

# Third Party Printer Discovery

in HP Web Jetadmin



## Table of Contents:

Overview .....	1
Discovery .....	2
Device Plug-ins.....	2
Third Party Device Plug-in Program.....	3
Generic Support .....	4
Conclusion .....	7

## Overview

HP Web Jetadmin has the ability to discover non-HP printers connected to the network via non-HP print server devices. By supporting third party printers, HP offers a network printer management solution that drives an additional step further toward the “one-stop-shopping” concept that LAN administrators desire. LAN administrators will now be able to discover and manage printers offered by all major printer vendors from a single software interface.

## Discovery

During discovery of devices, HP Web Jetadmin uses SNMP queries to gather information from the printer and print server device. If HP Web Jetadmin concludes that the device is a peripheral such as a printer, plotter, multi-function device, etc., it will display it in the list of discovered devices. In order for HP Web Jetadmin to conclude that a device is a peripheral, the device must be able to answer a set of basic questions.

A MIB (Management Information Base) is a set of objects that defines the types of SNMP queries that can be asked of a device. For example, the Standard Printer MIB (RFC 1759) is a generic set of objects to which most peripherals should be able to provide answers when queried. The Standard Printer MIB consists of objects that describe functionality and capabilities of the printer such as page counts, media types, etc. Other common MIBs include MIB-II (RFC 1213) and the Host Resources MIB (RFC 1514).

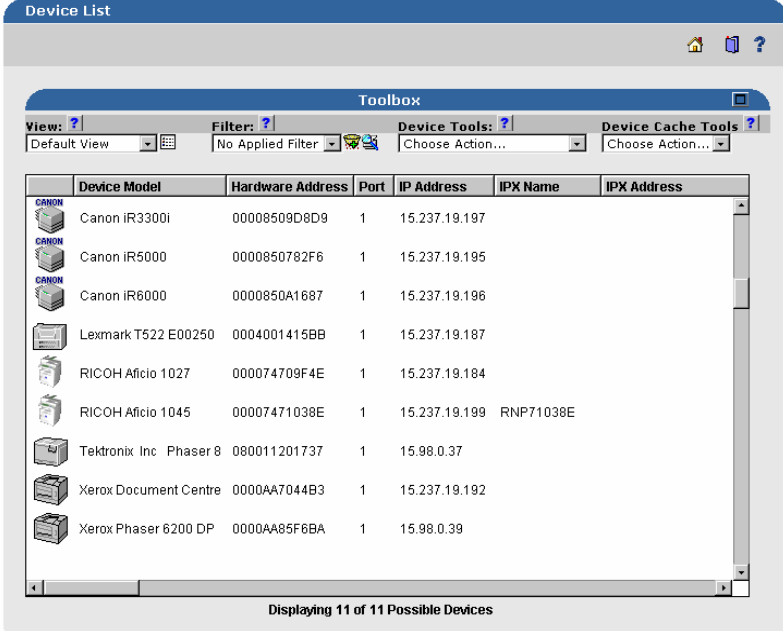
Devices must be able to answer queries defined in these common MIBs in order for HP Web Jetadmin to discover the devices. Otherwise, there is not enough information pertaining to the device to warrant displaying it in the list of discovered devices. HP Web Jetadmin focuses on printer management, and it would be increasingly difficult to distinguish devices as printers unless they can answer a standard set of questions such as those defined in the Standard Printer MIB.

Additionally, the print server device that connects the peripheral to the network must be able to answer queries defined in MIB-II (RFC 1213) in order for the peripheral to be discovered in HP Web Jetadmin. Examples of typical MIB-II questions include MAC address, IP address, Host Name, and System Description.

Assuming the printer and print server device can answer the required queries, the printer should be discovered with Web Jetadmin providing “generic” support for the device at a minimum. This will include items such as status, capabilities, etc.

## Device Plug-ins

Device plug-ins are developed for use in HP Web Jetadmin to assist in discovering devices and to display much more information pertaining to the device than can be obtained through generic support. The questions defined in a plug-in are specific to the device and go well beyond the standard type of questions built into generic support in HP Web Jetadmin. If a plug-in is not developed for a device, only basic, generic support can be provided in HP Web Jetadmin. Most HP printers will have specific plug-ins developed for use in HP Web Jetadmin to provide optimum support. HP Web Jetadmin also initially contains device plug-ins for the following list of third party printers:



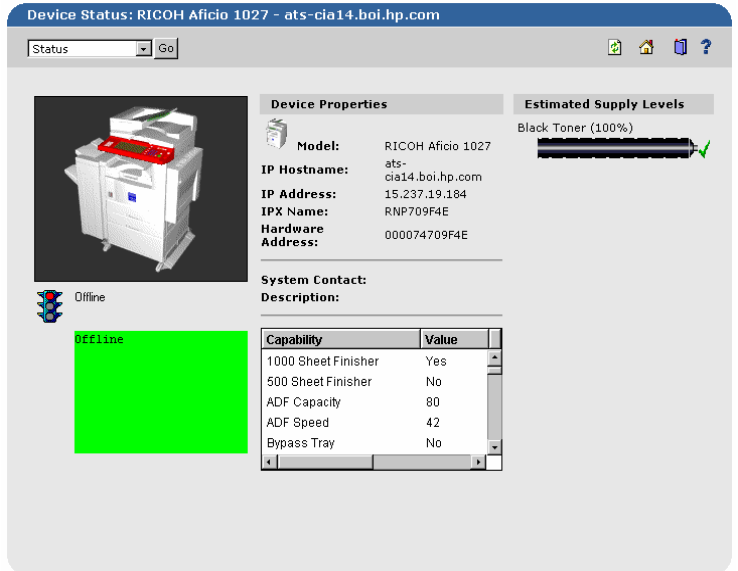
The screenshot shows the 'Device List' window in HP Web Jetadmin. It features a 'Toolbox' at the top with options for 'View', 'Filter', 'Device Tools', and 'Device Cache Tools'. Below the toolbox is a table listing discovered devices. The table has columns for Device Model, Hardware Address, Port, IP Address, and IPX Name. The devices listed include Canon IR3300i, Canon IR5000, Canon IR6000, Lexmark T522 E00250, RICOH Aficio 1027, RICOH Aficio 1045, Tektronix Inc Phaser 8, Xerox Document Centre, and Xerox Phaser 6200 DP. The status bar at the bottom indicates 'Displaying 11 of 11 Possible Devices'.

Device Model	Hardware Address	Port	IP Address	IPX Name
Canon IR3300i	00008509D8D9	1	15.237.19.197	
Canon IR5000	0000850782F6	1	15.237.19.195	
Canon IR6000	0000850A1687	1	15.237.19.196	
Lexmark T522 E00250	0004001415BB	1	15.237.19.187	
RICOH Aficio 1027	000074709F4E	1	15.237.19.184	
RICOH Aficio 1045	00007471038E	1	15.237.19.199	RNP71038E
Tektronix Inc Phaser 8	080011201737	1	15.98.0.37	
Xerox Document Centre	0000AA7044B3	1	15.237.19.192	
Xerox Phaser 6200 DP	0000AA85F6BA	1	15.98.0.39	

Example of Third Party Printers Discovered in HP Web Jetadmin

- Canon
- IBM
- Lexmark
- Kyocera
- Tektronix
- Xerox

While these plug-ins will provide an icon and bitmap of a printer from the respective vendor (not necessarily matching the specific printer), and will display basic capabilities and status, they do not provide a high level of functionality beyond generic support. For additional functionality, a specific plug-in will need to be created by the printer vendor.



Ricoh Aficio 1027 – vendor plug-in

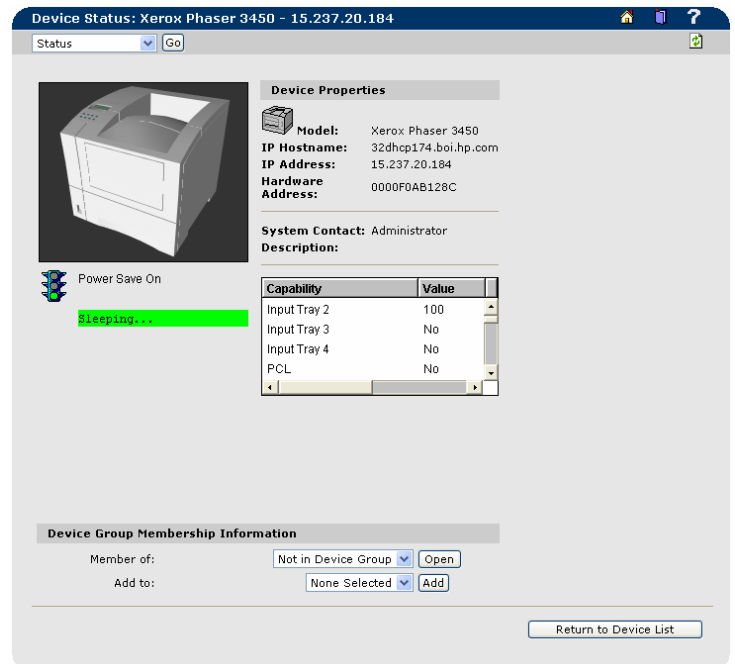
### Third Party Device Plug-in Program

Each printer vendor has its own proprietary MIBs that define exactly which objects to query to get or set information pertaining to the device. Unfortunately, these are proprietary, and HP Web Jetadmin has no knowledge of the objects defined in the MIBs. For this reason, HP Web Jetadmin must rely upon the device supporting the Standard Printer MIB as defined in RFC 1759 in order to provide management capabilities.

