

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.

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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).

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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 userspecified 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**.

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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.

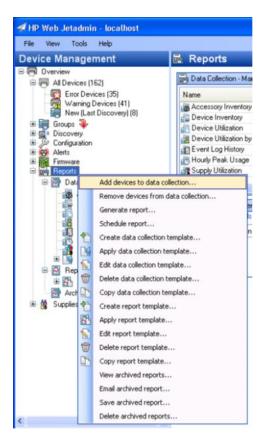


Figure 6: Right-click Reports

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 8 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).

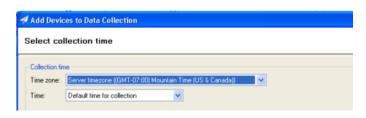


Figure 7: Select collection time page

- 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).

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HP LasesJet 4000	hpb11472 1	15 -				
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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).

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HP LasesJet 4345 MFP		boi08069	15.62.41.10		
HP Color LaserJet 5550		npi4cc861	15.5.168.141		
hp designjet 110plus (C77	96D)	npi003f76			
HP Deskjet 990C		npi4/61c2_	15.62.33.74		
HP Color LasesJet 5550		boi08066	15.62.41.7		

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).

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Application Management	•								

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).

Device Model	IP Ac	idre	IP Hostn	Por	Seveni	Hardware A			
HP Color LasesJet 9500	15.6	2.42	npia49694	. 1	0	0001E686E _			
HP Color LaserJet 5550	15.9	1.78_	npib56/85	. 1	Ö	0001E6856_			
HP LasesJet 5000	15.5	190_	npibe2d8e	. 1	Õ	0060808E2_			
HP Color LasesJet 5550	155	189	npic065e4	. 1	0	001104C06_			
HP LasesJet 4345 MFP	15.9	3.11.	npic16315.	. 1	0	001185C16			
HP LacesJet 4000	15.5	189	npic2879a	1	0	080009C28			
HP Color LasesJet 4700	15.5	176_	npic954fc.	. 1		00306EC95_			
HP 9200C Digital Sender	15.5	190	npic9b4d4	. 1	0	00306EC98			
HP LasesJet M3035 MFP	16.8	3.16.	npic9b4e2	_ 1	0	001708820			
Unknown (Disconnected)			npica3b/3		0	006080CA3			
					•	001104000			
us Config Alerts Grou	ps Rep	orts	Supplies S	torage	Applicat	ions Detailed Info	o Capabilitie	rs Troublesho	oot Firmware
Apply Template 🗿 Vier	w History	152	Customize	. 01	Refresh				
Encrypt al web co., Encryption Strength Error Handling IP Address IPP Printer Install IPX - Ethernet Fra IPX - Queue Serv IPX - RCFG Supp IPX - SAP Broadc IPX - SAP Broadc			rap destinatio	-	action list	Ve	at number. Insion: animunity:		
-IPX - Source Routi		A	uction	Slot	Trap	Destination	Port	Version	Community
- IPX Name Link Setting		4	None>	1	15.6	2.42.200	27892	SNMP v2c	
Locally Administer_		d	None>	3	15.5	190.49	27892	SNMP v2c	ATTAINTS.
mDNS Service Na Privacy Setting Protocol Stacks Scan Idle Timeout Stude Trap Dentin System Log Server System Name									

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 13

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).

De	evices			TI	ap table settings		
	Device Model	IP Hostname	IP Address		IP Address	Port	FQDN
	HP LaterJet 4345 MFP	boi08069.boi		•	15.5.188.96	27892	
	HP Color LasesJet 5550	boi08066.boi.	15.62.41.7		15.5.190.101	27892	
					15.5.189.122	27892	
					192.168.1.103	27892	
					15.5.188.157	27892	
					16.212.201.133	162	
				0	Remove all trap table Remove all trap table Remove selected tra Skip this device Activate Divice for De	p table settings	

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 userdefined 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: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.

Data Collection	Type	Time	Device Model	IP Hostna	IP Address	2
Device Utilization by User	Possibly missing job data	11/5/2008 12:00:00 AM	HP LasesJet 4050	hpbs3789_	15.62.43.164	
Hourly Peak Usage	Descending Page Counts	11/22/2008 9:00:00 AM	HP LasesJet 4050	hpbs3789_	15.62.43.164	
Device Utilization	Device at IP Address changed	11/16/2008 12:00:02 PM	HP CM8060 MFP with Edg.	condorid4	15.252.77.187	
Hourly Peak Usage	Inconsistant Totals	10/18/2008 10:00:00 AM	HP LaseJet 4050	hpbs3789_	15.62.43.164	
Device Utilization by User	Possibly missing job data	11/14/2008 4:10:08 PM	HP LasesJet 4050	hpbs3789_	15.62.43.164	
Event Log History	Device at IP Address changed	11/27/2008 12:00:46 AM	HP CM8060 MFP with Edg.	NP1887F92	15.252.77.57	
Device Inventory	Device at IP Address changed	11/23/2008 12:00:43 AM	HP CM8060 MFP with Edg.	NP1887F92	15.252.77.57	
Event Log History	Suspect Serial Number: >0000000000	11/10/2008 5:11:12 PM	HP Color LasesJet CP3505	hwtest2-2_	16.88.115.203	
Accessory Inventory	Device at IP Address changed	10/23/2008 12:00:01 AM	HP CM8060 MFP with Edg.	NP1887F92	15.252.77.57	
Accessory Inventory	Device at IP Address changed	8/28/2008 12:00:06 AM	HP CM8060 MFP with Edg_	NP1887F92	15.252.77.57	
Device Utilization by User	Possibly missing job data	8/26/2008 12:00:00 AM	HP Color LasesJet 5550	NP1705A42	15.62.40.206	
Hourly Peak Usage	Descending Page Counts	11/4/2008 2:00:00 PM	HP LasesJet 4050	hpbs3789_	15.62.43.164	
Device Utilization	Suspect Serial Number: >0000000000	10/21/2008 12:29:53 PM	HP Color LasesJet CP3505	hwtest2-1_	16.88.115.187	
Device Inventory	Device at IP Address changed	12/4/2008 12:00:45 AM	HP CM8060 MFP with Edg.	condorid4_	15.252.77.247	
Hourly Peak Usage	Inconsistant Totals	10/13/2008 4:00:00 AM	Reconcile Data Collecti	on Anomal	y ? 🔀	
Hourly Peak Usage	Inconsistant Totals	12/1/2008 9:00:00 PM	- Reconcine Data Contecti		y 💷 🎑	
Device Utilization	Descending Page Counts	11/4/2008 12:00:00 AM	How would you like to reconci	le the data co	flection anomaly?	
Device Utilization by User	Possibly missing job data	10/7/2008 12:00:00 AM				
Hourly Peak Usage	Descending Page Counts	11/11/2008 4:00:00 PM	Ignore the Anomaly		×	
Device Inventory	Suspect Serial Number: >0000000000	10/15/2008 6:22:08 PM	Ignore the Anomaly Reset the data affected b	u the Anomak		
				ОК	Cancel	Export Reconcile

