

Device Cache Export

using HP Web Jetadmin



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Overview

Users of HP Web Jetadmin software can export many types of device data to files or email attachments. This document uses device supply level tracking to show how the *Device Cache Export* feature can be used to monitor specific device supply levels. Information obtained through exporting can be used in a larger device supplies fulfillment process. Of course, many device attributes exist beyond supplies and can also be exported for the purpose of data tracking and analysis. The document focuses on two HP Web Jetadmin features *Views* and *Device Cache Export*.

Views

The Views feature places device data into column format in any HP Web Jetadmin device list. In the example of supplies data tracking, the administrator creates a custom View. Choose the **Views** icon located near the right of the **Views** drop-down menu in any HP Web Jetadmin device list (Figure 2). The Views configuration interface is displayed (Figure 1).

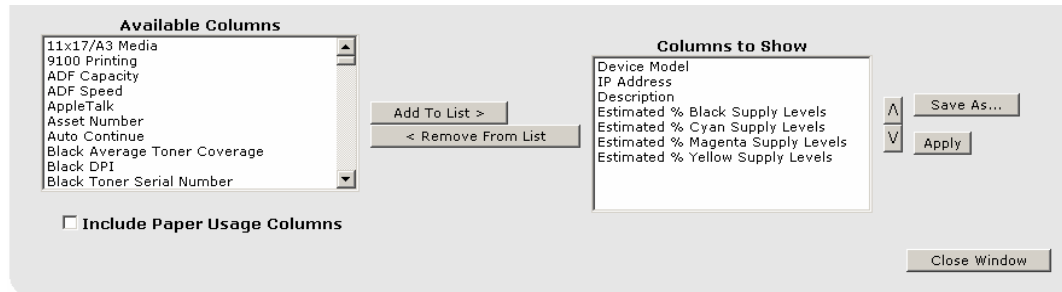


Figure 1 – Views Configuration

Choose any item in the **Available Columns** list, then choose **Add To List**, then click **Apply**. This enables the data in a column on the list you are currently viewing. Repeat this process until all desired data has been enabled in columns. Save the View by clicking **Save As**. By saving the View, you have created a set of device details that can be used later in *Device Cache Export*. The View created for the example (Figure 2) is saved as **LevelView** which shows columns enabled for **Device Model**, **Description** and supply levels (in Figure 2, **Estimated % Supply**).

The screenshot shows a web interface window titled 'Group: 4650'. At the top, there are tabs for 'View: LevelView', 'Filter: No Applied Filter', 'Device Tools', and 'Device Group Tools'. Below the tabs is a table with the following columns: 'Device Model', 'IP Address', 'Description', 'Estimated % Black Supply Levels', and 'Estimated % Cyan Supply'. The table contains four rows of data for HP Color LaserJet 4650 devices. At the bottom of the window, it says 'Displaying 4 of 4 Possible Devices'.

Device Model	IP Address	Description	Estimated % Black Supply Levels	Estimated % Cyan Supply
HP Color LaserJet 4650	15.5.178.170	123-4-bldg6	13	99
HP Color LaserJet 4650	15.98.76.73	123-5-bldg6	75	63
HP Color LaserJet 4650	15.5.192.146	001-1-bldg4	92	79
HP Color LaserJet 4650	15.2.202.211	005-8-bldg9	77	77

Figure 2 – List Displayed with Supply Levels

The **Description** column contains information about the device's location. This location detail may be used later as part of a supply order which directs the supply that specific device. Also, the View's information has been enabled on an HP Web Jetadmin Group named 4650. Views can be applied to any HP Web Jetadmin Group including the *All Devices* group. In many cases, Groups are used to break device populations into logical subsets which can further simplify supplies needs tracking.

Note: In both the Views and *Device Cache Export* features, device data is obtained directly from the device when HP Web Jetadmin determines the data is stale. Many data attributes such as page count or supply levels are pulled directly from the device whenever the Views or *Device Cache Export* feature are activated.

Device Cache Export

Using the *Device Cache Export* feature, you can export device details defined by HP Web Jetadmin *Groups* and *Views*. Activate this feature within the navigation tree item, **Device Management** → **Device Cache** → **Export Parameters**. You can export information to either email attachment or to a file on the hard drive of the HP Web Jetadmin host. Configure Export Parameters as shown here in Figure 3.