However, a Third Party Device Plug-in program exists whereby third party vendors can write their own device plug-ins for use in HP Web Jetadmin. Since the third party vendors have knowledge of the MIBs for their printers, these device plug-ins have the potential to provide much stronger support for devices in HP Web Jetadmin than can be provided through general MIB queries. Functionality that potentially may appear in vendor created plug-ins includes status, capabilities, diagnostics, alerts, etc. Functionality that will not be available, and is reserved for HP printers only, includes firmware upgrades and print queue creation.

Currently, plug-ins have been created for the following vendors via the Third Party Device Plug-in program:

- Ricoh
- Gestetner
- Infotec
- Lanier
- NRG
- Savin
- Okidata



Xerox Phaser 3450 – no vendor plug-in

- Canon
- Konica/Minolta
- Xerox
- Sharp
- Toshiba
- Epson

A complete list of printer models by these vendors can be viewed in the Appendix.

## Generic Support

If a device plug-in has not been written by a particular vendor, HP Web Jetadmin will still make every attempt to discover printers made by the vendor based upon standard queries. In order for such third party printers and/or print servers to be discovered in HP Web Jetadmin, the following criteria must be met:

- The printer must be Standard Printer MIB (RFC 1759) compliant.
- The print server device must be MIB II (RFC 1213) compliant.
- The print server device must be able to effectively send Standard Printer MIB requests to the printer and relay the answers back to HP Web Jetadmin.

Even though the printer can potentially answer the questions asked of it, if the print server device can't effectively send the requests to the printer, it can't relay the answers back to HP Web Jetadmin in order for the printer to be discovered. This certainly becomes an issue for print server devices manufactured by a different vendor than the printer. Naturally, network devices manufactured by the same vendor as the printer typically have no issue with this communication link since they test for the printers they are intended to support. However, for third party printer devices, both external and internal, effective communication can become a challenge.

HP external print server devices use a proprietary language (PML) to

The screenshot shows the 'Device Diagnostics' window for a Ricoh Aficio 1045 printer. The 'Diagnostic Categories' sidebar on the left includes 'Device', 'Network', 'TCP/IP', and 'Netware'. The main content area is divided into several sections:

- General:** Device (RICOH Aficio 1045 5.19.1 / RICOH Network Printer C model / RICOH Network Facsimile C model), Device ID string (MDL:RICOH Aficio 1045), Device Status (Panel Off Mode), System Contact, Description, Firmware Version (5.19.1), Serial Number (H7316900148), and Plugin Version (1.2).
- Printed Pages Counters:** Total Counter (12980), Printer Counter (6350), Fax Counter (1), Copier Counter (6629), and B&W Counter (12980).
- Paper Input Trays Level:** Tray 1 (550 (550)), Tray 2 (275 (550)), and Bypass Tray (0 (50)).
- Paper Output Trays Remaining Capacity:** Internal Tray 1 (250 (250)), Finisher Shift Tray 1 (500), and Finisher Shift Tray 2 (1500).
- Consumables:** Black Toner status is shown as 'OK' with a green checkmark.
- Interpreter Language:** Automatic Language Switching (Version 1.60) and Customized P3L (Version 1.60).

Diagnostics for a Ricoh Aficio 1045 – vendor plug-in

The screenshot shows the 'Device Diagnostics' window for a Xerox Phaser 3450 printer. The 'Diagnostic Categories' sidebar on the left includes 'device'. The main content area is divided into several sections:

- General:** Standard Printer ID (Xerox Phaser 3450), device ID string (MDL:Xerox: Phaser 3450), device status (Power Save On), system contact (Administrator), description, Firmware Date (Friday August 08, 2003), engine page count (2606), and serial number (PMY033028.....).
- Interpreter Language:** Automatic Language Switching (Version 1.15, Date: Friday August 08, 2003), Post Script (Version 1.21, Date: Wednesday July 23, 2003), and PCL (Version 3.20, Date: Monday June 09, 2003).
- Network Interface:** description (Xerox Phaser 3450 DN, OS: 1.15 08-08-2003, NIC: V1.11(P3450), SN: PMY033028.....), hardware address (0000FOAB128C), and system up time (23 Day(s), 23 Hour(s), 32 Minute(s), 20 Second(s)).