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 xxxxxxxx). 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	AAAA000000	АААААААА
	AAXXYY9999	S4601LXXXXX	YYYYA00000

List of invalid serial numbers		
XXXXXXXXXX	Y4601LXXXXX	ZYYYYX0SYX
XXXXXXXXXXX		

- **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).

🕞 Data Collection - Templates	* 🔀
All but User and Peak CR DC	Create
Device & Supply Template	Apply
	E dit
	Delete
	Сору
	View

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.

Device Management		My Printers (0 of 9		1 5 44 0						
E 🗐 Overview		Device Model	8	l Edit G	roup F	olicies				? 🗙
All Devices (162) Error Devices (38) R Warning Devices (41)	20	HP Color LaserJet 5550 HP Color LaserJet 5550	Ŀ	Config	ure g	roup po	olicies			F
Rew (Last Discovery) (8) Groups CLJ CP3505 (6)	7777	HP Color LaserJet 4700 HP Color LaserJet 4700 HP Color LaserJet 4700		Policy	Data D	Detail	•	Trigger Devices added to group		Add
Condor (5)	4	HP LaserJet 4100 MFP		LINDAG	Data C	AL GIT PI	-	Devices dured to group		Remove
Test (6) Test (42) Test (4	ove dev	to group rices from group			Po	<mark>dd Polic</mark> ; icy: gger:	Enable	Data Collection s added to group		
E Firmware	te grou group p	ps olicies			Po	licy action	All but U	User and Peak User and Peak		
Data Collection Ref Accessory Inventory	ame	China day incon an inched					CR DC	& Supply Template Add	Close	}
									Next >	Cancel

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).

🚿 HP Web Jetadmin - locathost	options			22
File Verre Tools: Bub Device Minimum Expant devices Device Decomp Bit Oracle Minimum Device Decomp Application Loga Details Syndromization Dial Syndromization Options	Shared Application Management Application Management Device Plake Devi	Data collection time Accessory Inventory Device Inventory Device Unitation Device Unitation Device Unitation Housy Peak Usage Supply Unitation	1200 AM 1200 AM 1200 AM 1200 AM 1200 AM 1200 AM 1200 AM	CK Carcel Acct

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).

File View Tools Help											
Device Management	Ā	My Printers	(0 of 9	Selecte	ed)						
Cverview		Device Model		IP Addre	IP Hostnam	Serial N	Number	Unique	MultiHomed	Severi	Engine Cycle Count
All Devices (162)	7	HP Color LaserJe	t 4700	15.62.41_	boi08062	×****		No	No	A	46,17
- 🙀 Error Devices (33) - 属 Warning Devices (43)	3	HP Color LaserJe	t 4650	15.5.188_	npi743cd3.	×××××	~~~~	No	No	<u> </u>	433
New (Last Discovery) (8)	3	HP Color LaserJe	t 5550	15.62.40_	NP1705A42	JPFC57	7D00B	Yes	No		33,15
🗏 📊 Groups	7	HP Color LaserJe	t 4700	15.98.11_	boi08035	JPGLB	08064	Yes	No		148,548
CLJ CP3505 (6)	Ó	HP LaserJet 405)	15.62.43_	hpbs3789	USQF0	022207	Yes	No		31,90
Condor (5)	3	HP Color LaserJe	t 5550	15.62.40_	boi08059	JPFC50	CK033	Yes	No		85,010
- My Printers (9) Test (6)	9	HP LaserJet 410	MFP	15.62.40_	eiptm-mfp	USLGY	/03046	Yes	No	0	21,85
Test1 (42)	7	HP Color LaserJe	t 4700	15.2.209_	boi04058	JPJLC0	02530	Yes	No	0	48,68
🥂 Test2 (2) 🖉	1	HP Color LaserJe	t 4700	15.62.41_	boi08064	JPGLB	07964	Yes	No	0	33,69
E ∰ Discovery E 200 Configuration											
	Stal	us Config Alerts	Group	s Reports	Supplies	Storage	Applications	Detailed Info	Capabilities	Troublesh	oot Firmware

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).

× 3	Reports - Archived Rep	orts	
	Reports - Archived Rep	orts	
			*
		Date Created V	View
Generate		2/6/2008 2:28:48 PM 2/6/2008 1:12:48 PM	Email
			Save
	K4 Device Utilization 1		Delete
~	Device Utilization 1	2/6/2008 12:50:33 PM	
Create	Reports - Scheduled Re	ports	\$
Apply	Task Name	Start Time	
Edł	K1 Event Log History	12/8/2008 1:	12:38 PM
Delete	K2 Accessory Inventory	12/8/2008 2:	8:39 PM
Copy			
View	<		
	Create Apply Edk Delete	Sample Report - Devi. 1 K4 Device Utilization 1 Device Utilizati	K4 Device Utilization 12/6/2008 12:59:32 PM Create Device Utilization 12/6/2008 12:50:33 PM Greate Task Name Start Time K1 Accessory Inventory 12/13/2008 1: K1 Accessory Inventory 12/8/2008 1:1 K2 Accessory Inventory 12/8/2008 1:1 K2 Accessory Inventory 12/8/2008 2:2

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).

