

# HP SNMP Proxy Agent

for HP Web Jetadmin



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## Overview

Administrators desire the ability to discover all printers in use in order to evaluate their entire printer inventory and move to a balanced deployment. Printers that are directly connected to client machines on the network via USB and parallel connections have always proven troublesome because they typically involve a physical inventory in order to locate them. Fortunately, HP Web Jetadmin provides two separate techniques for remotely discovering PC connected printers, eliminating the need for physical inventories. This paper will discuss the usage of the HP SNMP Proxy Agent on client machines to discover locally attached printers.

## HP SNMP Proxy Agent vs. PC Printer Discovery Plug-in

Two techniques are available in HP Web Jetadmin for discovering printers locally attached to client machines:

- HP PC Printer Discovery Plug-in
- HP SNMP Proxy Agent

HP PC Printer Discovery plug-in is an application plug-in that must be installed in HP Web Jetadmin in order to discover PC connected printers. It's only requirement on the client machines is that WMI is installed. It uses WMI calls to extract the plug-and-play ID of any locally attached printers from the registry. Administrator rights are required on all client machines in order to make the WMI calls. The only available information that can be extracted from the client machine pertaining to the locally attached printer is the model name. All discovered printers are placed in a separate folder from the network attached printers that HP Web Jetadmin discovers.

The HP SNMP Proxy Agent is software that can be loaded to a desktop client pc to allow HP Web Jetadmin to discover and manage locally connected (USB, LPT) printers. The HP SNMP Proxy Agent functions by exposing printer MIB OIDs to the client's Microsoft SNMP service. Regular network printer discoveries in HP Web Jetadmin will also discover printers that are locally attached to clients running the HP SNMP Proxy Agent. Discovered printers will appear in the All Devices list along with the networked printers but are distinguishable in the Port column as "PC Port". The client software is capable of passing the same types of questions that are typically passed to network connected printers. Therefore, additional printer information can be gathered such as remaining toner levels, page counts, status, etc.

### Comparison Matrix

	<b>HP SNMP Proxy Agent</b>	<b>HP PC Printer Discovery Plug-in</b>
Credentials	Admin rights are required to install the agent on the client machines, but not to run discoveries	Admin rights are required on all client machines in order to successfully discovery locally attached printers using WMI calls
Client Machines	Must install agent on all client machines. SNMP service must be active on client machines.	WMI must be active on client machines.
Performance	Discoveries are much faster using simple SNMP requests	Discoveries are slower using WMI calls
Discoveries	Normal HP Web Jetadmin network printer discovery techniques are used	Separate discovery techniques must be used from the typical HP Web Jetadmin network printer discovery techniques
Printer List	Discovered printers will appear in the All Devices list with the rest of the network printers. PC connected printers will be distinguishable in the Port column as "PC Port"	Discovered printers are placed in separate folder from network printers
Groups	Discovered printers can be placed in groups that are in the same location as network printers	Discovered printers can be placed in groups that are in a separate folder from network printers groups
Autogrouping	Yes, filter on Port as "PC Port"	No
Reports	Yes	No
Scheduled Data Exports	Yes since same groups as network printers	No, uses separate groups

Model Name	Accurately displays model name of printer based upon gdStatusID object on printer	Accurately displays model name of printer based upon plug-and-play entry in registry (not completely reliable for LPT ports)
Status	Yes	No
Serial Number	Yes, for printers that support the object	No
Page Counts	Yes, for printers that support the object	No
Toner/Ink Levels	Yes, for printers that support the object	No
Diagnostics Page	Yes	No
Alerts	No (coming soon)	No
Configuration	No	No

## HP SNMP Proxy Agent

HP SNMP Proxy Agent is designed for administrators who need not only inventories of PC connected printers but also the ability to manage those printers. Administrators who are not averse to installing client software will reap the benefits of being able to extract additional printer information such as remaining toner levels, page counts, status, etc. Simple HP Web Jetadmin discoveries can be performed to locate PC connected printers without requiring Administrator rights on those client machines.

## Installation

Two modes of installation are available for ease of installation through standard tools such as SMS.

**Standalone installation:** This will be the standard (non-silent) installation which takes input from the user in the form of responses to dialog boxes. Administrators can install the package using either the EXE package or the MSI package as such:

- Installation through MSI package: Administrator double clicks the HP SNMP Proxy.msi file or runs the Msiexec /i "HP SNMP Proxy.msi" command.
- Installation through EXE package: Administrator double clicks the hp\_snmp\_proxy.exe file or runs the hp\_snmp\_proxy.exe /i command. Thereafter the user will be guided by the installer through a series of dialogs.

**Silent Mode Installation/Network Installation:** The silent mode of installation is provided for "push" based installations. Administrators can initiate a silent installation (without UI) with the following commands.

