 - **Details:** Displays all the supplies for the devices selected, indicating the estimated quantity forecasted for the time period selected. Each of the devices' various supplies are listed along with supply identification information (such as **Supply Part Number**, **Supply Serial Number**, and **Supply Manufacturing Date**) and supply level information (such as **Estimated Supply Level**, **Estimated Pages Remaining**, **Estimated Replacement Date**, and **Quantity Installed In Prior Period**).
 - **Summary:** Displays a summary listing of all the supplies for the devices selected that will need to be replaced during the time period selected. The **Supply Part Number**, **Supply**, and **Quantity Installed In Prior Period** can be displayed as well.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single-line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single-line entries for each device in that group.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page 22. When selecting **Summary** from **Report subtype**, **Primary sort** and **Secondary sort** are not available.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.

- When **Details** is selected from **Reports subtype**, **Primary sort** options include the following: **<None>**, **% Confidence**, **Estimated Pages Remaining**, **Estimated Quantity Forecast**, **Estimated Replacement Date**, **Estimated Supply Level (%)**, **Quantity Installed In Prior Period**, **Supply**, **Supply Part Number**, and **Supply Status**.
- When **Summary** is selected from **Reports subtype**, **Primary sort** options include the following: **<None>**, **Estimated Supply Forecast**, **Quantity Installed In Prior Period**, **Supply**, and **Supply Part Number**.
- **Secondary sort** options are the same as those for **Primary sort**.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- Under **Formatting (Detailed)**, the following options are available:
 - **Forecast Period:** Select a future period of time for the HP Web Jetadmin forecast. Values available are **day(s)**, **week(s)**, **month(s)**, and **year(s)**.
 - **Include "Order Supplies" button report:** Displays a **Shop for Supplies** button in the report. When this button is clicked, the HP SureSupply webpage opens with the Shopping list prepopulated with the supplies from the report, thus simplifying the replacement ordering process. By default, this check box is selected. Clearing this check box removes the button from the report. This configuration option can be removed so it is not even available on this page. To do this, go to **Tools > Options > Device Management > Supplies > Supplies Re-ordering**. Clear the Include shop for supplies link in reports check box. When selecting **Summary** for **Report subtype**, this option is not available.
- **Device Information** is defined in Accessory Inventory report on page [22](#).
- Under **Report Data**, select the specific data relating to the supply forecasts that appears as columns in the report ([Figure 36](#)). The following values are available:
 - **Details:**
 - **Estimated Pages Remaining:** The number of pages the supply can expect to print using a standard 5% coverage rate per page (returned by the supply to HP Web Jetadmin).
 - **Estimated Quantity Forecast:** The forecast of the number of supplies that will be needed for a specific device over a future time period. This prediction is based on the historical data HP Web Jetadmin gathered.
 - **Estimated Replacement Date:** The HP Web Jetadmin estimation of when the supply will run out (based on historical usage data).
 - **Estimated Supply Level (%):** The estimated percent remaining of the supply (returned by the supply to HP Web Jetadmin).
 - **Last Collection Date:** The date when HP Web Jetadmin last performed a data collection on the device with this supply.
 - **Quantity Installed In Prior Period:** The number of a particular type of supplies that were installed in the prior period of time as defined by the future period of time.

- **Supply:** The name of the supply.
- **Supply Installation Date:** The date when the supply was installed in the device. For this value to be supported, the supply must be an HP Smart Print Cartridge.
- **Supply Manufacturing Date:** The date when the supply was manufactured. For this value to be supported, the supply must be an HP Smart Print Cartridge.
- **Supply Part Number:** The HP part number of the supply.
- **Supply Serial Number:** The serial number of the supply. For this value to be supported, the supply must be an HP Smart Print Cartridge.
- **Supply Status:** Indicates whether the supply is a genuine HP supply.
- **% Confidence:** Indicates how confident HP Web Jetadmin is in providing the Estimated Replacement Date. This percent value is based on the amount of historical data HP Web Jetadmin has gathered on the supply.
- **Summary** (these values are defined previously under **Details**):
 - **Estimated Quantity Forecast**
 - **Quantity Installed In Prior Period**
 - **Supply**
 - **Supply Part Number**

HP Web Jetadmin
Report Type: Supply Replacement Forecast - Details
Date Created: 12/8/2008 1:58 PM
Group By: Device (Sort: IP Hostname (Ascending), Port (Any) (Ascending))
Sort By: Supply (Ascending)
Forecast period: 1 month(s)
Include "Order Supplies" button in report: Yes
Device Group: None
Devices: 10

Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)
HP LaserJet M4345 MFP	hostname1.com	192.168.1.1	006A1D1C01D6	1

Supply	Supply Part Number	Estimated Supply Level (%)	Estimated Pages Remaining	Supply Installation Date	Estimated Replacement Date	Estimated Quantity Forecast
Black Toner	Q5945A	80%	14,400	5/8/2008	12/22/2008	1
Fuser	Q5998A	75%	7,500	2/12/2008	12/23/2008	2

Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)
HP Color LaserJet 4700	hostname10.com	192.168.1.10	00988E521960	1

Supply	Supply Part Number	Estimated Supply Level (%)	Estimated Pages Remaining	Supply Installation Date	Estimated Replacement Date	Estimated Quantity Forecast
Black Toner	Q5950A	44%	4,840	9/1/2008	12/22/2008	1
Cyan Toner	Q5951A	45%	4,500	1/3/2008	12/31/2008	2
Fuser	Q7502A	72%	7,200	8/17/2008	12/30/2008	2
Magenta Toner	Q5953A	90%	9,000	12/25/2007	12/27/2008	4
Transfer Kit	Q7504A	55%	5,500	10/20/2008	12/20/2008	4
Yellow Toner	Q5952A	77%	7,700	2/28/2008	12/19/2008	2

Figure 36: Supply Replacement Forecast report

Supply Usage report

This report shows the historical supply usage and coverage for supplies that are still in use (active) or are closed (removed from the device) (Figure 37). It is useful for understanding how efficiently supplies are being used.

Generate Report
Specify report settings

Formatting (General)
 Report subtype: Details
 Group by: Inventory
 Primary sort: IP Hostname (Ascending)
 Secondary sort: Port (Any) (Ascending)
 Sort data by:
 Primary sort: Supply (Ascending)
 Secondary sort: <None> (Ascending)
 Exclude devices with no collected data

Formatting (Detailed)
 Usage period: 1 month(s)
 Installation state: Removed Only

Device information
 Available columns: Source, 11x17/A3 Media, 9100 Printing, Acknowledged, Active Directory Description, Active Directory Location, Active Directory Name
 Selected columns: Device Model, IP Hostname, IP Address, Hardware Address (MAC), Port (Any)

Report data
 Available columns: Estimated Capacity in Pages, Estimated Pages Printed, Estimated Pages Remaining, Install Status, Supply Manufacturing Date
 Selected columns: Supply, Supply Part Number, Supply Status, Supply Serial Number, Supply Installation Date, Last Collection Date, Initial Supply Level (%), Estimated Supply Level (%)

< Back Next > Cancel

Figure 37: Supply Usage report settings

- **Report subtype** has two options:
 - **Details:** Displays all the supplies for the devices selected and their usage levels for the time period selected. Each of the devices' various supplies are listed along with supply identification information (such as **Supply Part Number**, **Supply Serial Number**, and **Supply Manufacturing Date**) and usage information (such as **Estimated Supply Level**, **Initial Supply Level**, **Estimated Pages Printed**, and **Average Supply Coverage %**).
 - **Inventory:** Displays a summary listing of all the supplies for the devices selected that will need to be replaced during the time period selected. The **Supply Part Number**, **Supply**, and **Quantity Installed In Prior Period** can be displayed as well.
- **Group by** defines the grouping of devices in the report:
 - **<None>** provides no grouping of devices, displaying single line entries for each device.
 - **Device** lists each device and the specific data under each device.
 - **Device Groups** lists the devices according to the device group with single line entries for each device in that group.
 - Others are self-explanatory.
- **Primary sort** and **Secondary sort** under **Group by** are defined in Accessory Inventory report on page [22](#). When **Inventory** is selected from **Reports subtype**, **Primary sort** and **Secondary sort** are not available.
- **Sort data by** sorts the data in the report using a **Primary sort** and **Secondary sort**.
 - When **Details** is selected from **Reports subtype**, **Primary sort** options include the following: **<None>**, **Estimated Pages Remaining**, **Estimated Supply Level (%)**, **Install Status**, **Supply**, and **Supply Part Number**.
 - When **Inventory** is selected from **Reports subtype**, **Primary sort** options include the following: **Estimated Pages Remaining**, **Estimated Supply Level (%)**, **Install Status**, **Initial Supply Level (%)**, and **Supply**. Other sort options (such as **Device Model** and **Serial Number**) are also available.
 - **Secondary sort** options are the same as those for **Primary sort**.
- **Show totals** shows the column subtotals per device and the overall totals for the selected devices in the report. When **Details** is selected from **Reports subtype**, this option is not available.
- **Exclude devices with no collected data** is defined in Accessory Inventory report on page [22](#).
- Under **Formatting (Detailed)**, the following options are available:
 - **Usage Period:** Specifies the time period in which to analyze the supply usage. Values available are: **day(s)**, **week(s)**, **month(s)**, and **year(s)**.
 - **Installation State:** Determines what state the supply must be in to be included in the report. **Active** indicates that the supply is still in the device and being actively used. **Removed**