, and the second	settings			1 Contraction of the second se
Formatting (General) Report subtype:	ne Interval Kub Typel Iareb (diana) (diana) (P Houtrame (Pat Kraj)	× • •	 According According According According 	<u>ier</u>
Show totals Exclude devices Exclude devices Cate range Previous time per Imorth Previous quarter Imorth Cate range	el 💌 🗹 From today			
Custom range Start date:	undap . November 09, 2008 💉			
Custom range Start date:	anday , Navember 20, 2000 vr Ianday , Dacember 20, 2000 v		Selected columes Device Model Photoesen Hadeware Address (MAC) Part Regi	

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).

eport Generation Complete		i i
Success		
Ease settings		
Report type:	Device Utilization	
Number of devices:	29	
Report name:	Device Utilization	
Days to archive:	50 deys	
Report destruction Destinutions:	Active	
Detailed settings Report settings:	Formating (General)	
	Report subgrave: Tree interval (Julo Type) Set duta for: Pinnary sort: IP-Horinary (According) Secondary sort: Part (Any) (According) Report interval: None	
	Show totals: Yes Eaclude devices with no collected data	
	Deter range Previous 1 month(s) (from today)	
	Device exformation columns Device Model IP Hactesson IP Address Hacksane Address (HAC) Pot Divy	
Create report template		

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.

🚿 Generate Report		7 🛛
Specify report settings		
Femating Dismost Report subger: Text Interval Group by: Device Prinary sort Secondary surt Pur Pury Sort data by Prinary sort Conclose with no callected data Femating Distained Stored as cassaries Secondary surt		According According According According According According According According
11.11 A23 Mode A25 C Sport A25 C Sport Barvier Caster of Space Caster sarge Stat dete End dete <td></td> <td></td>		
Dence stamuton Avaldario columno Socuere (Standard) W 11/07/26/Worldg Active Worldgood Active Directory Description Active Directory Name Active Directory Name Wegnot data Available columns		Selected Columns Device Model Photomene Hadmans Address (MAC) Part (Arg) Selected columns
	>	Accessory Details Caleston Date

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.

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invent						
IP Web Jetadmin						
Report Type		Ad	cessory Inventory - Time	Interval		
Date Created		12	/8/2008 11:30 AM			
Group By			evice (Sort: IP Hostname (.		
Sort By			cessory Name (Ascending		ling)	
Date Range			/9/2008 - 12/8/2008 (calc	ulated)		
Selected Accessories		AI				
Device Group Devices		10	one			
Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)		
HP LaserJet M4345 MFP	hostname1.com	192.168.1.1	00CE5BA39A0D	1		
Accessory Name	Accessory	Status		Accessory Details	Collection Date	
Color	Installed (S	tart Collecting)		Yes	11/16/2008 12:00 AM	
Duplexer	Not Installe	d (Start Collect	ing)	No	11/16/2008 12:00 AM	
Hard Disk	Not Installe	d (Start Collect	ing)	No	11/16/2008 12:00 AM	
Hard Disk	Installed			Yes	11/18/2008 12:00 AM	
Hard Disk	Not Installe	-		No	11/20/2008 12:00 AM	
PCL		tart Collecting)		Yes	11/16/2008 12:00 AM	
PJL	1	tart Collecting)		Yes	11/16/2008 12:00 AM	
Postscript	1	tart Collecting)		Yes	11/16/2008 12:00 AM	
Sleep Delay	Installed (S	tart Collecting)		Yes	11/16/2008 12:00 AM	
Device Model	IP Hostname	IP Address	Hardware Address (MAI	C) Port (Any)		
HP Color LaserJet 4700	hostname10.com	192.168.1.1		1		
Accessory Name	Accessory	Status		Accessory Details	Collection Date	
		tart Collecting)		Yes	11/16/2008 12:00 AM	

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.

💋 Generate Report					? 🛛
Specify report	settings				Ē.
- Formatting (General)					
Report subtype:	ne Interval	~			
Group by: De	rvice	~			
Primary sort:	IP Hostname	~	Ascending		
Secondary sort:	Port (Any)	~	Ascending		
Sort data by:					
Primary sort:	Inventory Date	~	Ascending		
Secondary sort:	(None)	~	Ascending		
Exclude devices v	with no collected data				
Date range					
 Previous time period 					
1 month(s	a) 🔽 🔽 From today				
 Previous quarter 					
1 quater	a) Customize				
 Custom range 					
	onday , December 08, 2008 💌				
Device information Available columns			Selected columns		
Source: Standard		~	Device Model		
11x17/A3 Media			IP Hostname IP Address		
9100 Printing Acknowledged		-	Hardware Address (MAC) Port (Any)		
Active Directory Desc Active Directory Loca					
Active Directory Nam	8	<u>~</u>			
Report data Available columns			Selected columns		
Last Known IP Addre	00		Inventory Status		
			Inventory Date		
		<			-
				< Back Next >	Cancel

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.