- Installation through MSI package: Msiexec /i "HP SNMP Proxy.msi" /qn
- Installation through EXE package: hp\_snmp\_proxy.exe /s /i

### Examples:

The hp\_snmp\_proxy.exe installer is a simple self extracting self executing installer to install the SNMP proxy solution and can accept the following command line parameters:

- /s: Silent extraction of the packaged binaries on the client system
- /qn: Executes the MSI in silent mode. Just specifying /s will imply this setting
- /i: Indicates that the installer is used for installing the package
- /fv: Indicates that the installer is used to upgrade an existing package
- /x: Indicates that the installer is being used for uninstalling an already installed package

PERMITTEDMANAGERS="ipaddress1;ipaddress2;...;ipaddressn" : This is used from the command line to setup the SNMP service to respond only to requests from the listed ip addresses. An empty string like PERMITTEDMANAGERS="" removes all existing entries that the proxy installer had previously made. A value of "\*" indicates that the SNMP service should be able to receive values from any server.

VALIDCOMMUNITIES="communityname1;communityname2;...communitynamen": This is used from the command line to setup the SNMP service to respond only to servers that request with one of the listed community names.

### Logging

The installer by default creates a log file with the name snmpprint.log in the windows folder. This is a hardcoded aspect of the installer and cannot be overridden currently.

### Typical usage:

1. To install the proxy in a silent mode without making any additional entries/changes to the SNMP service  
`hp_snmp_proxy.exe /s /i`
2. To install the proxy in a silent mode and set the allowed managers setting in the SNMP service  
`hp_snmp_proxy.exe /s /i  
PERMITTEDMANAGERS="127.0.0.1;162.162.162.162;15.5.178.64"`
3. To install the proxy in a silent mode and set the allowed community names setting in the SNMP service  
`hp_snmp_proxy.exe /s /i VALIDCOMMUNITIES="public;public.1;public.2"`
4. To install the proxy in a silent mode and set both the allowed community names and permitted managers setting in the SNMP service  
`hp_snmp_proxy.exe /s /i  
PERMITTEDMANAGERS="127.0.0.1;162.162.162.162;15.5.178.64"  
VALIDCOMMUNITIES="public;public.1;public.2"`
5. To modify permitted managers or valid community names use method 3 or 4 and instead of /i use /fv
6. To erase permitted managers or valid community names use method 3 or 4 (instead of /i use /fv) with the values of PERMITTEDMANAGERS and/or VALIDCOMMUNITIES set to "" (empty string)
7. To Uninstall the proxy in a silent mode  
`hp_snmp_proxy.exe /s /x`

## Supported Printers

The HP SNMP Proxy Agent supports a wide variety of compatible printers directly connected to client machines that meet the following criteria:

- Microsoft Windows XP (SP2), Windows 2000 (SP4), Windows Server 2003 Enterprise Edition and Windows Vista operating system is running on the client machine.
- Windows SNMP service must be installed and configured to allow queries from the WJA server. The community name should be set to public for read access.
- Firewall settings should be appropriately modified to allow WJA to query the proxy agent (i.e. UDP port 161 should be open for SNMP queries).
- Printers must be installed using a DOT4 bi-directional capable driver in order to respond to SNMP queries

A list of supported printers is contained in Appendix A of this document. At this time, only HP printers are supported with the HP SNMP Proxy Agent.

## Discovery

Discovering printers connected to workstations running the HP SNMP Proxy Agent is identical to discovering network connected printers in HP Web Jetadmin. No additional components or plug-ins are required in order to perform discoveries. Select *Device Management, Discovery, Properties* from the navigation tree and select the desired discovery methods (see Figure 1). Supported discovery techniques include IP Broadcast, IP Range, and Specified Address. Quick Device Find can also be used to discover locally attached printers individually. For more information pertaining to these discovery methods, please read the whitepaper titled “Discovering Devices in HP Web Jetadmin”.

Web Jetadmin will query the standard printer and enterprise PML OIDs in the supported printers. The proxy will filter these OIDs and query the printer over the USB or LPT cable. Other OIDs, such as Host Resources objects, are passed through to the SNMP service so the workstation can provide responses pertaining to itself, imperative for managing client machines using enterprise management solutions. For queries passed to the printer, in most cases, the printer model name, engine page count, toner levels, serial number, etc. are available. Many recent enterprise devices support additional objects, while some of the lower end personal printers may not support as many objects. The same objects queried on network connected printers are more or less queried for PC connected printers.

If a proxied windows host fails to respond to HP enterprise printer OIDs during discovery (because the printer is powered off/disconnected, or the printer driver’s I/O stack lacks a supported bi-di interface), HP Web Jetadmin classifies the host as a “windows workstation” and does not place it in the All Devices list. Thus, if a supported PC connected printer is newly attached to a proxied workstation and a supported driver is installed, the printer will not be visible in the All Devices list until another discovery has completed.

Only a single supported printer attached to each client computer will be discovered. The agent instruments the current user’s default printer if supported, else it instruments the first supported printer it finds.

Printers must have a DOT4 bi-di capable driver installed in order to be discovered. A list of printers that have been tested to provide bi-di capabilities through their drivers are contained in Appendix A.

While visible in the product, configuration and alerts are not supported. Only reading of information from PC connected printers is supporting, not writing.

