

Dell™ OpenManage™
Printer Manager v1.2

Quick Reference Guide

Notes, Notices, and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your computer.



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

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Quick Start

Introducing Dell™ OpenManage™ Printer Manager

We created this *Quick Reference Guide* to get you started as quickly and productively as possible. After a review of the hardware and software requirements needed for your installation in "System Basics", you can move on to Installation and Startup. To start the first use of the software, consult Discovering Printers. Finally, you can begin managing your printers as described in Managing Printers.

One powerful feature of this software is its reporting capability. These are described in Reports. To get the full benefit of this software's reporting, you must sometimes set it up. For example, you must poll printers (query them electronically for their status) and set thresholds. See Trend Reporting for a short description of this topic. Key features available in this software are the following:

- Real time monitoring of Alarms that impact your network. (See Alarm Panels.)
- Notification of events that a printer's toner is low. (See Alarm Manager.)
- A Printer inventory and overall condition available at a glance. (See Managing Printers.)
- Configurable Detail Panels that tell you about selected devices.
- Reports you can configure, print and archive about your printers. See *Reports*, in the *User Guide*.

For more detailed descriptions of all this software's features, consult its other manuals or online help.



NOTE: If you want to find something but are unsure about which manual contains it, you can search all the Acrobat files in a single directory. For example, in Acrobat v.8, Shift+Ctrl+F opens this directory-wide, multi-document search.

Upgrading from Version 1.0 to 1.2

Expect the following if you are upgrading your software from a previous version:

- Alarms in the existing version are deleted. Best practice is to upgrade when the number of existing open alarms is zero or low. Otherwise you can print or archive as XML the remaining open alarms before the upgrade.
- Upgrading deletes Events in the older version. Most users have no reason to retain existing open events. If you want to retain this information, then print and/or archive this information from v1.0.
- The newer version replaced Event Template Manager with an Event Definition Manager. No changes made previously to event templates are incorporated in the upgrade. You must re-make any user-defined changes in the Event Definition Manager.
- After the upgrade, Group-operations that previously used *All Devices* group use the group named *Temporary Group of '0' managed object(s)*. You must manually reinstate *All Devices* in these operations.

- After the upgrade, the new *Default ICMP Heartbeat Policy* has no printers associated with it. You must add the printers that should be included in this heartbeat policy.
- Upgrading leaves the Windows Start→ Programs menu item for the Java Client with both *OpenManage Printer Manager* and *OpenManage™ Printer Manager* menu items. After a successful upgrade, you can delete one by right-clicking it and selecting *Delete*.
- Commands in the Command Manager are not upgraded. You must add any previous commands back into the Command Manager.
- After an upgrade, all the Report Definitions are duplicated except for the *Consumables Ordering Report*. You can execute both the v1.0 report definitions and the new v1.1 report definitions in the OMPM 1.1 system. The new report definition names appear with a 1.1 version number.
- *Create Alarm* actions in the Actions Manager are no longer relevant and are deleted when you upgrade. Alarms are automatically created in OMPMv1.1. Actions that remain after upgrade are:
 - Initiate Printer Polling
 - Stop Printer Polling
 - Initiate Data Collection
 - Stop Data Collection
 - Register with Heartbeat Policy
- All Notifications change their identifier to an SNMP OID identifier. Any user changes to the Notification Mappings are not retained. You must add any previously-made changes to Notification Mappings after the upgrade.

System Basics

System requirements vary depending how you use the application and the operational environment. Because we do not know your specific network and devices, the following numbers are suggested, not definitive figures.

Supported Operating System Versions

The following are supported operating system versions:

- Microsoft® Windows® 2000 (Pro, Server, and Advanced Server)
- Microsoft Windows Server 2003
- Microsoft Windows XP (Professional) with current patches applied, including SP2.
- Microsoft Windows Vista® SP1
- Linux — OpenManage™ Printer Manager supports Redhat (Enterprise version 4) and Novell Suse® (version 10) Linux.



NOTE: For Linux, you must install no more than a single instance of MySQL—the one installed with this software. Before you install, remove any MySQL if it exists on your Linux machine.

Hardware Recommendations

OpenManagement™ Printer Manager contains an Application Server that runs continuously in the background, and a Client (the user interface). You can start and stop the client portion of the software without impacting the application server (although monitoring of devices stops when you stop the application server or turn off its host machine). The client can also be on a different machine than the application server. Hardware recommendations are based on the different types of installation available:

- Full Installation (Application server + Client) — Pentium 4, 3.2 GHz, 2GB RAM, and 20GB available disk space
- Client only — Pentium 4, 2.8 GHz, 1GB RAM (512 MB minimum, 1GB for optimum performance), and 1G available disk space.