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eport Type		Device Inventory -	Last Known	Status (Details)		
ate Created		12/3/2008 5:38 PM		Status (Betails)		
roup By		Device Model				
ort By		Inventory Date (As	cending), Inv	entory Status (Ascend	ing)	
evice Group		None				
evices		17				
evice Model						
P CM8060 MFP with Edgeline	IP Address	Hardware Address (MAC)	Port (Any)	Inventory Status	Inventory Date	Last Known IP Address
P CM8060 MFP with Edgeline P Hostname	IP Address 15.252.77.57	Hardware Address (MAC) 001708887F92	Port (Any) 1	Inventory Status	Inventory Date 11/3/2008 4:32 PM	Last Known IP Address 15.252.77.57
P CM8060 MFP with Edgeline • Hostname • 1887F92		001708887F92				
P CM8060 MFP with Edgeline P Hostname P1887F92 andorjd48.vcd.hp.com	15.252.77.57 15.252.77.247	001708887F92	1	Lost	11/3/2008 4:32 PM	15.252.77.57
P CM8060 MFP with Edgeline Hostname 1887F92 indorjd48.vcd.hp.com i98ea2e.americas.hpqcorp.net	15.252.77.57 15.252.77.247	001708887F92 0017A4982AE2	1 1	Lost Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM	15.252.77.57 15.252.77.247
P CM8060 MFP with Edgeline Plostname PlostPF92 undorjd48.vcd.hp.com 098ea2e.americas.hpqcorp.net bi8dbc5f.vcd.hp.com	15.252.77.57 15.252.77.247 15.98.116.15	001708887F92 0017A4982AE2 0017A498EA2E 000E7F757396	1 1 1	Lost Found Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM 11/17/2008 9:31 AM	15.252.77.57 15.252.77.247 15.98.116.15
vevice Model IP CM8060 MFP with Edgeline P Hostname P1887F92 ondorjd48.vcd.hp.com pi98ea2e.americas.hpqcorp.net pi8dbc5f.vcd.hp.com ondorjd47.vcd.hp.com vevice Model	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26	001708887F92 0017A4982AE2 0017A498EA2E 000E7F757396	1 1 1 1	Lost Found Found Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM 11/17/2008 9:31 AM 11/20/2008 9:25 AM	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26
P CM8060 MFP with Edgeline Plostname plostP92 indorjd48.vcd.hp.com pi98ea2e.americas.hpqcorp.net pi8dbc5f.vcd.hp.com indorjd47.vcd.hp.com	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26	001708887F92 0017A4982AE2 0017A498EA2E 000E7F757396	1 1 1 1	Lost Found Found Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM 11/17/2008 9:31 AM 11/20/2008 9:25 AM	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26
P CM8060 MFP with Edgeline P Hostname P1887F92 indorjd48.vcd.hp.com pi98ea2e.americas.hpqcorp.net isdbc5f.vcd.hp.com ndorjd47.vcd.hp.com evice Model	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26	001708887F92 0017A4982AE2 0017A498EA2E 000E7F757396	1 1 1 1	Lost Found Found Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM 11/17/2008 9:31 AM 11/20/2008 9:25 AM	15.252.77.57 15.252.77.247 15.98.116.15 15.252.49.26
P CM8060 MFP with Edgeline P Hostname 21887F92 indorjd48.vcd.hp.com is98ea2e.americas.hpqcorp.net is8dbc5f.vcd.hp.com indorjd47.vcd.hp.com evice Model P Color LaserJet 4650	15.252.77.57 15.252.77.247 15.90.116.15 15.252.49.26 15.252.77.107 IP Address	001708887F92 0017A4982AE2 0017A498EA2E 000E7F757396 001708887FA7	1 1 1 1	Lost Found Found Found Found	11/3/2008 4:32 PM 11/14/2008 9:10 AM 11/17/2008 9:31 AM 11/20/2008 9:25 AM 11/25/2008 1:15 AM	15.252.77.37 15.252.77.247 15.98.116.15 15.252.49.26 15.252.77.187

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. blackand-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.

💋 Generate Report					2 🛛
Specify report se	ettings				ā
Famaling (General Report subtype: Time Group by: Frinary sort: Secondary sort: Sort data by: Primary sort:	Interval (Job Type) Interval	> > >	Ascending Ascending Ascending Ascending Ascending Ascending		
O Custom range					
End date: Mor Device information Available columns Source: Standard			Selected columns		
11x17/A3 Media 9100 Prinking Acknowledged Active Directory Descrit Active Directory Locati Active Directory Name	ption		IP Hostname IP Address Hardware Address (MAC) Port (Any)		A V
Report data Available columns			Selected columns		
Copy Pages Digital Send Pages General Office - Color A General Office - Color A General Office - Color A	iccent Duplex iccent Pages iccent Pages (Equivalent) iccent Simplex	 	Mono Singlex Color Singlex Color Duplex Color Duplex Total Color Pages Total Color Pages Mono Duplex 1 Isaan	Ĵ	
				< Back Next >	Cancel

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.