## Troubleshooting Discoveries

For cases where HP Web Jetadmin isn’t discovering printers

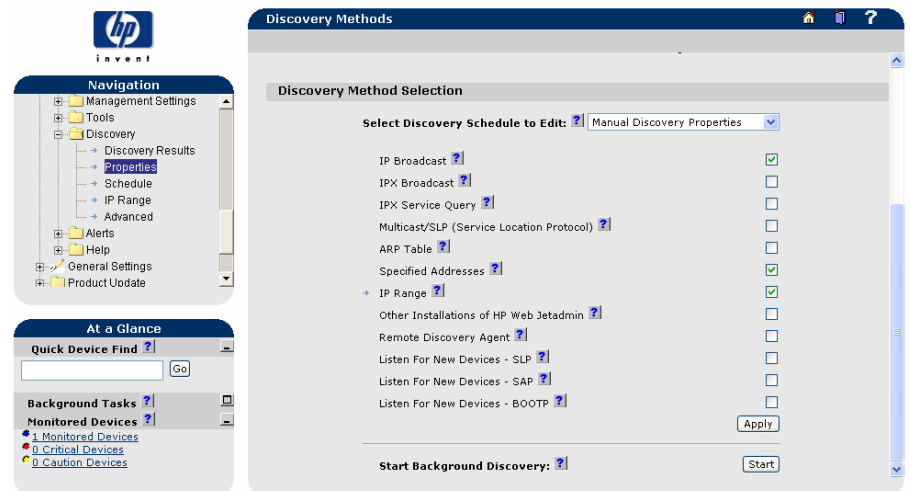


Figure 1 - Discovery Options

locally attached to clients running the HP SNMP Proxy Agent, confirm the following checklist and try the following troubleshooting steps to understand why the discovery is failing.

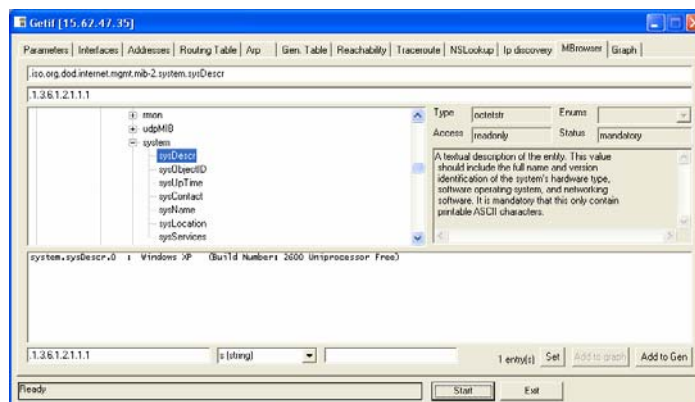
## Checklist

1. The client computers must be running Microsoft Windows 2000, Windows XP, Windows Server 2003, or Windows Vista.
2. Microsoft's Simple Network Management (SNMP) Service Windows Component (a service) must be installed and started on the client computers.
3. The HP SNMP Proxy agent must be installed on the client computers.
4. The client computers must be equipped with a supported HP printer (check the list in the Appendix of this document).
5. The printer driver must be installed with a supported bi-di I/O stack. The easiest way to ensure this may be to install the HP "premium" driver for a supported printer. There are still no guarantees that the largest file size driver obtained on the Web contains the DOT4 bi-directional stack, but chances are better.
6. HP Web Jetadmin must be designed to support Windows workstations equipped with proxied printer MIBs. HP Web Jetadmin v. 8.1.3570 and beyond has been fully tested to support the HP SNMP Proxy Agent.
7. Microsoft's SNMP Service must be configured to provide HP Web Jetadmin with READ access through a mutually agreed-upon community name (e.g. PUBLIC).
8. Microsoft's SNMP Service must be configured to either enable access by the management application's host IP address or to enable access by all IP addresses.
9. Firewalls on client computers must be configured to pass traffic on UDP Port 161 (SNMP).

## Troubleshooting

1. Verify basic network connectivity by pinging the client machine from the HP Web Jetadmin server.
2. Use a 3rd party SNMP tool such as SNMP Get or GetIF to verify basic SNMP service on the Windows client. Any tool capable of gathering SNMP information should suffice. A typically supported object to query to prove SNMP communication would be 1.3.6.1.2.1.1.1.0 (sysDescr). For example:

```
snmpget -v 2c -c public clienthostname 1.3.6.1.2.1.1.1.0
```



Using GetIF to prove SNMP communication

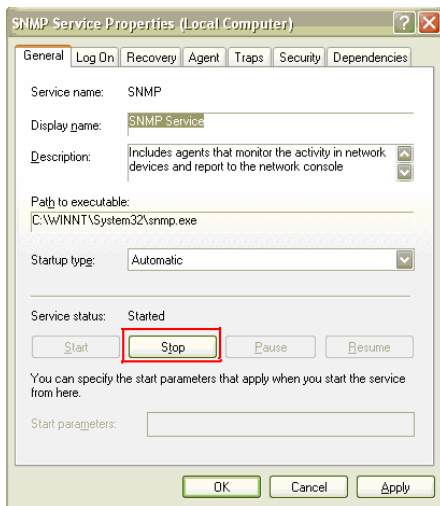
3. If SNMP is not responding properly, check the settings of the SNMP service. In the case of Windows 2003 and Windows Vista, HP Web Jetadmin will be unable to discover any printers even after successful installation of HP SNMP Proxy and printers due to improper SNMP service settings by default, such as no community name configured and the list of

accepted servers is set to localhost only. To ensure the settings for the SNMP service are set correctly, the installer can be run with the following command