NOTE: A browser-based client is also available. See *Web Client* for more information about using web access to this software.



NOTE: If your application server and client are on different machines, ensure they have the same time settings.

Basic Network Considerations

OpenManagement Printer Manager communicates over a network. The machine must be connected to a network for application server to start successfully. Firewalls, or even SNMP management programs using the same port on the same machine where this software is installed can interfere communication with your equipment.

Your network may have barriers to communication with this software. Dealing with barriers, security measures or firewalls are outside the scope of these instructions. Consult with your network administrator to ensure this software has access to the devices you want to manage with the Protocols described below.



NOTE: One simple way to check connectivity from a Windows machine to a device is to open a command shell with **Start**→ **Run** cmd. Then, type `ping [device IP address]` at the command line. If the device responds, it is connected to the network. If not, consult your network administrator to correct this. No useful information comes from disconnected or powered-down devices.

See *Troubleshooting* in this guide or see *Troubleshooting* in the *User Guide* for additional information about how to troubleshoot this software.



NOTE: You can click on the blue cross-references to go to the destination in Acrobat®, however for such electronic cross-references to the User Guide to work, this document and the User Guide must be in the same directory. Cross-document links do not work between documents for different versions of this software, but may provide an approximate location to consult.

Authentication

For successful discovery of the resources on your network, this software requires authenticated management access to the device. To get this access, you must provide the SNMP community strings, and any other command-line (Telnet/SSH) or browser (HTTP/HTTPS) authentication. Consult your network administrator for this information.

Name Resolution

OpenManage Printer Manager requires resolution of equipment names to work completely, whether by host files or domain name system (DNS). The application server cannot respond to clients with IP addresses alone. The application server might not even be in the same network and therefore the client would be unable to connect.

If your network does not have DNS, you can also assign hostnames in `%windir%\system32\drivers\etc\hosts` on Windows (`/etc/hosts` in Linux). Here, you must assign a hostname in addition to an IP address somewhere in the system. Here are some example hosts file contents (including two commented lines where you would have to remove the `#` sign to make them effective):

```
#      102.54.94.97      rhino.acme.com      # source server
#      38.25.63.10      x.acme.com          # x client host
127.0.0.1      localhost
```



NOTICE: This software supports installation only on the local file system. Avoid installing to shared drives.

Protocols

OpenManage Printer Manager uses the following protocols: TCP/IP, SNMP, HTTP/S, UDP Multicast.

Fixed IP Address

OpenManage Printer Manager is a web server and must be installed to a host with a fixed IP address or a permanently assigned Dynamic Host Control Protocol (DHCP) lease. For trial purposes, you can rely on a dynamic IP address assignment with a long lease, but this is not recommended for production installations.

If you do change your host's IP address:

To accommodate a changed IP address, first delete the contents of `\oware\temp`. Change your local IP address anywhere it appears in `\owareapps\installprops\lib\installed.properties`. Then restart your machine.

Alternatively, in a shell, after running `oware` to set the environment, you can run `ipaddresschange -n` followed by the new IP address to which you want to change.

Updating Your License

If you have a limited license then your application does not function outside those licensed limits. If you purchase additional licenses, put the updated license file in a convenient directory, then use the **Settings**→**Permissions**→**Register License** menu item to open a file browser. Locate the license file, and click the **Register License** button. Your updated license should be visible in **Settings**→**Permissions**→**View Licenses**.

Supported and Unsupported Printers

Printers supported in this version include the following new models:

- 3130cn
- 2130cn
- 2330dn - read only
- 2335dn - read only
- 5330dn - read only

The following Dell printer models and adaptor are not supported by this software:

- Dell AIO Ink printers
- Dell Photo printers
- Dell Laser Printer 1110 and others without the “n” suffix
- Dell Wireless Printer Adapter 3300

The Application Interface

A typical view of this software appears in Figure 1-1. The navigation panel to the left provides quick access to common functions (discovery, reports, and so on), which can also be accessed through the menus. When visible the left panel remains on screen while the main panel changes to reflect the currently selected function.