None Device Utilization - Time Interval (Job Type) Date Created 12/8/2008 12:33 PM Group By Device Sort By Device Device Device Device Device Device Device Device Group None Device Group None Device Group None Device Model IP Hostname IP Address Marker Address (MAC) Port (Any) Device Model IP Hostname IP Address Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages Interval None Device Model IP Address Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages Il/9/2008 - 12/8/2008	(p)							
Date Created 12/8/2008 12:33 PM Group By Device Sort By None Date Range 11/9/2008 - 12/8/2008 (calculated) Interval None Show Totals Yes Devices 10 Device Group Device Group Devices 10 Devices Total Color Pages 10 Total Color Pages 11/9/2008 - 12/8/2008 11/9/2008 - 12/8/2008 11/9/2008 - 12/8/2008 11/9/2008 - 12/8/2008 11/9/2008 - 12/8/2008 12/168.1.4 0026/DAED 788 11/9/2008 - 12/8/2008 228 200 201 12/168.1.4 12/168.1.10 </th <th>HP Web Jetadmin</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	HP Web Jetadmin							
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None None Devices 10 Devices 10 Devices 10 Devices 10 Devices 10 Device Model IP Hostname IP Address Markster Address (MAC) Port (Any) Interval Mono Simplex Color Simplex Mono Duplex Total Mono Pages Total Color Pages Total Pages IP Color LaserJet 4700 IP Hostname IP Address Markster Address (MAC) Port (Any) Total Mono Pages Total Color Pages Total Pages Device Model IP Hostname IP Address Markster Address (MAC) Port (Any) Total Color Pages Total Pages HP Color LaserJet 4700 IP Hostname IP Address Markster Address (MAC) Port (Any) Total Color Pages Total Pages HP Color LaserJet 4700 Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages			None					
Device Model IP Hostname IP Address Hardware Address (NAC) Port (Any) HP Color Laserlet 4700 hostname4.com 192.168.1.4 002/5/DA6D788 1 Interval Mono Simplex Color Simplex Mono Duplex Total Mono Pages Total Color Pages Total Pages 1/9/2008 - 12/8/2008 226 218 233 280 223 216 228								
Device Model IP Hostname IP Address Hardware Address (MAC) Port (Any) HP Color LaserJet 4700 Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages 11/9/2008 - 12/8/2008 226 218 233 280 223 216 228 Device Model IP Hostname IP Address Hardware Address (MAC) Port (Any) 226 218 233 280 223 216 228 Device Model IP Hostname IP Address Hardware Address (MAC) Port (Any) 192.168.1.10 00133C9CE276 1 Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages								
HP Color LaserJet 4700 hostname4.com 192.168.1.4 00267DA6D788 1 Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages L1/9/2008 - 12/8/2008 226 218 233 280 223 216 228 Device Model IP Hostname IP Address Hardware Address (MAC) Port (Any) Functional Color Pages Total Color Pages Total Pages Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages	Devices		10					
Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages 11/9/2008 - 12/8/2008 226 218 233 280 223 216 228 Device Model HP Color LaserJet 4700 hostname10.com 192.168.1.10 00133C9CE276 1 Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages	Device Model	IP Hostname	IP Address Harr	dware Address (M	AC) Port (Any)			
L1/9/2008 - 12/8/2008 226 218 233 280 223 216 228 Device Model IP Hostname IP Address Hardware Address (NAC) Port (Any) I <t< th=""><th>HP Color LaserJet 4700</th><th>hostname4.com</th><th>192.168.1.4 002</th><th>67DA6D788</th><th>1</th><th></th><th></th><th></th></t<>	HP Color LaserJet 4700	hostname4.com	192.168.1.4 002	67DA6D788	1			
Device Model IP Hostname IP Address Hardware Address (MAC) Port (Any) HP Color LaserJet 4700 hostname10.com 192.168.1.10 00133C9CE276 1 Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages		Mono Simplex	Color Simplex	Mono Duplex	Color Duplex	Total Mono Pages	Total Color Pages	Total Pages
HP Color LaserJet 4700 hostname10.com 192.168.1.10 00133C9CE276 1 Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages	nterval	0.0.4	218	233	280	223	216	228
Interval Mono Simplex Color Simplex Mono Duplex Color Duplex Total Mono Pages Total Color Pages Total Pages		226						
	11/9/2008 - 12/8/2008			ardware Address	(MAC) Port (An	y)		
1/9/2008 · 12/8/2008 229 241 253 209 187 227 225	1/9/2008 - 12/8/2008 Device Model	IP Hostname	IP Address H			y)		
	1/9/2008 - 12/8/2008 Device Model IP Color LaserJet 4700	IP Hostname hostname10.com	IP Address H. 192.168.1.10 0	0133C9CE276	1		Total Color Pages	Total Pages

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.

🚀 Generate Report				2 🛛
Specify report	settings			ā
Formating (General) Report subtype Group by Un Primary sort Secondary sort Secondary sort Secondary sort Secondary sort Secondary sort Primary sort Secondary sort O Previous time peri morthy Previous quarter Quarter Quarter Quarter Quarter	chones Chones IP Hostname Post Pary with no collected data od a)	Accending Accending Accending Accending Accending Accending		
	dien v	Selected columns Device Model P Address Hadvase Address (MAC) Pot (Any) Selected columns Color Pages Elsek Pages Total Pages		
			<back next=""></back>	Cancel

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.

49									
IP Web Jetadmin									
eport Type	Device Utilization By User - Time Interval								
ate Created		12/8	2008 12:49 PM						
roup By		User	r						
ort By			ostname (Ascending), Port		iding)				
ate Range			/2008 - 12/8/2008 (calcula	ted)					
how Totals		Yes	-						
evice Group		Non 10	e						
evices		10							
lser									
OMAIN\user1									
evice Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)	Mono Pages	Color Pages	Blank Pages	Total Pages	
P LaserJet M4345 MFP	hostname1.com	192.168.1.1	00BE1C6B1CC7	1	319	410	120	402	
P Color LaserJet 4700	hostname10.com	192.168.1.10	00E27AA89A92	1	467	276	272	323	
P Color LaserJet 4700	hostname2.com	192.168.1.2	00816CEC2C43	1	200	176	250	403	
IP LaserJet M4345 MFP	hostname3.com	192.168.1.3	009D11060300	1	487	198	381	257	
IP Color LaserJet 4700	hostname4.com	192.168.1.4	0074E1BEC7A7	1	263	134	366	404	
IP LaserJet M4345 MFP	hostname5.com	192.168.1.5	0032DDEEADB0	1	423	305	127	487	
P Color LaserJet 4700	hostname6.com	192.168.1.6	0057C643A528	1	199	389	482	335	
	hostname7.com	192.168.1.7	00E768BC82B9	1	479	415	473	101	
P LaserJet M4345 MFP		192.168.1.8	0087B5AD71C6	1	278	459	108	310	
P Color LaserJet 4700	hostname8.com							336	
P Color LaserJet 4700 P LaserJet M4345 MFP	hostname8.com hostname9.com	192.168.1.9	005DA1857EA1	1	161	477	280		
P Color LaserJet 4700 P LaserJet M4345 MFP			005DA1857EA1		161 3,276	477 3,239	280 2,859	3,358	
P Color LaserJet 4700			005DA1857EA1						
P Color LaserJet 4700 P LaserJet M4345 MFP vtal: ser			005DA1857EA1						
P Color LaserJet 4700 P LaserJet M4345 MFP stal:			005DA1857EA1 Hardware Address (MAC)		3,276				
P Color LaserJet 4700 P LaserJet M4345 MFP ttal: ser OMAIN\user2	hostname9.com	192.168.1.9		1	3,276	3,239	2,859	3,358	

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.