Xerox Diagnostics Information – no vendor plug-in

communicate with HP printers. However, there is no guarantee this communication channel will be effective on printers manufactured by other vendors.

If HP Web Jetadmin cannot receive any printer details, it will not discover the printer. Although the print server device may be answering its MIB II requests, there is not enough information in just the print server responses to warrant a discovery. There is no way to distinguish the device as a printer unless the printer can answer the Standard Printer MIB questions.

For devices that have plug-ins written to support them, the level of support will be high since the queried objects are written and tested by the printer vendors themselves. For devices that do not have a plug-in but are still discovered by HP Web Jetadmin, the amount of information that is displayed for each device depends upon the ability of that device to answer the SNMP queries it receives from HP Web Jetadmin. The following items will be available from the drop-down menu while viewing a third party printer:

- Status
- Configuration
- Diagnostics
- Device Web Page
- Test Page
- Reset Options
- Alerts

Whether a device plug-in has been developed or not, HP Web Jetadmin will attempt to support the following functionality for each device it discovers. Whether the items will appear in Web Jetadmin depends upon the device successfully answering the queries. Most of the following items will appear on the device Status page, Diagnostics page, and optionally as a column while viewing a list of devices, unless otherwise noted. Typical MIB objects queried to display each item will be discussed.

### **Bitmap and Icon**

Once a third party device is discovered and opened to reveal the Status page, HP Web Jetadmin will determine if it can display a matching bitmap and icon for the device. It will match the printer type that is returned from the device against any predefined bitmaps and icons that have been created in a plug-in. A plug-in written by the vendor should provide a perfect match, while an HP provided plug-in will provide at least a similar printer. Third party devices that do not have a plug-in will display the bitmap and icon for a generic HP LaserJet model printer.

### **Model**

The printer model name will appear according to the response to the hrDeviceDescr object in the Host Resources MIB.

### **Status**

Device status, indicating the current state of the printer (e.g. online, paper jam, etc.) will be displayed based upon responses to the hrDeviceStatus, hrPrinterStatus, and hrPrinterDetectedErrorState objects in the Host Resources MIB.

## Front Panel Display

The current message on the printer front panel will be displayed as long as the printer answers the Standard Printer MIB query for the prtConsoleDisplayBufferText object.

## Serial Number

The Serial Number is a unique manufacturing identifier for the printer. It is usually contained on the test page for the printer as well as stamped externally on the printer. The printer serial number can be extracted from the Standard Printer MIB prtGeneralSerialNumber object.

## Page Count

Page Count is a value stored on the printer that represents a cumulative total of pages printed for the life of the printer. This is the same value that is reported on the test or configuration page for the printer as the Engine Page Count. Page Count will be displayed if a printer supports the prtMarkerLifeCount object in the Standard Printer MIB. Additionally, for devices where a vendor has developed a plug-in, fax, copy, scan, and color page counts can be provided.

## IP Address

The device IP Address, and other IP related parameters, will be displayed as a result of various MIB-II objects.

## IP Hostname

IP Hostname, also known as System Name, will be displayed if the device answers the sysName MIB-II object. This name may or may not be registered with name servers such as WINS or DNS, depending upon the configuration.

## IPX Name

The IPX Name, and other IPX related parameters, will be displayed from responses to various MIB-2 objects.

## System Contact

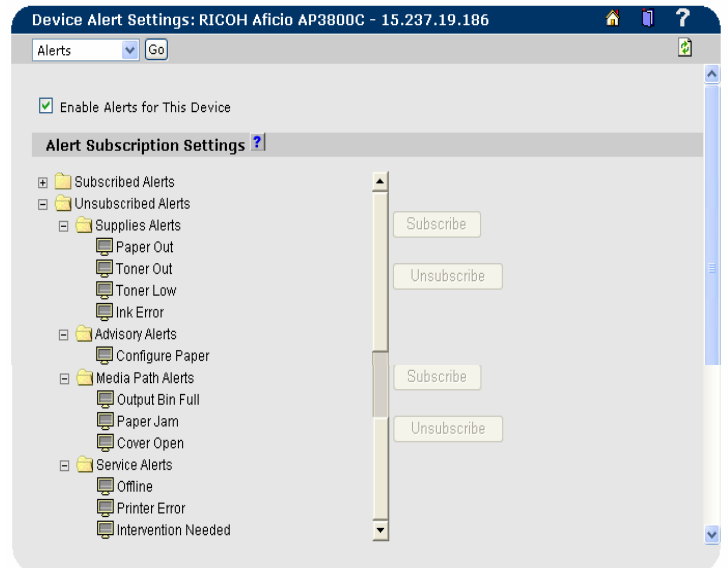
System contact will be displayed from the response to the susContact MIB II object stored on the Jetdirect device or NIC.