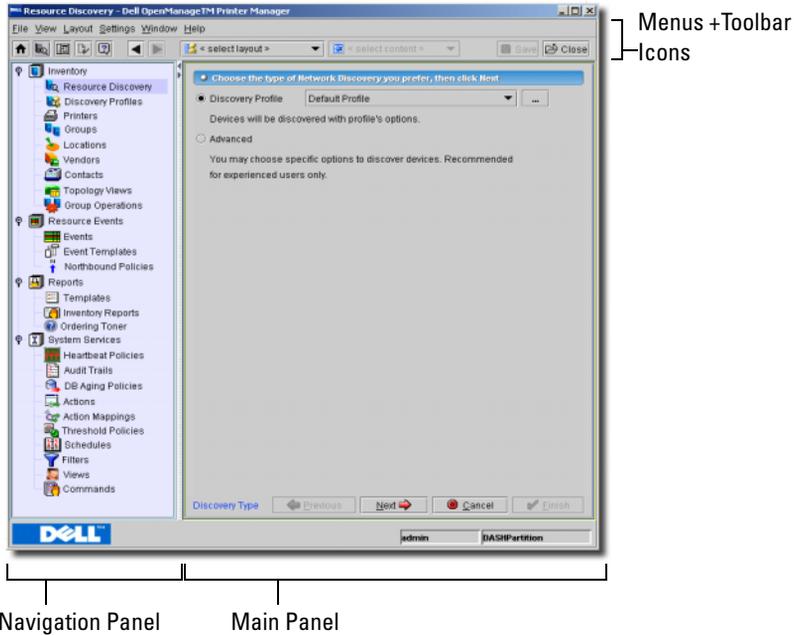


Figure 1-1. Discovery

Managing Multiple Screens

The content of the Main Panel is referred to as a window. Just as you can open several documents in your word processor, you can open several windows in this application. To see the list of windows you have open, click the Window menu.

 **NOTE:** In the default setting, you can see only one active window at a time. You cannot tile or minimize these windows unless you select **Multiple Document Interface (MDI) View** from the **View→ Launcher** menu

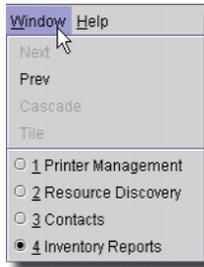


Figure 1-2. Window Menu

If you right-click a device, for example, and select **Open**, the editor screen that appears does not close the screen where you selected the device. Both remain open. You can navigate between screens by selecting them in the Window menu, or with the browser buttons



Figure 1-3. Browser Buttons and Select Layout / Select Content

The right and left arrows just left of the **Select Layout** pick list navigate backward and forward through the open screens. To close a screen layout, click the **Close** button to the right of the browser buttons and layout selectors.

NOTE: If you open more than 20 windows, the **Too Many Windows** error message appears. The *User Guide* contains instructions about modifying that number. More screens may slow performance.

Screen Layouts

When you select **Printers** in the **Navigation Panel** the default view appears, like Figure 1-4.

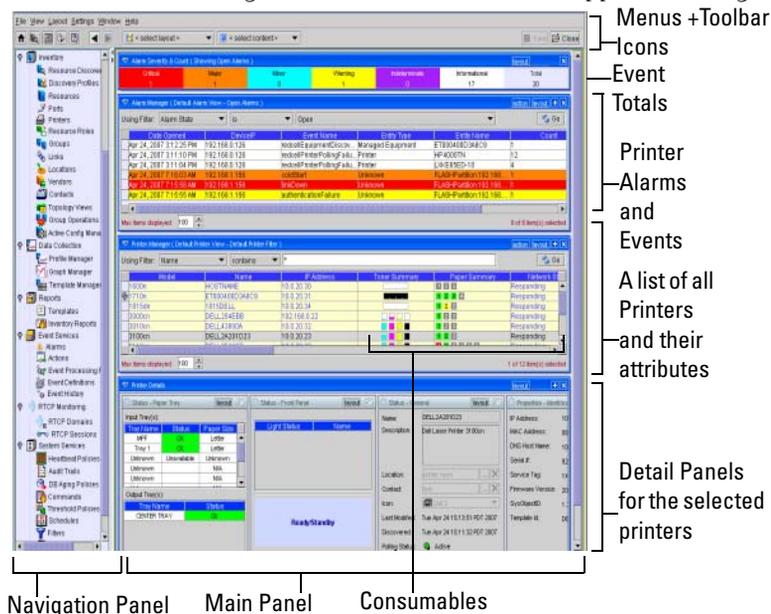


Figure 1-4. Default View

These screens can display multiple sub panels with details about your equipment. For details about changing and managing layouts, see *Managing Layouts*.

Getting Started

The following section outlines the steps in a typical installation and subsequent first use. Because the software described here is both flexible and powerful, this section does not exhaustively describe all the details of available installations. Instead, this *Quick Reference Guide* refers to those descriptions elsewhere in the *User Guide*. A typical installation will go through the following (in order):

Installation and Startup

Discovering Printers — After you first install the application, you must discover the equipment you want to manage.

Alarm Panels — See Alarm Panels for a discussion of alarms and events managed by the application.

Reports — See Reports for a description of the reports this software can generate.