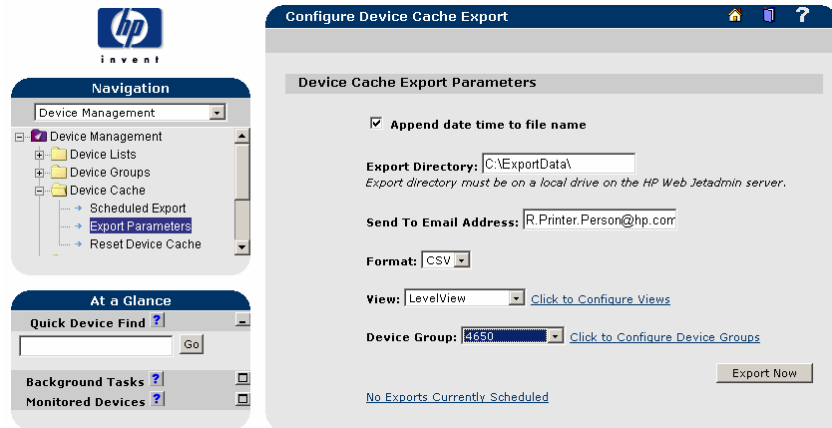


Figure 3 – Device Cache Export Controls

The text below describes the use of each *Device Cache Export* feature setting, starting at the top and working to the lower portion on the user interface.

- **Append date/time to the filename:** request the name-format of the output file to be: *Groupname_Veiwname_yyyymmdd_hhmmss.csv*, with the time and date values reflecting the moment the export begins. If this feature is not checked, the file has the format of *Groupname_Viewname.csv* (or *.xml* if applicable).
- **Export Directory:** designate an **export directory** by creating a path statement: this directs the device cache export file to a local drive and directory (HP Web Jetadmin host).
- **Send to Email Address:** designate an optional email address. This causes the software to attach the exported file to email. This requires that HP Web Jetadmin has had an SMTP server address configured (see General Settings, SMTP)
- **Format:** specify one of two file formats: XML or CSV.
- **View:** Specify the data which is represented by the *View* configuration (described earlier) to define the information to be exported. Remember, *Views* are used to enable columns like **Estimated % Black Supply Levels** or **Description**.
- **Device Group:** specify the HP Web Jetadmin group for which data will be exported. The *Device Group* can also include the *All Devices* list which contains devices currently discovered by the HP Web Jetadmin installation.
- **Export Now:** launch a Device Cache Export.
- **No Exports Currently Scheduled:** appears when there are no *Device Cache Exports* in stored schedules. When export schedules appear in a listing, choose one to specify the settings configuration you wish to perform. The settings within the *Device Export Parameters* will change depending on the schedule chosen.

You can use the *Scheduled Export* feature to configure exports to execute at a specified time, date and interval. Multiple scheduled exports can exist as a benefit in environments where HP Web Jetadmin *Groups* exist or where different data types require exporting. Figure 4 shows the *Device Cache Export Parameter* controls reflecting multiple schedules. Access the schedule interface by choosing **Device Cache** → **Schedule Export** from the HP Web Jetadmin navigation tree (not shown here).

Individual export schedules can have unique settings. Administrators can have a set of groups that require supplies fulfillment to launch device cache exports to different email addresses. Or, groups may be used to breakup a larger number of devices so that exported details are somewhat smaller. To reflect the schedule-unique features within the interface, select the specific schedule item in the **Device Cache Export Parameters** interface. To store the schedule-unique features, change the parameters and then click **Apply**.