## Description

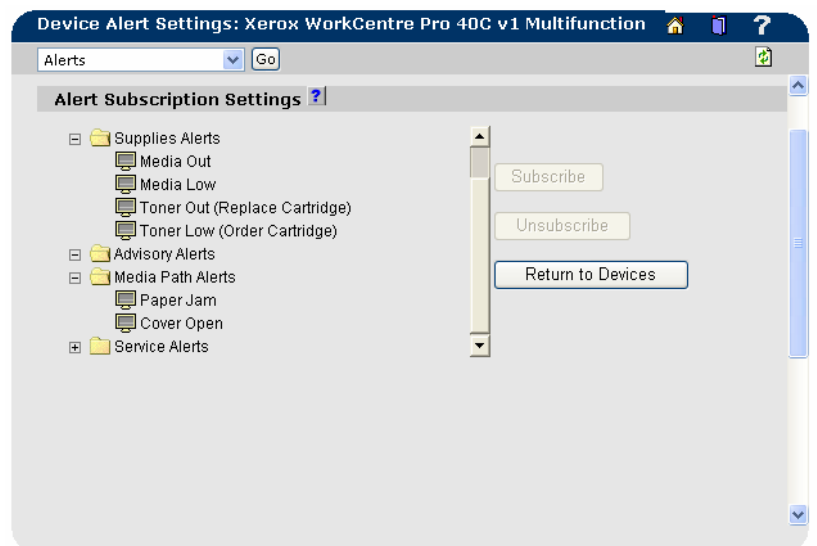
Description will be displayed via the sysLocation MIB II object stored on the Jetdirect device or NIC.

## Capabilities

Capabilities such as installed languages, trays, and



Alerts for a Ricoh Aficio AP3800C – vendor plug-in



Alerts for Xerox WorkCentre Pro – no vendor plug-in

accessories will be displayed on the Status page as supported by the device.

### **Remaining Toner Levels**

The approximate amount of toner or ink remaining in the cartridge cavity will be determined by calculating a percentage based upon the `prtMarkerSuppliesLevel` and `prtMarkerSuppliesMaxCapacity` Standard MIB objects.

### **Remaining Input Tray Levels**

The approximate amount of paper remaining in a particular tray can be displayed by calculating a percentage based upon responses to the Standard MIB objects `prtInputCurrentLevel` and `prtInputMaxCapacity`.

### **Alerts**

If a plug-in has been written by the vendor, the amount of alert events supported and the usage of traps or polling to generate the alerts will be determined by the vendor. Otherwise, polling will be used to provide alerts, supporting the following events:

- Toner Out
- Toner Low
- Paper Out
- Paper Low
- Cover Open
- Offline
- Paper Jam
- Printer Error

### **Configuration**

If a plug-in has been written by the vendor, the number of configuration items available will be provided by the vendor. Otherwise, the following items will be provided for configuration assuming the device supports the objects:

- Contact Info (`sysContact`)
- Description (`sysLocation`)
- Control Panel Language (`prtConsoleLocalization`)
- Orientation (`prtInterpreterDefaultOrientation`)
- System Name (`sysName`)
- Control Panel Access (`prtConsoleDisable`)

In addition, when third party printers are connected to the network via HP Jetdirect external devices, configuration of the Jetdirect device will also be possible.

### **Print Queue Creation**

Print queue creation is reserved for HP printers connected via HP Jetdirect devices.

### **Firmware Upgrades**

Printer and HP Jetdirect firmware upgrades are reserved for HP printers connected to the network via HP Jetdirect devices only.

## **Conclusion**

By supporting third party printers in HP Web Jetadmin, LAN administrators will now be able to discover and manage printers offered by all major printer vendors from a single software interface. This will undoubtedly save administrators time and effort since they will only have to learn a single

tool to provide printer management. As more and more third party vendors begin writing device plug-ins for HP Web Jetadmin through the Third Party Device Plug-in program, administrators will ultimately have the desired single tool to manage devices for all vendors in a consistent fashion.