You can also set up users, device access passwords, and groups for both users and devices, as you begin to use it. For example, use **Group Operations** to act or schedule operations on multiple devices. Consult the *User Guide* for details about administration and the many additional discovery, management, and reporting options available with this software beyond those discussed in this *Quick Reference Guide*.

Installation and Startup

To install and start your OpenManage Printer Manager software, follow these steps:

- 1 Close any applications that might interfere with this installation.
- 2 To install this software, log in as an administrator (for Windows install, the user cannot be "admin". For Linux install, the user can neither be "admin" nor "root") and run either **linux_install** or **win_install.exe**. Click **Next**.

Linux users should *not* install the software as root user. The installing user must have a home directory, and must have permissions to write both there and in the installation's target directory. At one point in the Linux installation, it stops and asks the installing user to run a script in a separate shell as root user. Other than these differences, to install on both Windows and Linux, you must follow these steps. After initiating installation, click **Next**.



NOTE: You must install as a non-root user with the permission to create directories in the selected installation target path. Installing to a directory that requires root level access fails.

- 3 Confirm your hardware meets the displayed Minimum System Requirements. Click **Next**.
- 4 Accept the license agreement after reading it, otherwise, installation cannot proceed. Click **Next**.
- 5 Confirm or alter the installation path. Click **Next**.
- 6 Select either **Full installation** or **Client installation**. (You must install the Full installation on at least one machine before Client will work on any others.) Click **Next**.
- 7 View the final confirmation of components to install. Click **Next**.

Observe the progress bar as files are copied for installation.

- 8 The database configuration typically defaults to 2G with unlimited expansion. Some installations display this default and let you modify it in a database installation screen that appears during this process. If you do not want the default, you can consult the other application manuals for database sizing suggestions, but the default size should be an acceptable starting place for most installations. Click **Next** to continue with the installation.

 **NOTE:** Regardless of the initial database size, post-installation configuration of Database Aging Policies (DAP) and monitoring retention policies can have a significant impact on how fast it reaches its capacity. The default DAP for alarms, for example, never cleans open alarms from the database. Similarly, defaults for archiving event history may not suit your environment. Consult the *User Guide* or online help for details about tuning these policies.

- 9 If you are installing on Linux, you must run a setup script in a separate shell, when logged in as root user. Installation prompts you to run a generated script after the installation phase finishes. This script records information in case you need technical assistance and installs some files as root. Open a new shell, log in as root, and run the script requested by the installer
(It should be `$OWARE_USER_ROOT/install/root/setup.sh`).

- 10 Click **Finish**.

- 11  In a Windows installation, notice the Server Monitor icon in the system tray. When the icon turns green, you can start your application client. This icon indicates the application server status. Green is running, red is stopped, yellow is starting or stopping. Application server monitors your devices even when the client is not visible, or you are not logged into your machine. Best practice is to install application server to a host you do not turn off if you want constant monitoring of your devices.

 **NOTE:** Since Linux does not have a system tray, reboot the system and wait 10 min for the application server to start, before starting the client.

 **NOTE:** This software is a Java application. Virtual memory use increases when you install it. This is normal. If you monitor memory use over time it may appear that it is growing. This is a normal function of Java's memory management. When the memory usage reaches a certain level the software removes excess usage.

Starting the Client

After you verify that the application server indicator is green, use the **Start** button (or its Linux equivalent) to find **OpenManage Printer Manager** among your programs. Click that icon to start the client. In Linux, first set the environment in a shell with `..dsienv`, then type `redcell` at a command line

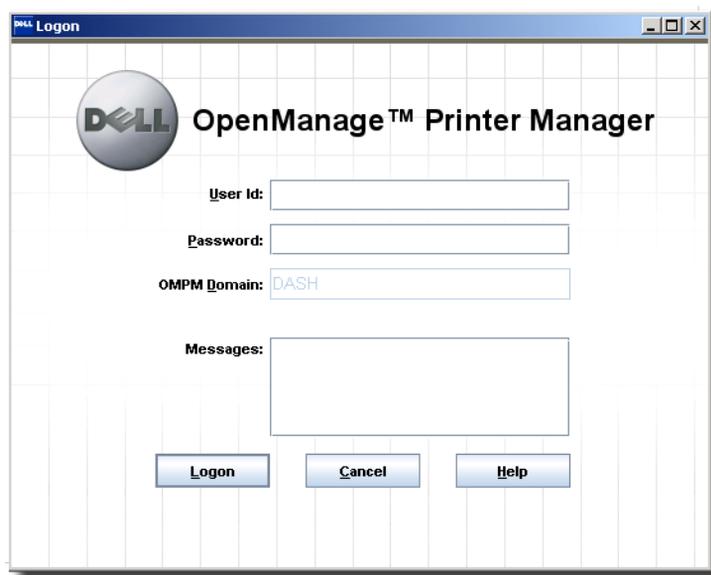


Figure 1-5. Login Screen

A login screen appears. The default login user is `admin`, with a blank password. Once you log in, you are prompted to change the password. See the *User Guide* for more information about options for adding and configuring user privileges.