🖋 Generate Report					2 🛛
Specify report a	settings				
Formatting (General)					
	me interval	~			
Te	ne Interval				
1.1.1	mmary (Event Type)				
Primary sort:	IP Hostname	~	Ascending		
Secondary sort:	Port (Arsy)	~	Ascending		
Sort data by:					
Primary sort:	Event Log Page Count	~	Ascending		
Secondary sort:	Event Date	~	Ascending		
Exclude devices v	with no collected data				
Date range					
 Previous time peri 	bo				
3 month(s	a) V From today				
O Previous quarter					
1 quarter(a) Customize				
Custom range					
Start date: To					
End date: M					
Device information					
Available columns			Selected columns		
Source: Standard		× _	Device Model IP Hostname		
11x17/A3 Media 9100 Printing		<u>a</u> 🕑	IP Address Hardware Address (MAC)		
Acknowledged Active Directory Desc	réstions		Port (Any)		
Active Directory Loca	tion				
Active Directory Nam Report data	e				
Available columns			Selected columns		
Event Type			Event Log Page Count		
			Event Date Event Code (Hex)		
			Event Description		
					<u> </u>
		_			~
				<back next=""></back>	Cancel

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.

IP Web Jetadmin						
Report Type		Ev	ent Log History - Time Inte	erval		
ate Created		12	/8/2008 1:04 PM			
iroup By				Ascending), Port (Any) (Ascending	a))	
iort By				nding), Event Date (Ascending)		
ate Range			9/2008 - 12/8/2008 (calcul	ated)		
)evice Group)evices		No 10	one			
vices		10				
Device Model	IP Hostname	IP Address	Hardware Address (MAC)	Port (Any)		
HP LaserJet M4345 MFP	hostname1.com	192.168.1.1	00CCA048B488	1		
Event Log Page Count		Event Date		Event Code (Hex)	Event Description	
1,000		9/16/2008 12	100 AM	83.1214	Unknown	
3,214		9/16/2008 12	:00 AM	E4.0101	Print Error	
7,118		9/16/2008 12	:00 AM	63.0025	Firmware Upgrade	
Device Model	IP Hostname	IP Address	Hardware Address (MAC) Port (Any)		
HP Color LaserJet 4700	hostname10.com	192.168.1.10	0 0065A2430E0B	1		
Event Log Page Count		Event Date		Event Code (Hex)	Event Description	
543		9/16/2008 12	:00 AM	A2.1214	Print Error	
2,590		9/16/2008 12	:00 AM	13.0180	Paper Jam	
5,432		9/16/2008 12	:00 AM	F0.0345	Unknown	
10,789		9/16/2008 12	100 AM	D1.0345	Carriage Drive	

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).

🚀 Generate Report					2 🛛
Specify report	settings				3
- Formalting (General)					
Report subtype:	ne Interval	~			
Group by: De	wice	~			
Primary sort:	IP Hostname	~	Ascending		
Secondary sort	Post (Any)	~	Ascending		
Sort data by:					
Primary sort:	Interval	~	Ascending		
Secondary sort	<none></none>	~	Ascending		
Report interval He	suly	~			-
Show totals					
Exclude devices v					
Formatting (Detailed) Time Range					
Entire day					
Start time: 0.00 AM					
End time: 5:00 PM					
Date range Previous time period					
1 day(1)	V From today				
Previous quarter					
1 quarter	al Custonize				
Custom range					
	onday , December 08, 2008				
End date: H					_
Device information					=
Available columns Source: Standard		-	Selected columns Device Model		
11x17/A3 Media			IP Hostname IP Address		
9100 Printing Acknowledged			Hardware Address (MAC) Port (Any)		
Active Directory Des Active Directory Loca	cription				
Active Directory Nam	•	~			
Report data Available columns			Selected columns		
Copy Pages			Total Mono Pages		
Digital Send Pages Incoming Fax Pages			Total Color Pages Total Simplex		
Outgoing Fax Pages Scan Pages			Total Duplex Total Pages		
Total Duplex 1 Image					
					×
				<back next=""></back>	Cancel
				Next Next	Carter

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 Pages
 - Scan Pages
 - Total Color Pages
 - Total Duplex
 - Total Duplex 1 Image
 - Total Mono Pages
 - Total Pages
 - Total Simplex

Sample Report - Hourly I	Peak Usage								
invent									
HP Web Jetadmin									
Report Type		Hour	rly Peak Usage - Time Inte	rval					
Date Created 12/8/2008 1:24 PM									
Group By Device (Sort: IP Hostname (Ascending), Port (Any) (Ascending))									
Sort By			rval (Ascending)						
Date Range			/2008 - 12/8/2008 (calcula	ted)					
Interval Show Totals		Hour Yes	riy						
Fime Range			AM - 5:00 PM						
Device Group		None							
Devices		10							
Device Model I	(P Hostname	IP Address H	lardware Address (MAC)	Port (Any)					
HP LaserJet M4345 MFP h	nostname1.com	192.168.1.1 0	028099B2689	L					
Interval	Tota	Mono Pages	Total Color Pages	Total Simplex	Total Duplex	Total Pages			
12/8/2008 8 AM - 9 AM	11		7	10	14	9			
12/8/2008 9 AM - 10 AM	5		10	9	0	9			
12/8/2008 10 AM - 11 AM	9		12	10	4	3			
12/8/2008 11 AM - 12 PM	8		10	14	0	12			
12/8/2008 12 PM - 1 PM	7		0	9	10	9			
12/8/2008 1 PM - 2 PM	5*		12*	6*	4*	10*			
12/8/2008 2 PM - 3 PM	5		2	0	13	2			
12/8/2008 3 PM - 4 PM	1		3	7	1	7			
12/8/2008 4 PM - 5 PM	12		11	14	11	12			
fotal:	63		67	79	57	73			
Device Model II	P Hostname	IP Address	Hardware Address (MAC)	Port (Any)					
HP Color LaserJet 4700 h		192.168.1.10	00D7991C082C	1					
Interval	Tota	Mono Pages	Total Color Pages	Total Simplex	Total Duplex	Total Pages			
	1		12	13	12	8			
L2/8/2008 8 AM - 9 AM	*		**	*3	**	0			

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.

🐔 Generate Report				2 🔀
Specify report	settings			<u>1</u>
	etals stats meagy [P Hostname Port (Ang)	>	✓ Ascending ✓ Ascending	
Primary sort: Secondary sort:	Supply (None)	> >	Accending Accending	
Device information Available columns Source: Standard 11x17/A3 Media 9100 Printing Acknowledged Active Directory Desi Active Directory Desi	ation		- Selected columns Device Model Photosane Handware Address (MAC) Port (Any)	
Active Directory Nam Report data Available columns Last Collection Date Supply Senal Number Supply Status	g Date		Selected columns Supply Part Number Supply Part Number Entimated Paper Hemaining Supply Installation Date Entimated Registerment Date & Confidence	
			< Back Next >	Cancel

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 userspecified 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.

