

Xerox eConcierge® Supplies Assistant

Technical Information



Xerox eConcierge®

Your printer supplies assistant.

The Xerox eConcierge Supplies Assistant is a desktop application that alerts you when supplies are low and provides a secure online environment for ordering supplies.

How the the Xerox eConcierge Service works.

The Supplies Assistant is a desktop application installed on one or more networked PCs. Using industry standard SNMP protocol it identifies and monitors the printing devices—Xerox® and those from other manufacturers—on your network. Printer status can be checked at any time from any location. When supply levels are nearing empty, the application automatically alerts office support personnel with an email notification. The application provides a secure link to purchase printer supplies from your Xerox eConcierge provider. Orders are then filled and shipped from distribution warehouses.

Supplies Assistant desktop application.

The desktop application performs two key functions: one polls networked printing devices through SNMP and HTTP protocols to monitor supply levels and status; the second provides a password protected user interface for you to view the supplies status of all of your selected network printers. When it's time to place an order, simply login to your Xerox eConcierge provider's online store. Your order is protected by industry standard secure data transfer and encryption.

Network Security

The Supplies Assistant desktop application uses SNMP communications protocol to discover and identify printing devices on the network. Upon discovery, SNMP and HTTP are used to monitor supply levels and status with read-only access.

Data Security

Basic information about your printers, such as IP addresses, model numbers, supply levels and billing information* is exchanged between the external secure Xerox server and the desktop application through a secure 128-bit encrypted, HTTPS, Secure Sockets Layer (SSL) connection.

*Billing information for Xerox® printers

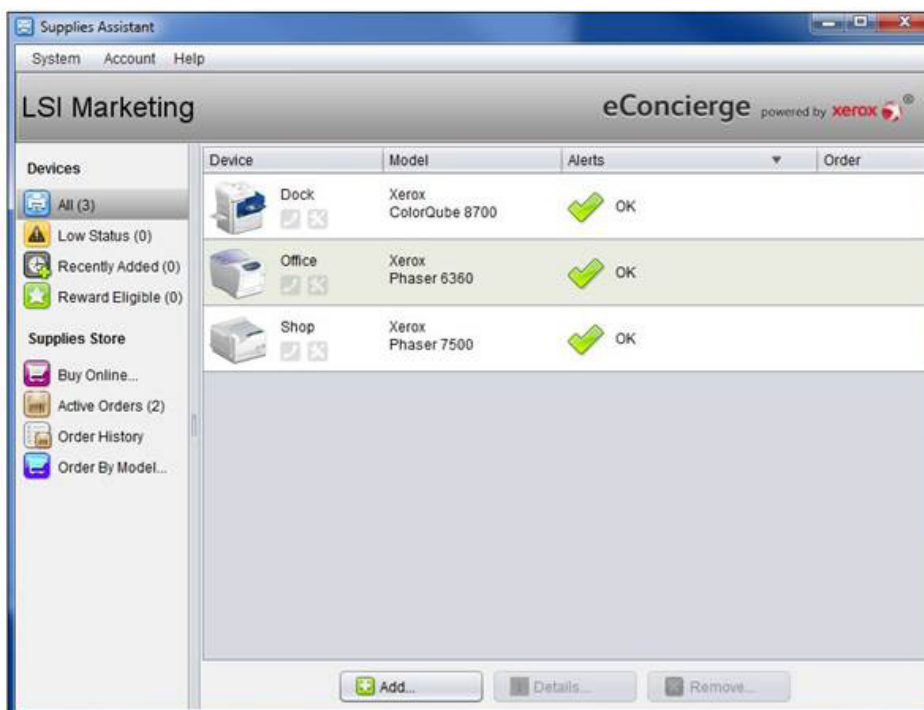
Powered by Xerox

The service is hosted and managed by Xerox. The Supplies Assistant desktop application is customized for your Xerox Provider, who supplies valuable local resources and service.

System Requirements

The Supplies Assistant is installed on a network computer with access to the printers chosen for the service. This is typically the PC of the person assigned to monitor and order printer supplies, but it can be installed on multiple computers. The computer(s) must be turned on during normal business hours to facilitate printer status updates, but the user is not required to be logged in to the Supplies Assistant application to receive status alerts.

The desktop application may also be installed on a network server equipped with a keyboard, mouse, and display. You can review the status of all of your printers online at any time from any location.



Printer listing and status

Minimum Computer Specifications

- Microsoft Windows 7 (Home or Professional), Windows 8 or greater (all versions except RT), Mac OS 10.8 or greater
- Network Transmission Control Protocol (TCP/IP) active
- User Datagram Protocol (UDP) active
- Browser: Internet Explorer 9 and 10 on Windows 7; Internet Explorer 10 on Windows 8; Internet Explorer 11 on Windows 8.1; Safari 6.1 on Mac OS 10.8; Safari 7 on Mac OS 10.9; Firefox 26 or Chrome 32 on Windows 7 or greater and on Mac OS 10.8 or greater
- 120MB RAM (70MB application, 50MB for monitoring service)

Proxy Server Access

The Supplies Assistant connects to the service through the Internet. Offices utilizing a proxy server for Internet access need to provide the proxy server's IP address and Port number during setup of the Supplies Assistant desktop application.