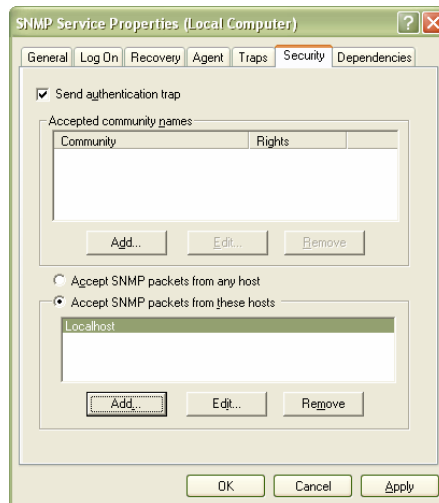
- **MSI based :** Msiexec /i "HP SNMP Proxy.msi" PERMITTEDMANAGERS= "\*" VALIDCOMMUNITIES="public"
- **EXE based:** hp\_snmp\_proxy.exe /i PERMITTEDMANAGERS= "\*" VALIDCOMMUNITIES="public"

Also, the SNMP service can be manually checked to ensure settings are proper as such:

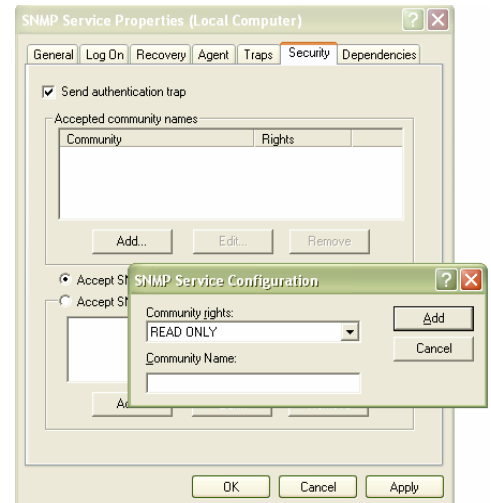
- A. Open SNMP Service tab by selecting *Start, Run, Services.msc, SNMP Service* or selecting it from the Administrative Tools folder.
- B. Stop the SNMP service by clicking on Stop button under general tab in SNMP property sheet.
- C. Open the Security tab in SNMP service property sheet.
- D. Click on the Add button of accepted community name, and add "public" as community name.
- E. Remove local host "Accept SNMP packets from these hosts". And either add new supported IP, or select "Accept SNMP packets from any host" radio button.
- F. Start SNMP service by clicking on the Start button in General tab of SNMP Service.