indicates that the supply has been removed from the device and is no longer in use. Values can be **Active and Removed**, **Active Only**, or **Removed Only**.

- **Device Information** is defined in Accessory Inventory report on page 22.
- Under **Report Data**, select the specific data relating to the supply usage that appears as columns in the report (Figure 38). These values include:
 - **(%) Supply Consumption**: The amount of the supply used since data was first collected on it. It is calculated as:

Initial Supply Level - Estimated Supply Level.
 - **Average Supply Coverage %**: The average supply coverage per page. It is calculated as:

 $(\text{supply max capacity} * \text{supply consumption} * 0.05) / \text{pages printed}$
 - **Estimated Capacity in Pages**: The approximate number of pages that can be printed with the supply based on an average supply coverage rate of 5% per page.
 - **Estimated Pages Printed**: The total pages printed with the supply. It is calculated based on the values captured by the HP Web Jetadmin data collection process on the device.
 - **Estimated Pages Remaining**: The number of pages the supply can expect to print using a standard 5% coverage rate per page (returned by the supply to HP Web Jetadmin).
 - **Estimated Supply Level (%)**: The estimated percent remaining of the supply (returned by the supply to HP Web Jetadmin).
 - **Initial Supply Level (%)**: The percentage level of the supply when HP Web Jetadmin performed the initial data collection on the device.
 - **Install Status**: Indicates whether the supply is still being used (active) or has been removed. Values can be Active or Removed.
 - **Last Collection Date**: The date when HP Web Jetadmin last performed a data collection on the device with this supply.
 - **Supply**: The name of the supply.
 - **Supply Installation Date**: The date when the supply was installed in the device. For this value to be supported, the supply must be an HP Smart Print Cartridge.
 - **Supply Manufacturing Date**: The date when the supply was manufactured. For this value to be supported, the supply must be an HP Smart Print Cartridge.
 - **Supply Part Number**: The HP part number of the supply.
 - **Supply Serial Number**: The serial number of the supply. For this value to be supported, the supply must be an HP Smart Print Cartridge.
 - **Supply Status**: Indicates whether the supply is a genuine HP supply.

Sample Report - Supply Usage

HP Web Jetadmin

Report Type: Supply Usage - Details
 Date Created: 12/8/2008 2:20 PM
 Group By: Device (Sort: IP Hostname (Ascending), Port (Any) (Ascending))
 Sort By: Supply (Ascending)
 Usage period: 1 month(s)
 Installation state: Removed Only
 Device Group: None
 Devices: 8/10 (devices without data excluded)

Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)
HP Color LaserJet 4700	hostname10.com	192.168.1.10	002872904A04	1

Supply	Supply Part Number	Supply Serial Number	Supply Installation Date	Initial Supply Level (%)	Estimated Supply Level (%)	(%) Supply Consumption	Average Supply Coverage
Yellow Toner	Q5952A	8242	9/15/2008	81%	71%	10%	4.0%

Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)
HP LaserJet 4700	hostname2.com	192.168.1.2	00E78D84921E	1

Supply	Supply Part Number	Supply Serial Number	Supply Installation Date	Initial Supply Level (%)	Estimated Supply Level (%)	(%) Supply Consumption	Average Supply Coverage
Cyan Toner	Q5951A	7691	10/15/2008	81%	60%	21%	1.0%
Fuser	Q7502A	4696	4/25/2008	91%	72%	19%	--
Magenta Toner	Q5953A	8705	7/10/2008	92%	73%	19%	9.0%
Yellow Toner	Q5952A	8288	9/15/2008	90%	76%	14%	9.0%

Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)
HP LaserJet M4345 MFP	hostname3.com	192.168.1.3	0084867C88EE	1

Supply	Supply Part Number	Supply Serial Number	Supply Installation Date	Initial Supply Level (%)	Estimated Supply Level (%)	(%) Supply Consumption	Average Supply Coverage
Black Toner	Q5945A	1984	3/13/2008	88%	67%	21%	3.0%

Figure 38: Supply Usage report

Sample reports

Sample reports showing realistic examples are available from the **Reports - Report Generation** task module. A report can be created by selecting any **Report Type**, and then clicking **Sample**. Although the devices and data in the sample report are fictitious, the report is representative of a real report. All the various options can be selected to see what the report will look like with real-looking data. The sample report that is created is also saved as an HTML file and available from the **Reports - Archived Reports** task module.

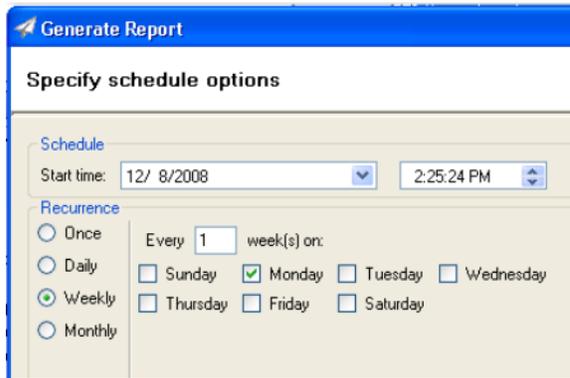
Schedule reports

In addition to generating reports manually, they can also be scheduled so that they are emailed or saved to a file at regular intervals. This is a very powerful automation feature.

Use the following steps to schedule a report:

1. Select **Report Generation** in the navigation tree.
2. From the **Reports - Report Generation** task module, select a **Report type**.
3. Click **Schedule**.
4. Click through the report configuration pages, choosing the appropriate settings. The options that are available depend on the report type selected and are described in Report type definitions on page 22.
5. On the **Specify destination options** page, select how the report is handled: **Archive only** (saved and available from the **Reports - Archived Reports** task module on the **Report Generation** page) or **Email**. When emailing the report, select the email addresses and **File format** for the email attachment (HTML or CSV).

6. On the **Specify schedule** options page, select the **Schedule Start time** and the **Recurrence**. Values are **Once, Daily, Weekly, or Monthly**. Each value has additional parameters to choose from (Figure 39).



The screenshot shows a web interface titled "Generate Report" with a sub-section "Specify schedule options". Under "Schedule", there are two input fields: "Start time:" with a date "12/ 8/2008" and a time "2:25:24 PM". Below this is the "Recurrence" section with radio buttons for "Once", "Daily", "Weekly", and "Monthly". The "Weekly" radio button is selected. To the right, there is a section "Every 1 week(s) on:" with checkboxes for "Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", and "Saturday". The "Monday" checkbox is checked.

Figure 39: Specify schedule options page

7. Click **Next**. The **Confirm** page opens.
8. Click **Create Schedule**.
9. Click **Done**.

The scheduled task is available from the **Reports - Scheduled Reports** task module on the **Report Generation** page. It is also available and manageable from the **Overview** page (at the top of the navigation tree) under the **Devices - Scheduled Tasks** task module. If the scheduled report generation task is running, it is also available from the **Devices - Active Tasks** task module on the **Overview** page.

Other ways to schedule a report

Another way to schedule a report is to right-click **Reports** or **Report Generation** from the navigation tree, and select **Schedule report**. You can also select **Generate report** from some items in the navigation tree, and then select the **Schedule report** check box in the lower-left corner of the page to create a schedule. This **Schedule report** check box is also available when selecting **Generate Report** from one of the specific data collection pages from the navigation tree under **Data Collection**. Finally, you can choose to schedule a report by selecting the **Reports** tab from any device list or device group page, and then selecting **Schedule report**.

Archived reports

Archived reports are available from the **Reports - Archived Reports** task module on the **Report Generation** page (Figure 40). From this task module, the **View, Email, Save, and Delete** options are available. Use the **Email** option to specify the attachment file format as HTML or CSV. The **Save** feature provides the same format options and saves the file to the client PC, not the server. When viewing a report, the **Email, Save As, and Print** options are available. The **Email** and **Save As** options provide the same functionality (respectively) as the **Email** and **Save** options described previously.