See Screen Layouts for more information about managing the user interface. See Frequently Asked Questions to explore other application capabilities.

Client installation sets this software's Domain based on the designated application server. You cannot change the Domain name.

Web Client

You can also open the client user interface in a browser. The URL is

```
http://[application server hostname]
```

For non-windows installations:

```
http://[application server hostname]:8080
```

If you encounter the *Change Password* dialog that appears when you first log in, you must re-start the browser and re-log in to a web client. This behavior is normal.

The *application server hostname* is the name of the system where *OpenManage™ Printer Manager* is installed.

A *Printer Management - Web* layout also comes with the application. Use this for better performance from web clients.

HTTPS

To limit connections to the application server to HTTPS (secure) only, you can use the `-e` option when starting the server from the command line, or add the following line to `owareapps/installprops/lib/installed.properties`

```
oware.appserver.web.enable.https=true
```

To force the client to use HTTPS (secure) for web connections to the server (such as opening the toner ordering pages) add the following line to `owareapps/installprops/lib/installed.properties` (this will be the same file as above when addressing this issue with the client when running locally on the server).

```
appserver.enable.https=true
```

Troubleshooting

If startup fails, see Additional Troubleshooting or the *Troubleshooting* chapter of the *User Guide* may solve the problem. See *Startup Failures* of that guide.

Discovering Printers

To begin managing printers in your network, you must discover them to store their information in the application database. Once you have discovered printers, you can manage them.

You can do discovery manually, as described in this section, or automatically (see Frequently Asked Questions or the *User Guide* for the latter). The initial screen that appears to the *Admin* user has a button to let you begin printer discovery.



Figure 1-6. Initial Screen

To start discovery, click the discovery wizard icon  on the toolbar or navigation pane. Alternatively, click **File**→ **Open Inventory**→ **Resource Discovery Wizard** or click the **Resource Discovery** wizard icon in the navigation window. Once you have discovered printers, you can manage them.

 **NOTE:** You can discover any printer with an IP address. The information received from a printer by this software may depend on how well the manufacturer supported the printer MIB standards. See published standards RFC 1759, and RFC 3805 for more information.

 **NOTE:** You toggle the appearance / disappearance navigation pane that leads to most available application functions with the Show / Hide Navigation Window Toolbar button.



Figure 1-7. Show/Hide Navigation Window

 **NOTE:** To clarify the origin of application features, the navigation window often appears throughout the rest of the manuals for this software.

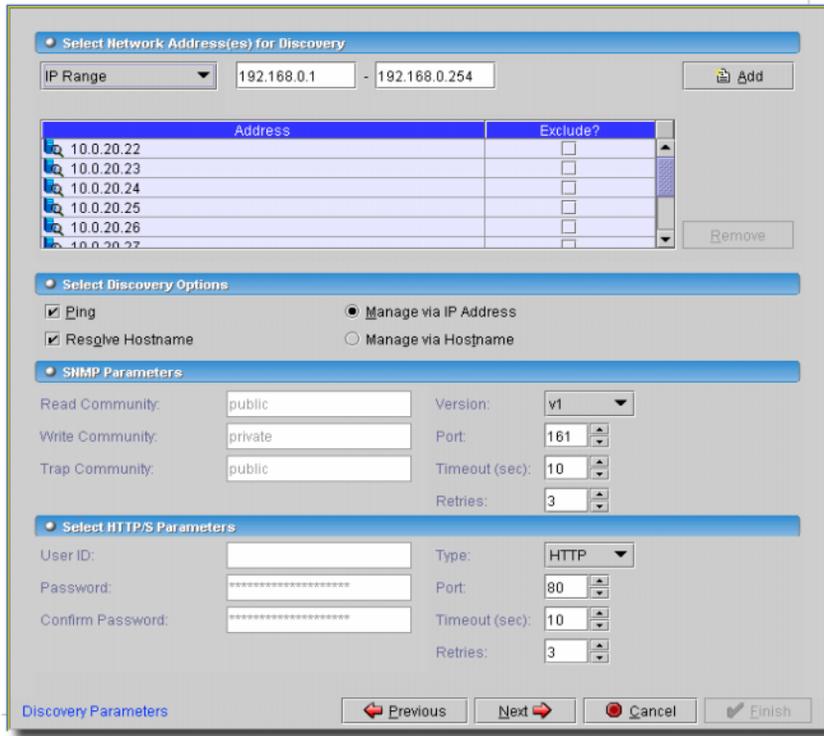
Follow these steps to discover your printers the first time (clicking **Next** at the end of each stage along the way):

- 1 In the first discovery panel, the Default Profile appears as selected with the Discovery *Profile* method (as opposed to the Advanced method) selected.