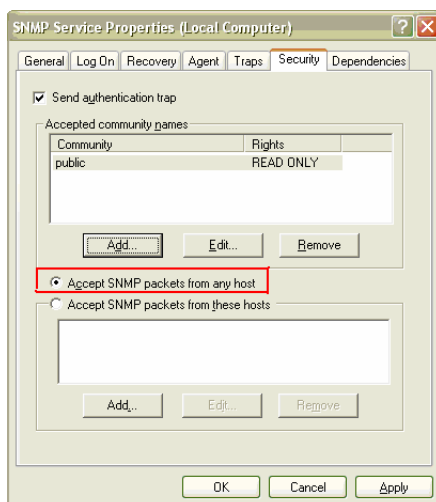
B. Stop SNMP Service



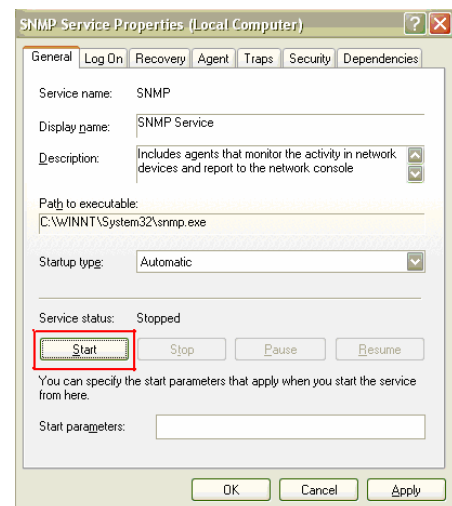
C. Open Security Tab



D. Add public as Community Name



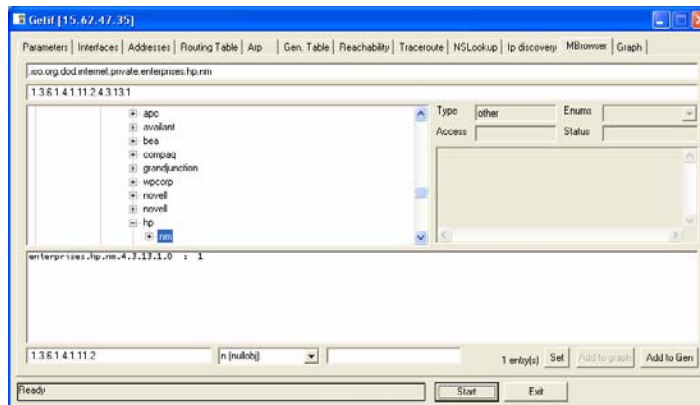
E. Accept SNMP packets from any host



F. Start SNMP Service

4. Use a 3rd party SNMP tool such as SNMP Get or GetIF to verify the successful installation of the HP SNMP Proxy agent. Any tool capable of gathering SNMP information should suffice. The object to query to prove successful installation of the proxy is 1.3.6.1.4.1.11.2.4.3.13.1.0. If the agent, printer driver and printer are all functioning, the agent responds with the INTEGER 1. The agent responds with error NO SUCH NAME if installed/configured successfully but now unable to communicate with the printer. For example:

```
snmpget -v 2c -c public clienthostname 1.3.6.1.4.1.11.2.4.3.13.1.0
```



Using GetIF to prove successful SNMP Proxy installation

5. The client's version and supported printer can be determined by checking the registry entries under "HKLM\SOFTWARE\Hewlett-Packard\HP SNMP Proxy". If there is not an entry for the attached printer, the workstation is unaware that a printer is attached. More than likely the driver does not support DOT4 bi-directional capabilities. In such cases, try to download and install another driver with such capabilities. Remember, typically the largest driver that can be found on the HP Web will contain the bi-directional communication stack (if supported).

## Printer Groups

Discovered printers can be added to device groups to provide organization and structure. These groups can co-exist with the existing groups of network-connected printers.

Printers that are locally attached to client machines running the HP SNMP Proxy Agent will be distinguishable in the All Devices list by the Port column containing "PC Port". This column could be sorted to quickly select the locally attached printers and add them to a group by selecting either *Create Device Group* or *Add to Device Group* under the *Device Tools* drop-down menu. The group will now appear under the *Device Management, Device Groups* folder in the navigation tree. (see Figure 2).

Locally attached printers can also be added to existing groups automatically upon discovery by using the Autogrouping feature. While viewing the group, select *Autogroup* from the *Device Group Tools* drop-down menu, and create a filter that defines Port equal to "PC Port". Once *Enable Autogrouping* is selected, all future discovered printers that match the filter criteria will be automatically added to the group.

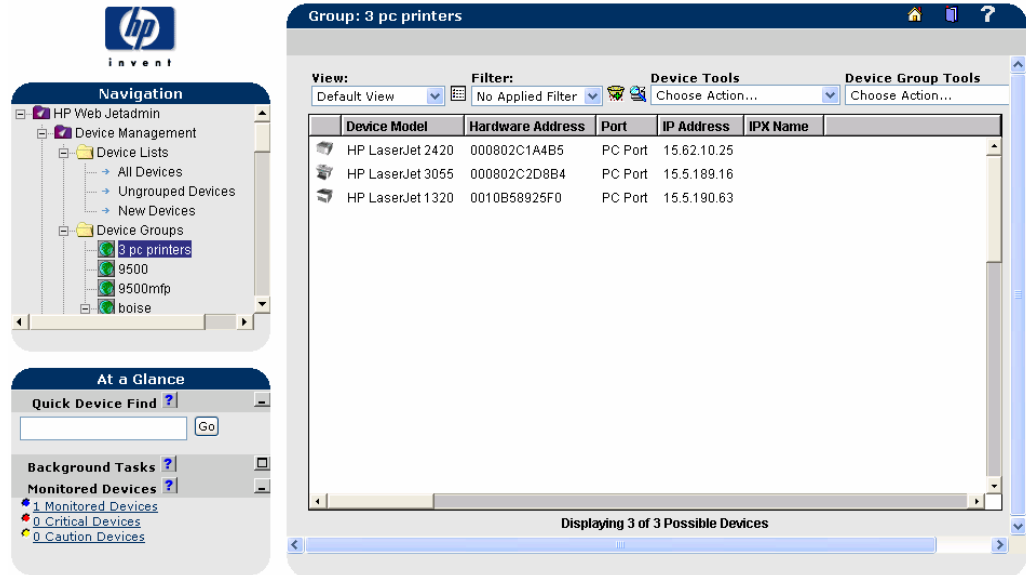


Figure 2 –Printer Groups

## Printer Details

Double-clicking on a printer in the All Devices List or from a group will display a Device Status page that contains various pieces of information pertaining to the printer (see Figure 3).

Information such as, IP address, IP Hostname, and Hardware Address pertain to the client workstation where the printer is locally attached.

The remaining pieces of information that are displayed pertain to the printer that is attached to the client machine. In most cases, a matching picture will be displayed. The status of the device will be displayed, which refreshes itself every six seconds (configurable) to display an accurate representation of current status. Descriptive items such as Device Location and System Contact are also displayed, as well as a list of printer capabilities.