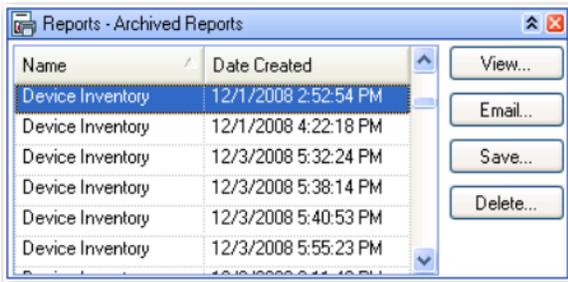


Figure 40: Archived Reports task module

Report templates

A report template is a uniquely named set of defined report settings. It contains a set of criteria that includes the report type and report settings (including the device grouping information, date range to use, device information to display, report data to display, and destination options). After a template is created, it can be applied easily to any list of devices to quickly generate a report. Report templates are a time-saving convenience, streamlining the process of creating reports with a consistent format. These templates can be activated manually or through a schedule to generate a report for the selected devices. There are 22 predefined report templates available (Figure 41). They cover all the report type categories (**Accessory Inventory**, **Device Inventory**, **Device Utilization**, **Device Utilization By User**, **Event Log History**, **Hourly Peak Usage**, **Supply Ordering**, **Supply Replacement Forecast**, and **Supply Usage**).

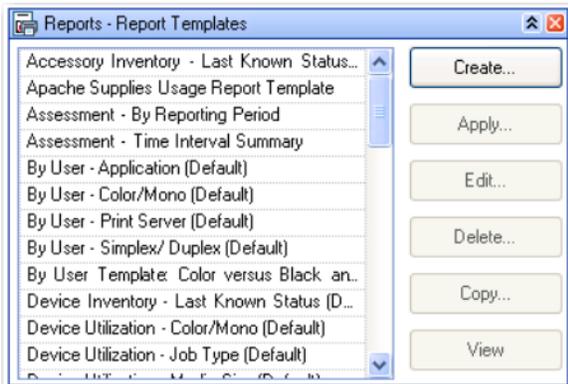


Figure 41: Report Templates task module

Custom templates can easily be created by launching the **Create Report Template** wizard. Click **Report Generation** under **Reports** in the navigation tree, and then click **Create** in the **Reports - Report Templates** task module. Select the report type, choose the various report settings, specify the destination options, provide a template name, and then create the template. The new template is now ready to use.

Invoking a report template to create a report can be done in a number of different ways. The **Reports - Report Templates** task module can be used. Just click **Apply** to start this process. You can also right-click **Reports > Report Generation > Templates** or on the template itself in the navigation tree, and then select **Apply report template** to start this process. Another method of invoking a report template is to use the **Generate Report** option on any data collection page. The first page displayed provides an option for selecting the template. You can also use the Windows drag-and-drop functionality. By selecting any number of devices from any device list or device group, the devices can be dragged and dropped onto any report template listed under **Templates** in the **Report Generation** section of the navigation tree. Finally, you can also select one of the templates by selecting the **Reports** tab from

any device list page or device groups page, and then selecting **Generate report** or **Schedule report**. Again, the first page displayed provides an option for selecting the template.

Report templates can be managed from the **Reports - Report Templates** task module. From here, click **Create, Apply, Edit, Delete, Copy**, or **View** to manage the templates. The predefined templates (shown with a lock icon next to them in the navigation tree) cannot be edited. However, they can be deleted. To re-create any deleted predefined templates, go to **Tools > Options > Device Management > Reports > General**, and then click the **Restore** button. This feature applies only to the predefined templates that are initially created during the installation of HP Web Jetadmin.

Additional points of interest about report generation

When emailing a report, the report is generated and then attached as an HTML or CSV file (as defined by the user). The filename of the report is created randomly. Also, for HTML file attachments, a JPEG file containing the HP Logo is attached. Examples of these filenames are: ge33injw.as1.html, ge33injw.as1_hp.jpg, and c5r4m05p.utw.csv.

Footnotes are used in reports to indicate certain details about the data. The following are the symbols used.

Symbol	Meaning
--	The data is not available.
*	The collected data is not complete for the selected time period.
**	The value is not supported for the device.