 **NOTE:** Consult the *User Guide* if you want instructions about how to create your own Discovery Profiles, or to explore Advanced discovery).

This Default Profile assumes authentication for equipment it detects use the factory defaults. If you have changed device authentication (the login / password for HTTP access, in particular), you must create a new profile that accounts for that change.

- 2 Configure the next screen to specify the devices and methods of discovery you want to use.



Select the way you want to enter the network location of printers you want to discover at the top of this screen. Options include IP Range, IP address, Hostname, Subnet, File Name, and SNMP Broadcast.

The field(s) to the right of your selection change to fit the selected type. For example, a command button—a button with three periods—appears if you select **File**. Clicking this command button lets you browse to a text file (with a list of IP addresses on individual lines). As you enter selections, click **Add** to list them. To exclude listed items, check the **Exclude?** column checkbox.

Select Discovery Options

This panel has the following:

- Ping — Discover equipment with an ICMP ping. (Ping operations pass to the operating system and use its default settings, including TTL.)
- Resolve Hostname — Use the Directory Name Service (DNS) to resolve the hostname for what is discovered.
- Manage via IP Address / Hostname — Manage the printer with its IP address or hostname, depending on the radio button selected here. The default is the IP address.

SNMP Parameters

This panel displays the Read, Write and Trap Community selected in the profile, the SNMP Version, Port, Timeout and number of Retries.

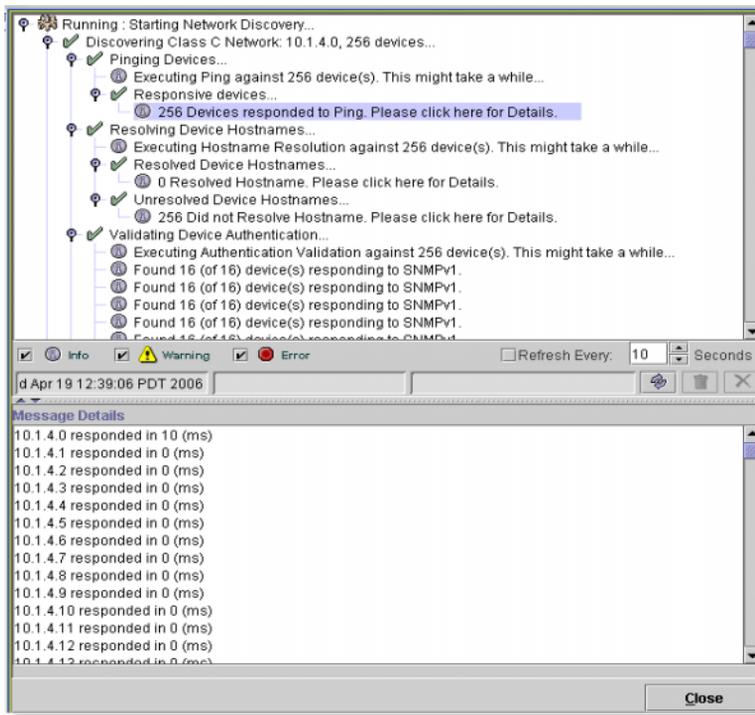
Select HTTP/S Parameters

This displays the HTTP/S User ID (and asterisks for Password / Confirm Password). This also lets you select whether the interaction will use HTTP or HTTPS, the Port, Timeout and number of Retries.

NOTE: Ensure that you have the correct HTTP/S credentials. Dell factory defaults are in the Default discovery profile. Your ability to configure the device depends on them. See the *Advanced Discovery Wizard* section of the *User Guide* for details about changing these credentials.

Also: If a profile does not have some of the above parameters, they do not appear in this screen

- 3 Click **Next** to observe the results of discovery (see the *Audit Trail Manager* chapter of the *User Guide* for more about this screen's contents).



This screen catalogs, the step-by-step process of discovery. Additional information about the incremental messages appears in the lowest panel when you select the message in the upper panel. Ranges of discovered equipment appear (collapsed) on the message tree. (Discovery automatically organizes ranges into class C subnets.)

You can click **Finish** any time during this process to exit the screen, although the process may continue. You can view these messages later in the application's Audit Trail Manager. The *User Guide* has the details.

Competitive Printer Discovery

This software lets you discover and manage many printers from different manufacturers as long as they support Simple Network Management Protocol (SNMP) communications and published printer MIB standards.