© November 2006 Hewlett-Packard Development Company, L.P. The information contained in this document is subject to change without notice. HP makes no warranty of any kind with respect to this information. HP specifically disclaims the implied warranty of merchantability and fitness for a particular purpose. HP shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in conjunction with the furnishing or use of this information. Microsoft, Windows, and Windows NT/2000/XP are registered trademarks of Microsoft Corporation in the USA, and other countries. All other brand and product names are trademarks or registered trademarks of their respective companies.

## Appendix A

Models	Alerts	Configurations
<b>Canon</b>		
canon_ir2270	Printer Error	<i>*Device Section*</i>
canon_ir2870	Intervention Needed	Location
canon_ir3570	Cover Open	Contact
canon_ir4570	Output Bin Full	<i>*Network Section*</i>
canon_ir5570	Paper Jam	System Name:
canon_ir5570_m3	Paper Out	Obtain TCP/IP Configuration Via
canon_ir6570	Toner Low	IP Address
canon_ir6570_m3	Toner Out	Subnet Mask
canon_ir8070		Gateway
canon_ir8070_m3		Primary DNS Server
canon_ir9070		Secondary DNS Server
canon_ir9070_m3		DNS Dynamic Update
canon_ir85plus_m3		Host Name
canon_ir85plus_m3		Domain Name
canon_ir105plus		WINS Scope ID
canon_ir105plus_m3		WINS Server Address
canon_ir8500_m2		Server Message Block (SMB)
canon_ir85_m2		SMB Printer Name
canon_ir_c5800		SMB Workgroup Name
canon_ir_c5800_d1		SMB Server Name
canon_ir_c6800		LM Announce
canon_ir_c6800_d1		HTTP Status
canon_ir_c3100		LPD Status
canon_ir_c3100_e1		LPD Banner Status
canon_ir_c3220		RAW Status
canon_ir_c3220_C1		IPP Status
canon_ir_c3200		IPX Frame Type
canon_ir_c3200_c1		Print Application
canon_ir105		Print Server Name
canon_ir105_m2		Options For Bindery PServer And RPrinter Applications
canon_ir7200		NetWare Server
canon_ir7200_m2		Options For NDS PServer And NPrinter Applications
canon_ir_c3170		NDS Tree
canon_ir_c2620		Context Name
canon_ir_c2620_c1		Apple Talk Phase Type
		Name
		Zone

Models	Alerts	Configurations
<b>Epson</b>		
AL-C1100		
AL-C2600		
AL-C3000		
AL-C9100		
AL-CX11		
AL-C4200		

Models	Alerts	Configurations
<b>Panasonic</b>		
DP-C322	Media Out	<b>DEVICE</b>
DP-C262	Toner Out	Description
	Toner Low	System Contact
	Output Binfull	<b>Network</b>
	Paper Jam	System Name
	Cover Open	
	Stapler Error	
	Printer Error	
	Intervention Needed	

Models	Alerts	Configurations
<b>Okidata</b>		
oki_data_corp_b6200	Printer Error	<b>*Device Section*</b>
oki_data_corp_b6300	Cover Open	Asset Number
c9600	Offline	Description
c5200n	Output Bin Full	System Contact
c5400n	Paper Jam	Control Panel Language
c7350	Paper Out	Manual Feed
c5900	Toner Low	Default Printer Copies
c6100	Toner Out	Paper Jam Recovery
	Manual Feed	Toner Low Action
	Configure Paper	Powersave Operation
	Out of Memory	Power Save Timeout
	Intervention Needed	Orientation
		<b>*Network Section*</b>
		Job Timeout
		IP Address
		Subnet Mask
		Gateway
		IPX/SPX Name
		TCP Idle Timeout