An asterisk indicating a partial data collection includes any data collection where HP Web Jetadmin does not have a full range of data for the interval. In the case of daily intervals, HP Web Jetadmin checks the collection times (default is 12:00 a.m.) between the days. In the case of a weekly interval, HP Web Jetadmin checks the days on the endpoints of the intervals. Unless there was a problem with the first or last day HP Web Jetadmin collected for an interval, the entire interval should not be marked incomplete.

If the **From today** check box is selected for a report interval, HP Web Jetadmin displays asterisks next to the data because today is not finished yet and the data collection is considered incomplete. If the report is configured to run for the last day only and the **From today** check box is selected, the error **No data is present** is displayed because there is not a complete days' worth of data to present. The same behavior occurs if a custom range is selected and today is selected as the endpoint. The safest option is to clear the **From today** check box or select a custom range with an endpoint on a complete day of data (such as the previous day).

Export device data

Create an export

Device data can be exported from HP Web Jetadmin to an XML or CSV file format. This can be initiated from any device list or device group (Figure 42), or the **Export Devices** wizard can be launched from **Tools > Export devices**. When this wizard is launched, the user is presented with a variety of export choices.

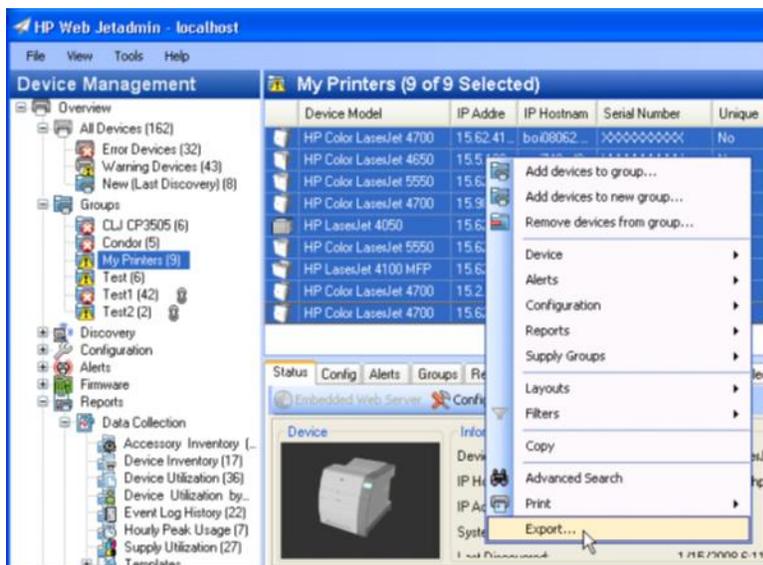


Figure 42: Launch an export from a device group

Select data columns

The **Select columns** page is initially displayed by the **Export Devices** wizard (Figure 43) where the **Threshold** level can be set. The **Threshold** level specifies the age or type of data that HP Web Jetadmin uses when gathering data from the devices selected.

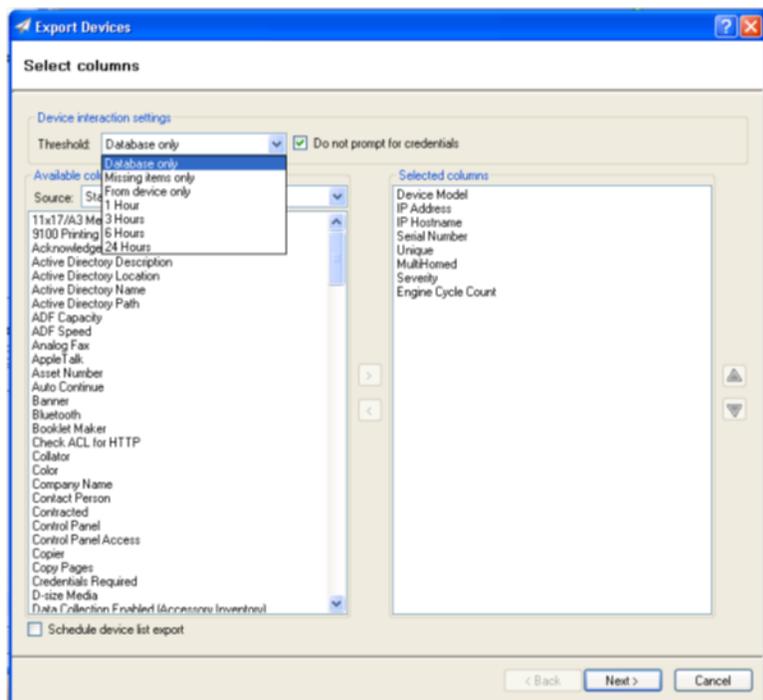


Figure 43: Select columns page

The thresholds available are:

- **Database only:** Data is gathered only from the database, not from the device. This option allows for very quick data gathering.