Additional information pertaining to both the printer and workstation can be obtained by selecting *Diagnostics* from the drop-down menu (see Figure 4). Items such as Firmware Version, Engine Page Count, Serial Number, and Install Date can be viewed on this page.

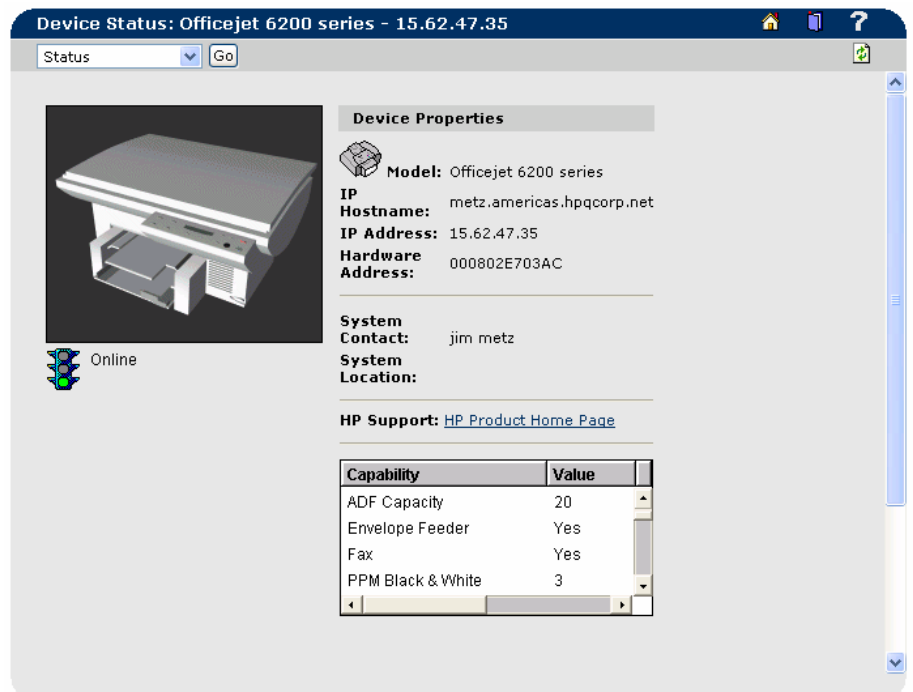


Figure 3 - Device Status

These attributes can also be enabled as columns in Views to see values for multiple printers simultaneously.

## Additional Functionality

Since PC connected printers are displayed in the same capacity as network connected printers, it makes sense that many of the features available to network connected printers will apply to PC connected printers.

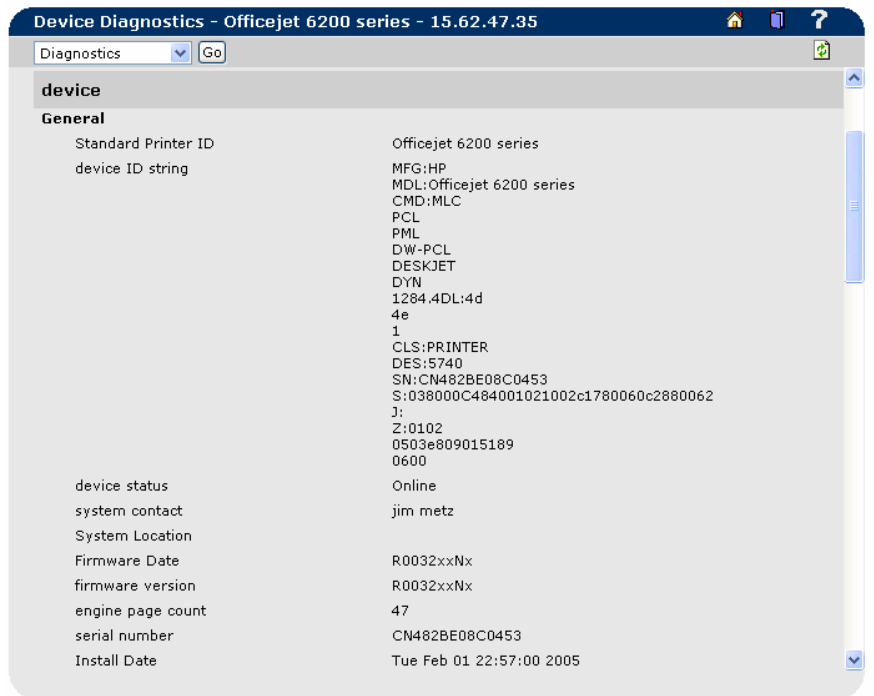


Figure 4 - Device Diagnostics

- Views can be created for groups of PC connected printers to view any attainable columns of information such as Serial Number, Engine Page Count, etc.
- Data Exports can be scheduled for particular groups of PC Connected printers containing views of desired columns of information.
- Reports can be generated through the Report Generation Plug-in for groups of PC connected printers for comparisons on attributes such as mono/color printing, simplex/duplex printing, etc.
- While visible in the product, configuration and alerts are not supported. Only reading of information from PC connected printers is supporting, not writing.