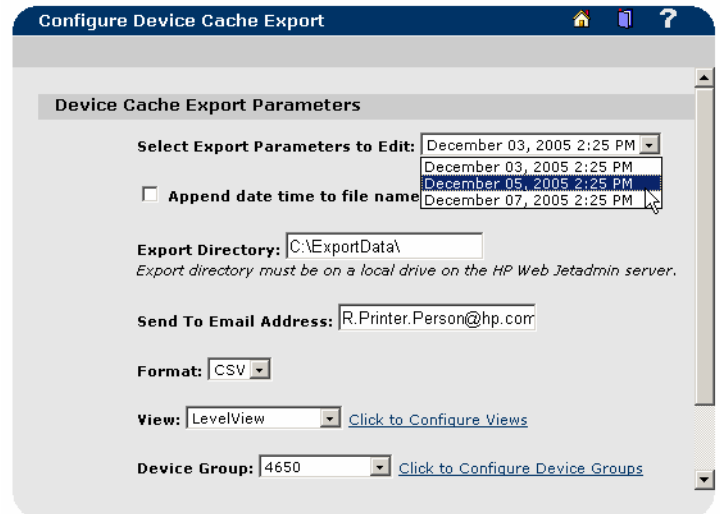


Figure 4 – Export Schedules

An Example of How Exported Data Can Be Used

With device cache exports now complete, a data source exists from which you can track and analyze supplies needs. Further, triggers can be established as part of a data analysis process which could help either you or a supply fulfillment entity satisfy device supply needs. Orders and order tracking could then be processed separately within a larger supplies fulfillment initiative.

	A	B	C	D	E	F	G	H	I
1	Device Model	IP Address	Description	Estimated	Estimated	Estimated	Estimated	% Yellow Supply Level	
2									
3	HP Color LaserJet 4650	15.5.178.170	123-4-bldg6	5	98	63	88		
4	HP Color LaserJet 4650	15.98.76.73	123-5-bldg6	74	61	86	85		
5	HP Color LaserJet 4650	15.5.192.146	001-1-bldg4	92	78	37	27		
6	HP Color LaserJet 4650	15.2.202.211	005-8-bldg9	77	71	84	17		

Figure 5 – Supply Level Data in a Spreadsheet

The exported data shown in Figure 5 is a CSV file that has been opened in a spreadsheet program. Color has been added to represent the four supplies in our devices. Notice there are two devices in the list that have toner supply levels lower than 20%. These levels might be used to trigger supplies orders. You or a supply fulfillment entity could also leverage the information represented in the **Description** or **IP Address** fields for directing supply orders to the correct location or department that is physically near the device. This type of data lends itself easily to any number or types of process within a given environment.

Other HP Device Supply Detail

HP Web Jetadmin users can export many different types of device information. Supplies information that can be exported includes:

- Toner Serial Number
- Average Toner Coverage
- Estimated OPC Levels
- Estimated Fuser Levels
- Estimated Transfer Unit Levels
- Page Count (several)
- Maintenance Kit Interval
- Maintenance Kit % Remaining

Summary

This document uses the example of supplies tracking through HP Web Jetadmin *Device Cache Export* and describes how this feature might be used as a part of a larger supplies fulfillment process. Many other scenarios exist where details can be exported into an email attachment or local file for the purpose of device detail analysis. Examples of these are security audit, configuration change detection, page count tracking and many others. The appendix section of this document shows a comprehensive listing of data available for exporting.

Appendix A

The following charts depict the columns available for display in a View in HP Web Jetadmin. The charts have been categorized into those columns that represent device capabilities, device configuration items, device attributes, and HP Web Jetadmin attributes. In addition, columns are depicted for the various paper sizes that can be displayed and the types of page counts that can be viewed for each size. Definitions are provided for the items that are not self explanatory.

Device Capabilities	
11x17/A3 Media	
ADF Capacity	Automatic document feeder capacity
ADF Speed	Automatic document feeder speed
Black DPI	
Color	
Color DPI	
DPI	
Duplexer	
Embedded Web Server	
Envelope Feeder	
Fax	
Flash Disk	
Hard Disk	
HCO	High capacity output device
HP Multifunction Finisher	
Input Tray 1	
Input Tray 2	
Input Tray 3	
Input Tray 4	
Input Tray 5	
Input Tray 6	
Installed RAM	
n-up Printing	
Optical Resolution	
PCL	
PCL/XL	
PJL	
Post Insertion Device	
Poster	
Postscript	
Powersave	Yes or N/A, indicates if powersave can be enabled
PPM Black & White	
PPM Color	
Punch Unit	
Serial Infra-Red	
sRGB	
Stacker	
Stapler/Stacker	
USB	