Sample Report - Supply Ordering				
()				Î
HP Web Jetadmin Report Type Date Created Group By Sort By Sort By Threshold Include "Order Supplies" button in report Device Group Devices	Supply Ordering - Details 12/8/2008 1:42 PM Device (Sort: IP Hostname (Ascending Supply (Ascending) 20% Yes None 10	g), Port (Any) (Ascending))		
Device Model IP Hostname IP Addres HP LaserJat M4345 MFP hostname1.com 192.168.1 Supply Supply Part Number Estimated Sup Istack Toner Black Toner Q5945A 15%	.1 00224614539D 1	Supply Installation Date 8/14/2008	Estimated Replacement Date 12/19/2008	% Confidence 82.0%
Device Model IP Hostname IP Addre HP Color LaserJet 4700 hostname10.com 192.168. Supply Supply Part Number Estimated Sup Fuser Q7502A 13% Magenta Tonce Q5953A 15% Vallov Toner Q5952A 14%		Supply Installation Date 8/23/2008 2/19/2008 9/20/2008	Estimated Replacement Date 1/1/2009 12/25/2008 12/18/2009	% Confidence 83.0% 80.0% 87.0%
Device Hodel IP Hostname IP Address HP Color LaserJet 4700 hostname2.com 192.168.1 Supply Supply Part Number Estimated Sup Fuser Q7502A 13% Transfer KL Q7504A 16% Yellow Toner Q5952A 11%		Supply Installation Date 7/27/2008 11/3/2008 5/3/2008	Estimated Replacement Date 12/21/2008 12/24/2008	%6 Confidence 77.0% 88.0% 80.0%

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.

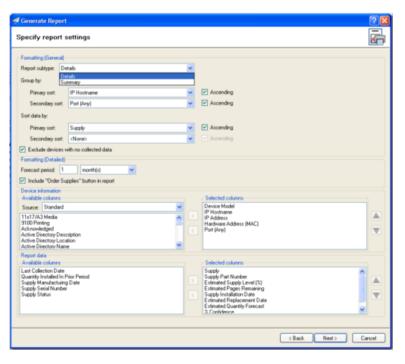


Figure 35: Supply Replacement Forecast report settings

- 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 Reordering. 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

IP Web Jetadı Report Type						
ceport Type						
Date Created			Supply Replacement Forecas 12/8/2008 1:58 PM	rt - Details		
roup By				Ascending), Port (Any) (Ascen	ting))	
ort By			Supply (Ascending)	Ascending), Fort (Airy) (Ascen	2019 <i>//</i>	
orecast perio	bd		1 month(s)			
nclude "Orde	r Supplies" butto	n in report	Yes			
evice Group			None			
)evices			10			
Device Model	IP Hostn	e1.com 192.168.1.1	Hardware Address (MAC) Port (An 006A1D1C01D6 1	iy)		
upply			Level (%) Estimated Pages Remain	ing Supply Installation Date	Estimated Replacement Date	Estimated Quantity Forecast
lack Toner	05945A	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 Hostn	ame IP Address	Hardware Address (MAC) Port (Any)		
		10.com 192.168.1.10		()		
	Supply Part Numb	er Estimated Supply /	Level (%) Estimated Pages Remain	ing Supply Installation Date	Estimated Replacement Date	Estimated Quantity Forecast
upply	Q5950A	44%	4,840	9/1/2008	12/22/2008	1
		45%	4,500	1/3/2008	12/31/2008	2
lack Toner	Q5951A			8/17/2008	12/30/2008	2
Supply Black Toner Cyan Toner Fuser	Q5951A Q7502A	72%	7,200	0/ 1// 2000		
Black Toner Cyan Toner	Q7502A	72% 90%	7,200 9,000	12/25/2007	12/27/2008	4
llack Toner Cyan Toner Suser	Q7502A	1 2 10	.,		12/27/2008 12/20/2008	4

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		2 🔀
Specify report settings		ā
Formating (Seneral) Report subtype: Details Group by: Details Primary sort: (PH contraster Secondary sort: Port (Any) Sort data by: Primary sort: Primary sort: Supply Secondary sort: Supply Secondary sort: Supply	 Ascending Ascending Ascending Ascending Ascending 	
Construction C	Selected columns Device Model P Addes Hadvase Addess (MAC) Pat (Arg)	•
Report data Anadade columns Extinuated Capacity in Pages Extinuated Pages Printed Extinuated Pages Remaining Supply Manufacturing Date	Selected columns Supply Supply Part Number Supply Parts Supply Institution Supply Institution Lant Collection Date Institution Date Institution Date Institution Date Institution Supply Institution I	
	<back nest=""> Car</back>	xcel

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:

(supply max capacity * supply consumption * 0.05) / 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.

P Web Jetadm	in							
eport Type				Supply Usage - Deta	ails			
ate Created				12/8/2008 2:20 PM				
roup By				Device (Sort: IP Hos	thame (Ascending), Port ((Any) (Ascending))		
ort By				Supply (Ascending)				
sage period				1 month(s)				
nstallation sta	te			Removed Only				
evice Group				None	and a second second second			
evices				8/10 (devices without	it data excluded)			
evice Model		IP Hostname	IP Address H	ardware Address (MAC)				
			om 192.168.1.10 0		Port (Any)			
					Initial Supply Lovel (25)	Estimated Supply Level (%)	(iii) fumply foregroup line	Augusta Cumple Courses
	05952A		1242	9/15/2008	R1%	71%	10%	4.0%
	4			77 8 97 8 9 9 9				1.4.0
Newice Model		IP Hostname	IP Address Hard	ware Address (MAC) Por	t (Any)			
P Color LaserJet			m 192.168.1.2 0082					
apply	Supply P	art Number	Supply Serial Number	Supply Installation Date	Initial Supply Level (%)	Estimated Supply Level (%)	(%) Supply Consumption	Average Supply Coverag
yan Toner	Q5951A		7691	10/15/2008	81%	60%	21%	1.0%
uzer	Q7502A	1 1	4696	4/25/2008	91%	72%	19%	**
lagenta Toner	Q5953A	1	8705	7/10/2008	92%	73%	19%	9.0%
ellow Toner	Q5952A		8288	9/15/2008	90%	76%	14%	9.0%
Nevice Model		IP Hostname	IP Address Har	dware Address (MAC) Po	rt (Any)			
P LaserJet M434	45 MFP	hostname3.co	m 192.168.1.3 008	4867C88EE 1				
A CONTRACTOR OF	Supply P	art Number	Supply Serial Number	Supply Installation Date	Initial Supply Level (%)	Estimated Supply Level (95)	(%) Supply Consumption	Average Supply Coverage
pply				3/13/2008	88%	67%	21%	3.0%
	Supply P	art Number	Supply Serial Number		and the second	Estimated Supply Level (%)		