- **Missing items only:** Data is gathered mainly from the database. However, any missing device data in the database is gathered directly from the device. This option helps minimize the time it takes to gather the data.
- **From device only:** All the data is gathered from the devices, ensuring the most up-to-date information. However, this option causes the process to take longer because every device must be contacted and data gathered from it.
- **1 hour:** Data in the database that is older than 1 hour is updated directly from the device before being exported. This option minimizes the time it takes to export the data while ensuring that the data is mostly up-to-date.
- **3 hours:** Data in the database that is older than 3 hours is updated directly from the device before being exported. If the device data does not change significantly in a 3-hour time period, this option minimizes the time it takes to export the data while ensuring that the data is mostly up-to-date.
- **6 hours:** Data in the database that is older than 6 hours is updated directly from the device before being exported. If the device data does not change significantly in a 6-hour time period, this option minimizes the time it takes to export the data while ensuring that the data is mostly up-to-date.
- **24 hours:** Data in the database that is older than 24 hours is updated directly from the device before being exported. If the device data does not change significantly in a 24-hour time period, this option minimizes the time it takes to export the data while ensuring that the data is mostly up-to-date.

You can now define whether credentials are required for data export. The **Do not prompt for credentials** check box is selected by default, which means that credentials are not required. Clear this check box to be prompted by each device that has credentials defined when exporting data.

On the right side of the **Select columns** page, the **Selected columns** table defines the data elements to export. This table is prepopulated with a default set of data elements when the wizard is launched from the **Tools** menu. However, when the wizard is launched by right-clicking on a device list, and then selecting **Export**, the table is prepopulated with the columns that are displayed in the device list.

The **Available columns** table consists of the data elements that are still available. The number of items in the list can be adjusted by selecting one of the following:

- **Favorites:** Displays the most commonly used columns.
- **All:** Displays all the available columns, except obsolete columns. To display only a specific category of columns, expand **All**, and then select the category.
- **Obsolete:** Displays the columns that are still available in HP Web Jetadmin, but have been replaced by new columns or will not be supported in the future.

Finally, selecting the **Schedule device list export** check box adds a scheduler page to the **Export Devices** wizard and restricts the destination for the export to email only.

Select devices

If the **Export Devices** wizard is launched from **Tools > Export devices**, the **Select devices** page is displayed. You can then select the devices to include in the export, and click **Next**. If the **Export**

Devices wizard is launched by right-clicking from the device list and selecting **Export**, only the devices that are already selected in the device list are included in the export.

Destination settings

After the columns and devices are selected, the **Specify destination settings** page is displayed (Figure 44). This page specifies the filename and destination. The default filename is HP Web Jetadmin Exported Devices.

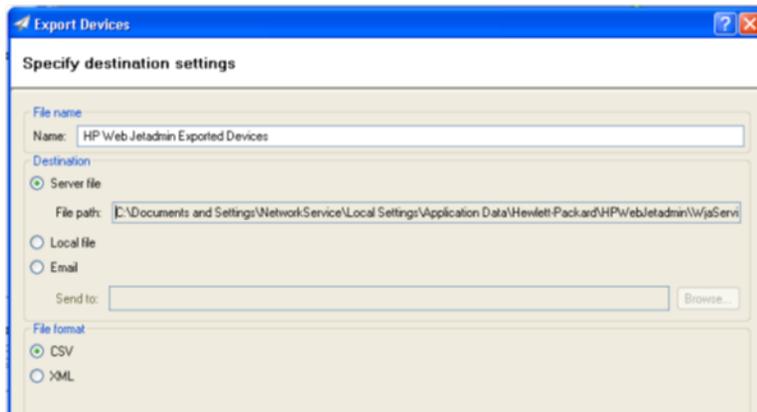


Figure 44: Specify destination settings page

Under **Destination**, select one of the following options:

- **Server file:** Specifies that the server filename and path are specific to the HP Web Jetadmin host installation. The specified path describes where the file is located after the export is complete. If a file of the same name exists in the location, the filename of the export file has a time stamp appended to it that makes it unique. The following is the file path on the server, which cannot be modified:

C:\Documents and Settings\NetworkService\Local Settings\Application Data\HP Inc\HPWebJetadmin\WjaService\Export

- **Local file:** Saves the export to a local file on the client PC. You are prompted for a filename and location after the export begins.
- **Email:** Sends the data to an email address. Enter the email address on this page or browse for the correct email address.