## Summary

HP Web Jetadmin provides two separate techniques for remotely discovering PC connected printers, eliminating the need for physical inventories. Each technique contains pros and cons, providing flexibility in how Administrators choose to manage locally attached printers. HP SNMP Proxy Agent provides advantages in that it provides full management capabilities of locally attached printers rather than simple inventory.

## Appendix A

The following table lists the printers that should be successfully discovered using the HP SNMP Proxy Agent since they support a DOT4 bi-directional channel in the driver and PML in the printer. The Table in Appendix B will contain examples of the level of management support to expect for some of these printer models.

HP Color LaserJet 2550 series	HP LaserJet 3380	HP Photosmart 470 Series
HP Color LaserJet 2820 Series	HP LaserJet 3390	HP Photosmart 7200 series
HP Color LaserJet 2830 Series	HP LaserJet 4240	HP Photosmart 7600 series
HP Color LaserJet 2840 Series	HP LaserJet 4250	HP Photosmart 7700 series
HP Color LaserJet 3000	HP LaserJet 4350	HP Photosmart 7800 Series
HP Color LaserJet 3500	HP LaserJet 5200	HP Photosmart 7900 series
HP Color LaserJet 3550	HP LaserJet 5200L	HP Photosmart 8000 Series
HP Color LaserJet 3600	HP LaserJet M3027 MFP	HP Photosmart 8200 Series
HP Color LaserJet 3700	HP LaserJet M3035 MFP	HP Photosmart A310 series
HP Color LaserJet 3800	HP LaserJet M4345 MFP	HP Photosmart A430 series
HP Color LaserJet 4610	HP LaserJet M5025 MFP	HP Photosmart A510 series
HP Color LaserJet 4650	HP LaserJet M5035 MFP	HP Photosmart A610 series
HP Color LaserJet 4700	HP LaserJet P3005 Series	HP Photosmart A710 series
HP Color LaserJet 4730mfp	HP Officejet 4100	HP Photosmart C3100 series
HP Color LaserJet 5550	HP Officejet 4105	HP Photosmart C4100 series
HP Color LaserJet 9500 MFP	HP Officejet 4200 series	HP Photosmart C5100 series
HP Color LaserJet CP4005	HP Officejet 4300 series	HP Photosmart C6100 series
HP Deskjet 450	HP Officejet 5500 series	HP Photosmart C7100 series
HP Deskjet 5400 Series	HP Officejet 5600 series	HP Photosmart D5060 Printer
HP Deskjet 5900 Series	HP Officejet 6100	HP Photosmart D5100 series
HP Deskjet 6600 Series	HP Officejet 6200 series	HP Photosmart D6100 series
HP Deskjet 6800 Series	HP Officejet 6300 series	HP Photosmart D7100 series
HP Deskjet F300 series	HP Officejet 7200 series	HP Photosmart D7300 series
HP LaserJet 1010	HP Officejet 7300 series	HP Photosmart Pro B9100 series
HP LaserJet 1012	HP Officejet 7400 series	HP PSC 1000
HP LaserJet 1015	HP Officejet 9100 series	HP PSC 1100
HP LaserJet 1150	HP Officejet J2100 Series	HP PSC 1200
HP LaserJet 1160 series	HP Officejet Pro K5300	HP PSC 1300 series
HP LaserJet 1300	HP Officejet Pro K5600	HP PSC 1310 series
HP LaserJet 1300n	HP Officejet Pro L7300	HP PSC 1358
HP LaserJet 1320 series	HP Officejet Pro L7500	HP PSC 1400 series
HP LaserJet 2300	HP Officejet Pro L7600	HP PSC 1500 series
HP LaserJet 2300L	HP Officejet Pro L7700	HP PSC 1600 series
HP LaserJet 2410	HP Photosmart 140 series	HP PSC 2100
HP LaserJet 2420	HP Photosmart 240 series	HP PSC 2150
HP LaserJet 2430	HP Photosmart 2570 series	HP PSC 2170
HP LaserJet 3015	HP Photosmart 2600 series	HP PSC 2200
HP LaserJet 3020	HP Photosmart 2700 series	HP PSC 2300 series
HP LaserJet 3030	HP Photosmart 3100 Series	HP PSC 2350 series
HP LaserJet 3050	HP Photosmart 3200 Series	HP PSC 2400 series
HP LaserJet 3052	HP Photosmart 330 Series	HP PSC 2500 series
HP LaserJet 3055	HP Photosmart 3300 Series	
	HP Photosmart 380 Series	
	HP Photosmart 420 Series	

## Appendix B

The following table contains examples of supported management features for some of the printers contained in Appendix A. Since the HP SNMP Proxy Agent gathers information from direct-connected printers via PML, it is safe to conclude that approximately the same information that can be obtained from a printer on the network will be obtained from a direct-connected printer. HP Web Jetadmin will be issuing the same queries, and as long as the HP SNMP Proxy Agent can direct the questions to the printer via a DOT4 bi-directional channel, the printer should be able to answer the queries just as if it were on the network.