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.
- 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).

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).

🐗 Generate I	Report
Specify so	hedule options
Schedule Start time: Recurrence Daily Weekly Monthly	12/ 8/2008 Image: 2:25:24 PM Every 1 week(s) on: Sunday Monday Tuesday Wednesday Thursday Friday Saturday

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.

🕞 Reports - Archived	Reports		* 🔀
Name	Date Created	^	View
Device Inventory	12/1/2008 2:52:54 PM		Email
Device Inventory	12/1/2008 4:22:18 PM		Email
Device Inventory	12/3/2008 5:32:24 PM		Save
Device Inventory	12/3/2008 5:38:14 PM		
Device Inventory	12/3/2008 5:40:53 PM		Delete
Device Inventory	12/3/2008 5:55:23 PM		
	40.00.0000.0.44.40.00	<u> </u>	

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).

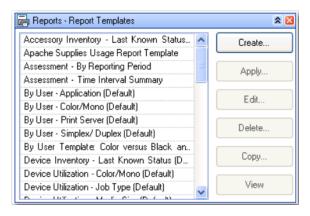


Figure 41: Report Templates task module

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 rightclick **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.

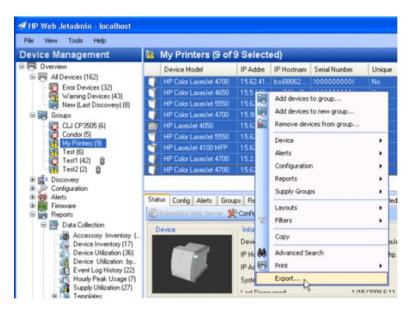


Figure 42: Launch an export from a device group

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.

ᢞ Export Devices					2 🗙
Select columns					
Device interaction settings Threshold Database only Variable col Missing items only Source: Set State coly Source: Set Thour 11107/20148 Hours 11117/20149 Floor Achrowedog 24 Hours Achrowedog 24 Hours Achrowedog 24 Hours Achrowedog 24 Hours Achrowedog 24 Hours Achrowedog 24 Hours Achrowedog 7 and Achrose Hours Achrowedog 7 and Achrose Hours Achrowedog 7 and Achrose Hours Achrowedog 7 and Achrose Hours Achrowedog 7 and Achrose Hours Achrose Hours Code Control Boarner Bastooth Boarner Bastooth Boarner Code Control Boarner Code Control Boarner Code Control Boarnel	not prompt I	or credentials Selected columns Device Model IP Address IP Address Selial Number Unique Multi-formed Severity Engine Cycle Count			
			< Back	Next> Ca	ncel

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 upto-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.

🐔 Export Dev	rices 🔹 💽 🔀
Specify de	stination settings
File name	
Name: HP	Web Jetadmin Exported Devices
Destination Server file File path Local file Email	<u> </u>
Send to:	Browse
 CSV 	
◯ XML	

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.

🚀 HP Web Jetadmin - localhost						
File View Tools Help						
Device Management	🖶 Overview - D	evice Manage	ement			
Overview Al Devices (162)	Devices - Summary			* 🛙	🕞 Devices - Scheduled Tasks	* 🖸
Error Devices (34)	162 🐺 Al Devices	(100%)			Task Name	Start Time I
Warning Devices (42)	34 🔞 Error Device	20%)			Test Daily with Local Export Device List	12/9/2008 9:00:00 AM A
	42 😽 Warning De	vices (25%)			K1 Accessory Inventory	12/13/2008 1:10:44 PM A
Groups	8 🙀 New (Last (K1 Event Log History	12/9/2008 1:12:38 PM A
- CLJ CP3505 (6) - Condor (5)	o any new lease	(4%)			K2 Accessory Inventory	12/9/2008 2:28:39 PM A
- My Printers (9)						
Test (6)	Pevices - Active Tasks 😤 🔀			≈ 🛛		
- Test1 (42) 😰	Task Name	State	Initiator	Start Time		
- 📆 Test2 (2) 💈	Test Daily with Local.	Need Information	AMERICA	12/8/2008 9:0		
Discovery					<	>
E- Description					Dele	te Edit
Alerts						
Firmware Reports					🛋 Discovery - Summary	* 🔀
					Last discovery: 5/21/2008 3:41:24 PM	
	<				East about of a second of the	
Accessory Inventory (
Device Inventory (17) Device Utilization (36)		Stop		View	View	History Discover Devices
Device Utilization (36)						

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	В	С	D	E	F	G	Н
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></unknown>	2,428.00
3	<unknown></unknown>	10.88.110.203	11/18/2008 13:09	XXXXXXXXXXXX	No	9,640	<unknown></unknown>	<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	XXXXXXXXXXXX	No	1,604	<unknown></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>	<not supported=""></not>
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	USRB014422	Yes	109,052	<not supported=""></not>	<not supported=""></not>
9	hp LaserJet 4345 mfp	10.62.41.10	12/7/2008 18:49	CNJYF07270	Yes	60,867	<not supported=""></not>	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></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>	<not supported=""></not>

Figure 46: Exported data viewed in a spreadsheet format

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