Under **File format**, select **CSV** or **XML**. When exporting to email, the file is added to the email as an attachment. Clicking **Next** displays the **Confirm** page. Clicking **Start Export** starts the export process. The **Results** page is displayed at completion. Click **Details** or **Done** to complete the export process.

Schedule device exports

When the **Schedule device list export** check box in the **Select columns** portion of the wizard is selected, a **Specify schedule options** page is displayed after clicking **Next** on the **Specify destination** page. A flexible set of scheduling options can be used to launch a one-time or recurring export process. This is similar to the **Specify schedule options** function covered previously in Schedule reports on page 53. The one item that is different with this scheduling option is the required **Schedule name**. By default, the **Schedule name** is **Export Device List**, but it can be renamed. The **Schedule name**

is also available in the **Devices - Scheduled Tasks** task module on the **Overview** page (Figure 45). From this task module, the schedule can be edited or deleted. If the scheduled export is in progress, the schedule is also available in the **Devices - Active Tasks** task module on the **Overview** page.

Scheduled exports are valid when any destination option is selected. However, you are prompted for a filename if **Local file** is selected.



Figure 45: Overview page for viewing and managing scheduled tasks

Example of exported data

Figure 46 provides an example of the data that was exported using **Export devices**. This example shows the exported CSV data in a spreadsheet editor, but the data can be opened in any simple text editor. Uses for this data include supplies tracking, security auditing, page count tracking, and status tracking.

	A	B	C	D	E	F	G	H
1	DeviceName	IPv4Address	LastCommunicationTime	SerialNumber	Unique	PageCount	SurfacesCountColor	PrinterTotalCharge
2	HP LaserJet M3035 MFP	10.98.77.239	10/24/2008 6:41	CNLLG46693	Yes	2,460	<Unknown>	2,428.00
3	<Unknown>	10.88.110.203	11/18/2008 13:09	XXXXXXXXXX	No	9,640	<Unknown>	<Unknown>
4	hp color LaserJet 5550	10.5.168.141	12/7/2008 18:43	MT1049	Yes	3,734	3,086	989
5	HP LaserJet M4345 MFP	10.88.120.158	11/3/2008 11:10	XXXXXXXXXX	No	1,604	<Unknown>	1,601.00
6	HP LaserJet 5000 Series	10.2.212.147	10/28/2008 11:08	USB3007188	Yes	72,750	<Not supported>	<Not supported>
7	hp color LaserJet 5550	10.98.116.191	12/7/2008 18:43	JPDC4CK00N	Yes	61,215	50,364	62,327.70
8	HP LaserJet 4000 Series	10.2.206.206	12/7/2008 18:45	USRBD14422	Yes	109,052	<Not supported>	<Not supported>
9	hp LaserJet 4345 mfp	10.62.41.10	12/7/2008 18:49	CNJYF07270	Yes	60,867	<Not supported>	60,990.10
10	hp color LaserJet 5550	10.2.209.219	12/7/2008 18:43	JPFC5CK02S	Yes	78,391	65,609	79,231.80
11	HP CM8060 MFP with Edge	10.98.116.15	12/7/2008 18:43	SG71M11003	Yes	95,576	85,203	99,447.00
12	hp LaserJet 9040 MFP	10.62.41.4	12/7/2008 18:27	JPTL76N01V	Yes	4,000	<Unknown>	3,713.60
13	HP Color LaserJet 4700	10.98.112.70	12/7/2008 18:47	JPGLB04022	Yes	148,332	130,065	148,910.50
14	hp color LaserJet 5550	10.62.41.7	12/7/2008 18:43	JPFC5CK02W	Yes	38,112	27,295	38,667.80
15	hp color LaserJet 5550	10.2.209.217	12/7/2008 18:46	JPFC5CK01T	Yes	120,490	78,068	128,825.90
16	HP LaserJet 4100 Series	10.62.41.86	12/7/2008 18:44	USBDB00023	Yes	689,837	<Not supported>	<Not supported>

Figure 46: Exported data viewed in a spreadsheet format

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