If a particular desired printer model is not listed in this table, there may be a similar printer model that is listed that closely resembles the desired printer and behaves similarly. Generally, more recent and higher end printers will answer more queries than older or lower end personal printers. For Tray Media Levels, a “Y” indicates that a percentage of remaining media will be displayed, while an “E” indicates that only a value of “Empty” or “Not Empty” can be displayed.

Device Model	Total Page Count	Total Color Page Count	Serial Number	Estimated Supply Levels	Tray 1 Media Level in %	Tray 2 Media Level in %	Control Panel	Install Date
HP Color LaserJet 2550	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 2820	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 2830	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 2840	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3000	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3500	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3550	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3600	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3700	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 3800	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 4610	Y	Y	Y	Y	E	Y	Y	Y
HP Color LaserJet 4650	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 4700	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 4730mfp	Y	Y	Y	Y	E	E	Y	Y
HP Color LaserJet 5550	Y	Y	Y	Y	E	Y	Y	Y
HP Color LaserJet 9500 MFP	Y	Y	Y	Y	E	Y	Y	Y
HP Color LaserJet CP4005	Y	Y	Y	Y	E	N/A	Y	Y
HP Deskjet 5900 Series	Y	N	Y	Y	N	N	N	Y
HP Deskjet 6600 Series	Y	N	Y	N	N	N	N	Y
HP Deskjet 6800 Series	Y	N	Y	N	N	N	N	N
HP LaserJet 1010	Y	N	Y	N	N	N	Y	N
HP LaserJet 1012	Y	N	Y	N	N	N	Y	N
HP LaserJet 1015	Y	N	Y	N	N	N	Y	N
HP LaserJet 1150	Y	N	Y	N	N	N	N	N
HP LaserJet 1160 series	Y	N	Y	N	N	N	N	N
HP LaserJet 1300n	Y	N	Y	Y	E	N/A	N	Y
HP LaserJet 1320	Y	N	Y	Y	E	E	N	Y
HP LaserJet 2300	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 2300L	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 2410	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 2420	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 2430	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 3015	Y	N	Y	N	E	E	Y	Y
HP LaserJet 3020	Y	N	Y	N	E	E	Y	Y
HP LaserJet 3030	Y	N	Y	N	E	E	Y	Y
HP LaserJet 3050	Y	N	Y	N	E	E	N	Y
HP LaserJet 3052	Y	N	Y	N	E	N/A	Y	Y
HP LaserJet 3055	Y	N	Y	N	E	N/A	Y	Y
HP LaserJet 3380	Y	N	Y	N	E	E	Y	Y
HP LaserJet 3390	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 4240	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 4250	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 4350	Y	N	Y	Y	E	E	Y	Y

Device Model	Total Page Count	Total Color Page Count	Serial Number	Estimated Supply Levels	Tray 1 Media Level in %	Tray 2 Media Level in %	Control Panel	Install Date
HP LaserJet 5200	Y	N	Y	Y	E	E	Y	Y
HP LaserJet 5200L	Y	N	Y	Y	E	E	Y	Y
HP LaserJet M3027 MFP	Y	N	Y	N	E	E	Y	Y
HP LaserJet M3035 MFP	Y	N	Y	Y	E	E	Y	Y
HP LaserJet M4345 MFP	Y	N	Y	Y	E	E	Y	Y
HP LaserJet M5025 MFP	Y	N	Y	Y	E	E	Y	Y
HP LaserJet M5035 MFP	Y	N	Y	Y	E	E	Y	Y
HP LaserJet P3005	Y	N	Y	Y	E	E	Y	Y
HP Officejet 6200 series	Y	N	Y	N	N	N/A	N	Y
HP Officejet 7200 series	Y	N	Y	N	N	N/A	N	N
HP Officejet 7300 series	Y	N	Y	N	N	N/A	N	N
HP Officejet 7400 series	Y	N	Y	N	N	N/A	N	N
HP Officejet 9100 series	Y	N	Y	N	N	N/A	Y	Y
HP Officejet Pro K5300	Y	N	Y	N	N	N/A	N	Y
HP Officejet Pro L7500	Y	N	Y	N	N	N/A	N	N
HP Officejet Pro L7600	Y	N	Y	N	N	N/A	N	Y
HP Officejet Pro L7700	Y	N	Y	N	N	N/A	N	Y
HP Photosmart 3200 series	Y	N	Y	N	N	N/A	N	N
HP Photosmart 3300 series	Y	N	Y	N	E	N/A	Y	Y
HP Photosmart 8200 series	Y	N	Y	N	N	N/A	Y	Y
HP Photosmart C5100 series	Y	N	Y	N	N	N/A	N	Y
HP Photosmart C6100 series	Y	N	Y	N	N	N/A	N	Y
HP Photosmart C7100 series	Y	N	Y	N	N	N/A	N	Y
HP Photosmart Pro B9100 series	Y	N	Y	Y	N	N	Y	Y