	5100cn	DELL2A201D			1 2 3 4 5 6	10.0.20.24
	850DP	Phaser 850DP			1 2 3 4 5 6 7 8 9 10	192.168.0.11
	Laserjet...	NPIC90730			1 2 3 4 5 6 7 8 9 10	192.168.0.12
	M5200	LXKE65BA6			1 2 3 4 5 6 7	192.168.0.165

Figure 1-8. Non-Dell Printers Discovered (light icons)

When you add the **Printer Icon** column to the default screen, distinguishing icons appear for those printers supported by this default printer capability, (and columns for up to 25 attributes). See *Status* in the *User Guide* for a look at all the supported printer icons.

Supported capabilities may include the following:

- Name, contact and location
- Configuration — console localization, character set, country and language
- Identification — description, ID, serial number
- Display — number of characters and lines
- Hardware — hard drive, capacity, removability
- Network — IP address and mask
- SNMP — community names, uses.
- Trays — status, capacity, name, paper type
- Status — impressions count, page count, system uptime.
- Toners and toner levels.

The presence and accuracy of the information collected above depends on the depth of SNMP support of each printer make and model, and on installed templates that interpret that information.

NOTE: Competitive printers are supported to the extent they follow the published printer MIB standards covered by RFC 1759 and/or RFC 3805. You can find these on the internet.

For more information about supported printers, see the application's **About** box (**Help**→ **About** in the menus). This screen also contains a link to a support page that may let you download more printer templates. You must re-discover printers once you install this additional printer support to get its benefit.

See *Managing Printers* for more details about managing printers.

NOTE: Cross-references work in the electronic form of this document only if the *User Guide* and this guide are in the same directory.

Printer Templates

Support for printers extend beyond the basic support of standard printer MIBs with custom printer templates. These templates provide additional data display and configuration functionality by providing custom mapping for a particular model. Templates for certain non-Dell printers are shipped with this software. New templates, when available will be on the Dell website and loaded into this software to improve support for particular models. Be sure to check this site to determine if templates are available for printers used on your network. See *Printer Template Updates* in the *User Guide* for instructions about installing the templates once you download them

Scheduling Discovery

When you first discover devices, you typically use a Discovery Profile that includes the discovery parameters (IP addresses, authentication used, and so on). You can keep your inventory up-to-date and discover equipment over a range of addresses by scheduling a repeated discovery. To do this, after you create the **Discovery Profile** in **Discovery Profiles**, open the **Schedules** screen (accessible through **File**→ **Open**→ **System Services**→ **Schedules** or under the **System Services** node in the navigation window), click **New** and select **Device Discovery**. Select the profile, and configure the schedule in the **Schedule Info** panel.

The screenshot shows a software window titled "Device Resync" with a sidebar containing "Parameters" and "Schedule Info". The "Schedule Info" section is active and contains the following fields:

- Starting On:** Month: October, Day: 4, Year: 2005, Hour: 9, Minu...: 34, am, pm
- Stopping On:**
 - By Date and Time**: Month: October, Day: 4, Ye...: 2005, Hour: 9, Min...: 32, am, pm
 - By Occurrence**: Number Of Occurren...: 1
 - Never**
- Recurrence:** Recur: Every, 1, Day/s
- Enable Schedule**

A "Save" button is located at the bottom left of the window.

Figure 1-9. Schedule Info

You cannot schedule discovery using the Default profile. See *Schedules* in the *User Guide* for more about what you can automate. You can discover Dell and other types of devices this way.

Troubleshooting Discovery

If discovery fails, see Troubleshooting in this guide, or the *Troubleshooting* chapter of the *User Guide* may be helpful. See *Discovery Problems* of that guide.

Managing Printers

After you click **Finish** in discovery, whether scheduled or manual, **Printer Inventory** (the middle panel in the default layout visible when you first open the application) can display the devices. Click the **Go** button in the upper right corner of this panel to refresh the screen if discovered printers do not appear when you are done discovering them.