Models	Alerts	Configurations	
<b>Konica / Minolta</b>			
		<b>*Network Section*</b>	
konica_minolta_7145	Cover Open	TCP Host Port Number	Enable LMLS
konica_minolta_7222	Offline	Enable WINS	LMLS Printer Name
konica_minolta_7228	Paper Jam	WINS Primary Server	IP Address
konica_minolta_7235	Media Out	WINS Secondary Server	Subnet Mask
konica_minolta_7272	Toner Low	IPX/SPX Protocol	Default Gateway
konica_minolta_magicolor_2350	Toner Out	PServer Name-Bind	Using Boot Protocol
konica_minolta_magicolor_7300	Printer Error	Ethernet Frame Type	Boot Protocol Enabled
pagepro_9100	Stapler Error	Job Check Delay	DNS Host Name
magicolor_3100	OutputBin Full	Config Check Delay	DNS Domain
magicolor_3300		Pserver Context	DNS Server Address
minolta_qms_magicolor_2350		IPX/SPX Name	Enable IPX/SPX Protocol
minolta_qms_magicolor_7300		FServer Bindary1	Ethernet Frame Type
konica_minolta_c350		FServer Bindary2	Netware Pserver Table
c350(ic_401_controller)		FServer Bindary3	Enable Ethertalk Protocol
konica_minolta_magicolor_5440_dl		FServer Bindary4	EtherTalk Zone Name
konica_minolta_bizhub_c450		FServer Bindary5	EtherTalk Printer Table
konica_minolta_magicolor_5450		FServer Bindary6	Enable SMB
konica_minoltamagicolor_2450		FServer Bindary7	WorkGroup Name
konica_minolta_c500		FServer Bindary8	HostName
konica_minolta_magicolor_7440		FServer Bindary9	SMB Printer Table
konica_minolta_350		FServer Bindary10	Enable LPD
konica_minolta_bizhub_500		FServer Bindary11	LPD Port Number
konica_minolta_bizhub_750		FServer Bindary12	LPD Queue Table
konica_minolta_bizhub_c250		FServer Bindary13	Enable FTP Server
konica_minolta_bizhub_420		FServer Bindary14	FTP Server Port Number
konica_minolta_200		FServer Bindary15	Enable HTTP
konica_minolta_250		FServer Bindary16	HTTP Port Number
konica_minolta_bizhub_600		NPrinter1	HTTP Description
konica_minolta_magicolor_5450		NPrinter2	Enable SMTP
konica_minolta_bizhub_c300		NPrinter3	SMTP Port Number
konica_minolta_bizhub_c352		NPrinter4	SMTP Server Address
konica_minoltamagicolor_2550		NPrinter5	Enable IPP
		NPrinter6	IPP Port Number
		NPrinter7	Enable SLP
		NPrinter8	SLP Port Number
		EtherTalk Protocol	MTU
		EtherTalk Zone Name	TTL
		Enable LaserWriter	Broadcast Support
		Enable Minolta-QMS Remote Console	SLP Table
		Enable HP Zoner	System Name
		EtherTalk Connection Type	Restore Network setting to Factory Default
		<b>*Security Section*</b>	<b>*Device Section*</b>
		Control Panel Access	System Name
		NMS 1 Address	Description
		NMS 1 Community	Control Panel Language
		NMS 1 Access	Default Printer Copies
		NMS 2 Address	Duplex
		NMS 2 Community	Auto Continue
		NMS 2 Access	PS Error Print
		NMS 3 Address	Default Printer Copies
		NMS 3 Community	Default Paper Size
		NMS 3 Access	Collation
		NMS 4 Address	Default Input Bin
		NMS 4Community	Power save Timeout
		NMS 4 Access	Device Reset
		NMS 5 Address	Configuration Page
		NMS 5 Community	Statistics Page
		NMS 5 Access	PS Font List
		Set Community Name	PCL Font List
		Repeat Set Community Name	Directory Listing
			Menu Map
			Demo Page
			Registration Page

Models	Alerts	Configurations
<b>Toshiba</b>		
	The devices don't support to send email messages but they do support different status errors	<b>Device</b>
toshiba_e_studio200l		
toshiba_e_studio230		System Contact
toshiba_e_studio280		Description
toshiba_e_studio350		<b>Network</b>
toshiba_e_studio3511		Time Zone Settings
toshiba_e_studio450		Power Save Timeout
toshiba_e_studio4511		Auto Shut-Off Time
toshiba_e_studio451c		Auto Clear
toshiba_e_studio351c		Maximum Copies
toshiba_e_studio281c		Auto 2-Sided Mode
toshiba_e_studio520		Date Format
toshiba_e_studio600		Sort Mode Priority
toshiba_e_studio720		
toshiba_e_studio850		
toshibe_e_studio282		
toshibe_e_studio452		
toshiba_e_studio352		
toshiba_e_studio202l		
toshiba_e_studio232		