Printer Requirements

The Xerox eConcierge service supports a range of printer brands including Xerox, Brother, HP, Lexmark and Samsung. Printers must be SNMP-based devices, located on the network, with support for the following MIBs:

- RFC 1514/2790 (Host resources MIB v1/v2)
- RFC 3508 (Printer MIB v1)
- Private Manufacturer MIB for select devices

Printers connected via USB are not accessible. Printers under a Managed Print Service are not eligible.

Ports and Protocols Used by the Supplies Assistant

Printer Discovery and Supplies Status	Protocol	Printer Port	Data Direction
Laser Printers	SNMP v1, v2	161	Outgoing
Solid Ink Printers	SNMP v1, v2 HTTP/HTTPS*	161 80/443	Outgoing

*Xerox® Phaser® 8500 Color Printer, Xerox® Phaser® 8550 Color Printer, Xerox® Phaser® 8560 Color Printer, Xerox® Phaser® 8860 Color Printer only

Add Printers Automatically

The Supplies Assistant relies on a standard TCP/IP network port to monitor printers. The printer discovery function of the desktop application performs an IP address sweep to identify eligible printers on a customer's network.

The discovery process runs with minimal network impact, exploring the same subnet that the host computer is connected to. The discovery process is complete when:

- All of the printers on the network have been located
- The discovery time limit is reached
- User ends the discovery process

During the IP address sweep, a single packet is sent to every IP address on the subnet. Any device that responds is "discovered" as a live IP address. The client application then queries the live IP addresses to identify SNMP-enabled printing and non-printing devices. Basic information such as make, model, serial number, consumable status, etc., is added to the client interface as it is discovered. You can then edit the list of available printers.

Once selected, the printers will be queried periodically (default is every five minutes) for updates on printer status and consumable levels. This information is transferred to the service where it is used to update the client application. The data transfer occurs once daily or when a printer's consumable reaches a reorder point. When a new printer is added to the network you can add it to the client application by entering its IP address, DNS Name or re-running printer discovery.

Add Printers Manually

You can stop the automatic printer discovery process at any time. For example, when all of the required printers have been found. Alternatively, you can bypass the printer discovery process and add specific printers to the client application by entering network IP addresses or DNS Names into the application. This alternate method is useful if the printer discovery process fails to discover any required printer.

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Network Impact of Printer Discovery

Although network administrators will see a steady stream of packets on their network during the printer discovery process, the network impact is no more than 7KB per printer. Likewise, router usage logs will record multiple entries, but the impact is minor.

The network impact of printer discovery for a customer with ten networked printers can be calculated as follows:

$$10 \text{ (printers)} \times 978 \text{ (bytes/printer)} = 9.5\text{KB}$$

Network Impact of Updating Printer Status

The client application monitors the designated network printers once every five minutes to update their status and supply levels. After an initial poll "handshake", the application and the printer exchange a short series of queries and responses until the data for each device is complete.

The network impact of polling and gathering historical data once every five minutes for a fleet of ten printers, over a one month period, can be calculated as follows:

Consumable Data Gathering

$$10 \text{ (printers)} \times 144 \text{ (polls per day)} \times 30 \text{ (days)} \\ \times 36,611 \text{ (bytes/printer)} = 1.5\text{GB/month}$$

Note: It takes approximately 5 minutes to poll 10 printers. The interval between polling queries is 5 minutes.

Historical Print Data Gathering

$$10 \text{ (printers)} \times 30 \text{ (days)} \\ \times 36,611 \text{ (bytes/printer)} = 10.7\text{MB/month}$$

Note: Historical print data are only gathered for Xerox® printers.

Total Network Impact

Using the previous examples, the total monthly network impact of the Supplies Assistant desktop application is:

$$9.5\text{KB (discovery)} + 1.5\text{GB (status poll)} \\ + 10.7\text{MB (historical data)} = 1.51\text{GB/month}$$

Internet Bandwidth Impact

The Supplies Assistant desktop application communicates securely with the Xerox service over the Internet using encrypted data. It uploads shipping and billing, and user account information. It downloads information on printers, orders, and shipments. The exact impact of this data transfer is dependent on the number of printers managed, but it's on the same order as a web service such as Gmail or Yahoo mail.

The Supplies Assistant also passively communicates with the service to update printer consumable status and retrieve Alerts and current printer status information. The impact of the total daily passive communications for a fleet of ten printers can be calculated as follows:

Passive Download

$$10 \text{ (printers)} \times 1 \text{ (times/day)} \\ \times 300 \text{ (bytes/printer)} = 2.9\text{KB}$$

Passive Upload

$$10 \text{ (printers)} \times 1 \text{ (times/day)} \\ \times 1700 \text{ (bytes/printer)} = 16.6\text{KB}$$

Total passive Internet throughput = 19.5KB/day

Minimal Network Impact

The service offers robust security for online ordering with minimal impact to your network while supporting a variety of printer manufacturers. It's a cost effective solution office managers can rely on to improve business operations and reduce costs.

For more information on the award-winning line of Xerox products and solutions contact your Xerox Provider.