Device Attributes	
Black Average Toner Coverage	Average % of black toner used per page
Black Toner Serial Number	
Control Panel	Printer front panel display. Multiple lines are separated by a semi-colon
Cyan Average Toner Coverage	Average % of cyan toner used per page
Cyan Toner Serial Number	
Device Model	
Device Status	
Estimated % Black OPC Levels	
Estimated % Black Supply Levels	
Estimated % Cyan OPC Levels	
Estimated % Cyan Supply Levels	
Estimated % Fuser Levels	
Estimated % Image OPC Levels	
Estimated % Light Cyan Supply Levels	
Estimated % Light Magenta Supply Levels	
Estimated % Magenta OPC Levels	
Estimated % Magenta Supply Levels	
Estimated % Transfer Unit Levels	
Estimated % Yellow OPC Levels	
Estimated % Yellow Supply Levels	
Firmware Rev	Printer firmware datecode (e.g. 20040708)
Firmware Version	Printer firmware version (e.g. 03.783.1)
Free Disk Space (MB)	
Hardware Address	
Jetdirect Model	
Jetdirect Revision	Jetdirect firmware version on the device
Jetdirect Firmware Update	Jetdirect firmware version that has been previously downloaded to Web Jetadmin (will be preceded by a carat (>) if version is newer than what is currently on device)
Latest Firmware Rev	Printer firmware datecode that has been previously downloaded to Web Jetadmin (will be preceded by a carat (>) if version is newer than what is currently on printer)
Magenta Average Toner Coverage	Average % of magenta toner used per page
Magenta Toner Serial Number	
Maintenance Kit Interval	Page count interval upon which the printer will recommend a maintenance kit replacement
Maintenance Kit Percent Remaining	Pages remaining (represented as a percentage of the total maintenance kit page count interval) before the printer will recommend a maintenance kit replacement
Model Number	
Pages Remaining Until Maintenance Kit	Number of pages to be printed before the printer will recommend a maintenance kit replacement
Port	
Print Engine Revision	Also known as DC Controller revision (e.g. P777 14)
Serial Number	

Status Level	Red, green, or yellow, depending upon the status of the printer. Red indicates an error condition where the printer cannot print. Yellow indicates a warning condition where the printer can still print.
Toner Coverage	Average percentage of all toner used per page
Total Color Page Count	A value stored on the printer that represents a cumulative total of color pages printed for the life of the printer
Total Digital Copy Usage	
Total Disk Space (MB)	
Total Memory	
Total Page Count	
Total Printer Usage	
Tray 1 Media Level in %	% of paper remaining in tray. Some printers can only report Empty or Not Empty.
Tray 2 Media Level in %	% of paper remaining in tray. Some printers can only report Empty or Not Empty.
Tray 3 Media Level in %	% of paper remaining in tray. Some printers can only report Empty or Not Empty.
Tray 4 Media Level in %	% of paper remaining in tray. Some printers can only report Empty or Not Empty.
Tray 5 Media Level in %	% of paper remaining in tray. Some printers can only report Empty or Not Empty.
Used Disk Space (MB)	
Yellow Average Toner Coverage	Average percentage of yellow toner used per page
Yellow Toner Serial Number	

Device Configuration Items	
9100 Printing	Ability to print via port 9100 is enabled/disabled
Appletalk	
Asset Number	
Auto Continue	If set to On, a non-critical error message will appear for 10 seconds before the device resumes operation. If set to Off, the user must acknowledge non-critical error messages by pressing Continue on the device before the device resumes operation.
Check ACL for HTTP	
Control Panel Access	unlock, minimum, moderate, maximum
Copy Count Start Date	The date upon which an interim copy counter was started in HP Web Jetadmin, which calculates the number of pages copied over a period of time.
Default Gateway	
Description	
DLC/LLC	
DSS Server	The DSS server servicing the printer (if configured). 0.0.0.0 indicates no DSS server.
Ethernet Frame Type	
EWS Config	Ability to configure via EWS is enabled/disabled
EWS Password Enabled	Indicates whether an EWS (embedded web server) password is enabled or disabled. EWS password can deter unwanted changes to the printer via EWS.
File System Password	Indicates whether file system password is enabled or disabled on the printer. This password is required to perform secure