Models	Alerts	Configurations
<b>Xerox</b>		
	The plug-ins don't support email messages but the plug-ins are available to detect a big list of status errors	<b>Device</b>
xerox_workcentre_m35		
xerox_workcentre_m45		Description
xerox_workcentre_m55		System Contact
xerox_workcentre_232		
xerox_workcentre_238		
xerox_workcentre_245		
xerox_workcentre_255		
xerox_workcentre_265		
xerox_workcentre_275		
xerox_workcentre_m20i		
xerox_workcentre_m20		
xerox_workcentre_pro_35		
xerox_workcentre_pro_45		<b>Network</b>
xerox_workcentre_pro_55		System Name
xerox_workcentre_pro_123		
xerox_workcentre_pro_128		
xerox_workcentre_pro_232		
xerox_workcentre_pro_238		
xerox_workcentre_pro_245		
xerox_workcentre_pro_255		
xerox_workcentre_pro_265		
xerox_workcentre_pro_275		
xerox_workcentre_pro_c2636		
xerox_workcentre_pro_c2128		
xerox_workcentre_pro_c3545		

Models	Alerts	Configurations
<b>Muratec</b>		
muratec_mfx_2030		<b>*Device Section*</b>
		Description
		System Contact
		<b>*Network Section*</b>
		IP Address
		Subnet Mask
		Gateway

Models						Alerts	Configuration
Ricoh, Lanier, Savin, Gestetner, Infotec, NRG							
Ricoh	Lanier	Savin	Gestetner	Infotec	NRG	Online / Offline	*Device Section*
aficio 1022	5622	2522	2212			Printer Error	Description
aficio 1027	5627	2527	2712			Intervention Needed	System Contact
aficio 1032	5632			is2032	3205	Toner Low	Enable Alerts By Traps
					3238	Toner Out	Device General Reset
					3212	Toner / Ink Error	<b>*Network Section*</b>
aficio 1035	5635	2535	3502			Cover Open	IP Address
		2235				Paper Out	IPX/SPX Name
aficio 1045	5645	2545	4502			Configure Paper	<b>*Security Section*</b>
		2245				Output Bin Full	Control Panel Access
aficio 1060	ld060	2560	6002	is 2060	6002	Paper Jam	Set Community Name
aficio 1075	ld075	2575	7502	is 2075	7502		Repeat Set Community Name
aficio 1224c	ld024c	c2524	dsc224	isc824	dsc224		Subnet Mask
		c2408	dsc524		dsc524		Gateway
aficio 1232c	ld032c	c2532	dsc232	isc1032	dsc232		
		c3210	dsc532		dsc532		
ricoh_aficio_2015	ld115	4015	dsm615	is2015	dsm615		
ricoh_aficio_2018	ld118	4018	dsm618	is2018	dsm618		
ricoh_aficio_2018d	ld118d	4018d	dsm618d	is2018d	dsm618d		
aficio_2022	ld122	4022	dsm622	is2122	dsm622		
aficio_2027	ld127	4027	dsm627	is2127	dsm627		
aficio_2032	ld132			is2132	dsm632		
aficio_2035	ld035	4035	3532	is2035	3545		
		4135g	4235g		3518		
					3532		
aficio_2045	ld045	4045	4532	is2045	4545		
		4145g	4245g		4518		
					4532		
ricoh_aficio_2035e	ld135	4035e	dsm635	is2135	dsm635		
		4135eg	645g				
ricoh_aficio_2045e	ld145	4045e	dsm645	is2145	dsm645		
		145eg	645g				
ricoh_aficio_2232c	ld232c	c3224	dsc332	is2432	dsc332		
ricoh_aficio_2238c	ld238c	c3828	dsc338	isc2838	dsc338		
ricoh_aficio_2228c	ld228c	c2820	dsc328	is2028	dsc328		
aficio ap3800c	2138	slp38c	dsc38	ip280	dsc38		
ricoh_aficio_ap400	lp025	mlp25	p7325		p7325		
	lp026						
ricoh_aficio_ap400n	lp025n	mlp25n	p7325n		p7325n		
	lp026n						
ricoh_aficio_ap600n	lp032	mlp32	p7132n		p7132n		
ricoh_aficio_cl1000n	lp031c	clp831	p7431cn		p7431cn		
ricoh_aficio_cl2000	lp116c	clp17	c7416		c7416		
ricoh_aficio_cl3000e	lp122c	clp18	c7417		c7417		
ricoh_aficio_cl3100	lp121c						
aficio cl3000	lp 020c	clp1620	c7116		c7116		
aficio cl7000	lp138c	clp28	dsc38u	ipc2838	dsc38u		
ricoh_aficio_cl7100	lp235c	clp35	c7435n	ipc3535	c7435n		
ricoh_aficio_2051	ld151	4060	dsm651	is_2151	dsm651		
ricoh_aficio_2060	ld160	4051	dsm660	is_2160	dsm660		
ricoh_aficio_2075	ld175	4075	dsm675	is_2175	dsm675		