	storage and file system access functions.
FTP Printing	Ability print via FTP is enabled/disabled
Input Auto Continue	Specifies the default action that the printer takes when the specified media size or type is not available.
Input Auto Continue Timeout	Specifies how long the printer waits before performing the default action when the specified media size or type is not available.
Install Date	Identifies the date that the device was installed. A time services server can set the date and time the first time the printer is put on the network.
Interim Copy Count	A calculation of the number of pages copied over a period of time.
Interim Page Count	A calculation of the number of pages printed over a period of time.
IP Address	
IP Hostname	
IPP Printing	Ability to print via IPP (Web) is enabled/disabled
IPv6 Enabled	
IPX Address	
IPX Name	
IPX SAP Broadcast Interval	How frequently the HP Jetdirect devices sends SAP (IPX broadcast) packets
IPX/SPX	
Jam Recovery	
Jetdirect Firmware Update	
Job Hold Timeout	Specifies how long the printer holds a print job that has not printed before automatically deleting the print job.
Job Retention	Indicates whether the job retention feature is enabled or disabled, which allows users to store print jobs in the flash memory on a printer.
Last Configured by	How the HP Jetdirect device was configured for TCP/IP, either manual, BOOTP, or DHCP.
LDAP Server	The LDAP server used by the printer for authentication.
LPD Printing	Ability to print via LPD is enabled/disabled
NFS Access	Ability to communicate via NFS is enabled/disabled
PJL Access	Ability to communicate via PJL is enabled/disabled
PML Access	Ability to communicate via PML is enabled/disabled
Power Save Timeout	Indicates how many minutes/hours of idle time before device goes into powersave mode
Printer Firmware Update	Indicates whether printer firmware update has been enabled or disabled
PS Access	Ability to configure via Postscript is enabled/disabled
Quick Copy Jobs	
RAM Disk	
Secure File Erase Mode	Modes determining the file erase behavior of the device. Three modes are supported: 1. Non-Secure Fast Erase: Simple file table erase. Data is retained on disk until overwritten due to freed up status. 2. Secure Fast Erase: File information is overwritten with identical character pattern. 3. Secure Sanitizing Erase: Secure, repetitive algorithm used to overwrite all file information and remove any residual data persistence
Set Community Name	Indicates whether a Set Community Name is enabled or

	disabled. Setb Community Names can deter unwanted configurations of the device via SNMP.
SLP Config	Service Location Protocol (SLP) is enabled/disabled
SMTP Server	Mail server used to send e-mail.
Start Date	Date upon which an interim page counter was started in HP Web Jetadmin, which calculates the number of pages printed over a period of time.
Subnet Mask	
System Contact	
System Log Server	
System Name	
TCP/IP	TCP/IP is enabled/disabled
TCP/IP Idle Timeout	
Telnet Config	Ability to communicate via telnet is enabled/disabled
Toner Low Action	specifies how the printer responds when a toner-low condition exists. Set the printer to continue normal operations or set it to stop printing.

HP Web Jetadmin Attributes

HP Web Jetadmin Attributes	
Custom Field 1	Custom data can be imported or entered into HP Web Jetadmin and displayed as a column. These custom columns can be renamed to any desired string.
Custom Field 2	Custom data can be imported or entered into HP Web Jetadmin and displayed as a column. These custom columns can be renamed to any desired string.
Custom Field 3	Custom data can be imported or entered into HP Web Jetadmin and displayed as a column. These custom columns can be renamed to any desired string.
Custom Field 4	Custom data can be imported or entered into HP Web Jetadmin and displayed as a column. These custom columns can be renamed to any desired string.
Custom Field 5	Custom data can be imported or entered into HP Web Jetadmin and displayed as a column. These custom columns can be renamed to any desired string.
Discovery Date/Time	Date and time the device was last discovered in HP Web Jetadmin

Paper Sizes	
T6K	International C5
8K	International C6
A3	International DL
A4	Japanese Envelope #2
A4-R	Japanese Long Envelope #3
A5	Japanese Long Envelope #4
A5-R	Japanese Postcard Double
A6	Japanese Postcard Single
A6 Postcard	Japanese Postcard with Tab
Any	JIS B4
Any Custom	JIS B5
B5	JIS B5-R
Commercial 10	JIS B6
Custom	JIS Executive
Custom Roll	Ledger
Executive	Legal
Executive-R	Letter
Foolscap	Letter-R
Index Card 3x5	Monarch
Index Card 4x6	Photo 4x6
Index Card 5x8	Standard US Invitation
International B5	Unknown

Page Counts per Page Size
Duplex 1 Image Count
Duplex Count
Duplex Count Color
Duplex Count Mono
Simplex Count
Simplex Count Color
Simplex Count Mono
Total Count
Total Count Color
Total Count Mono

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