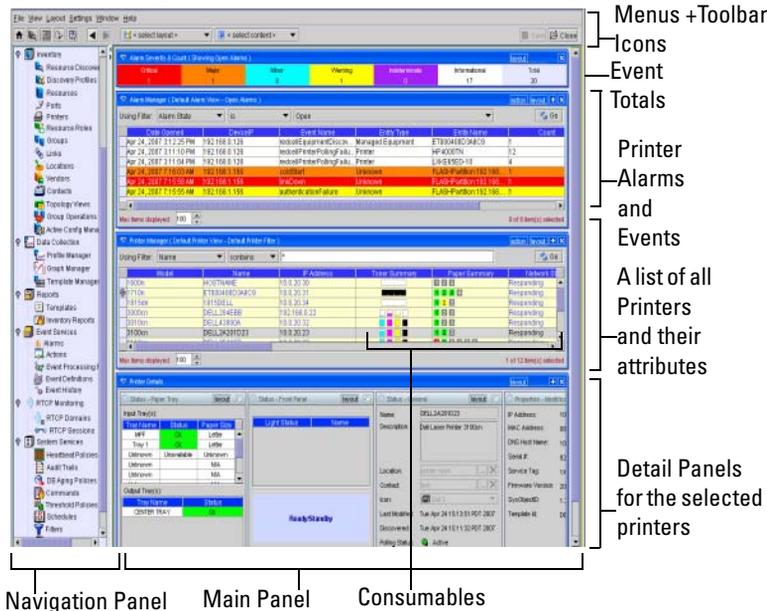


Figure 1-10. Default View

In the default view, you can view alarms and events related to all discovered printers in the top panel, the list of discovered printers in the upper panel, and the details about selected printer in the lowest panel. Above the Alarms are totals of alarms, by severity (see Alarm Severity & Count for details).

Click the plus (+) in the upper right corner of the **Details Panel** to add or remove sub-panels there. If the details panel is blank, that means you have selected no printer in the **Printer panel**.

Select a printer in the **Printer Manager** by single-clicking to highlight the row and see the printer's information in the detail panel. You can also double-click one of those same rows to open an Editor with additional detail information.

➡ **NOTICE:** Immediately after discovery, some fields like Avg Pages Per Day (over 2 weeks) are not accurate because the application has not collected enough data. It takes at least 14 days of data collection for fields displaying trends of use to have meaningful information.

Alarm Panels

This section describes the alarm panels. You can reorder or hide these panels to customize your view. You can also further customize some of these panels by adding, removing or reordering their columns.

Alarm Severity & Count

This panel displays the count of events by severity, and totals them on the right.



Figure 1-11. Event Severity & Count

This can either display **All Events** or **Open Events**. Change between these counts by clicking the **Layout** button. Select **Change Filter** and choose the **All Events** or **Open Events** items.

Alarm Manager

In the Default filter, only Open alarms appear on these screens (part of the default view). You can change displayed columns (Alarm attributes) with the plus (+) button near the top of the screen, and modify filters to restrict the alarms that appear in the display. For example, you could filter to see alarms that are major and above for only selected equipment.

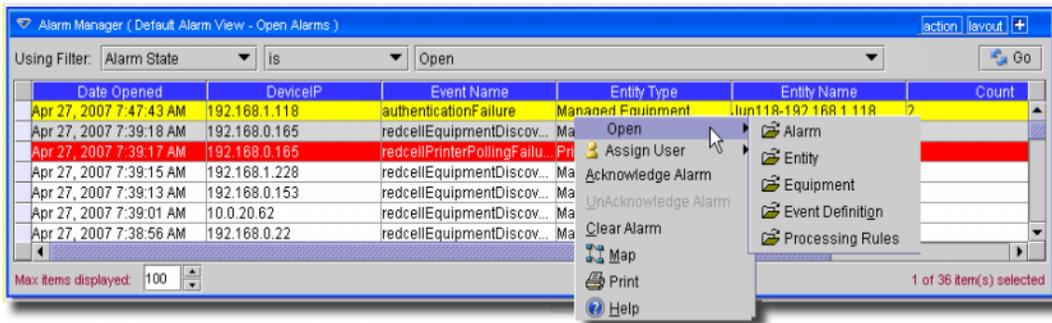


Figure 1-12. Alarm Manager

📄 **NOTE:** As in most such screens, you can sort the listed Alarms by clicking a column header. Toggle the sort order by clicking the header again.

See also Alarm Manager for a description of the columns visible in this display of alarms. This menu displays the following items (some installations conceal some of these):

Open → **Alarm** — Opens a screen describing all the details of the selected alarm. See Alarm Panels.

Open → **Event Definition** — This opens an editor where you can configure the device from which this alarm came. See *Event Definitions* in the *User Guide*.

Acknowledge Alarm — Acknowledges the selected alarm(s). The current date and time appear in the Ack Time field, and the name of the currently logged-on user appears in the Ack By field.

Unacknowledge Alarm — Unacknowledges previously acknowledged alarm(s), and clears the entries in the Ack By and Ack Time fields.

Assign User — Assign this alarm to one of the users displayed in the sub-menu by selecting that user.

Map — Open a topology view displaying the equipment selected alarm(s) came from. See Mapping.

Close Alarm — Select this option to close the alarm.

Print — Prints the displayed alarms to a pdf file.

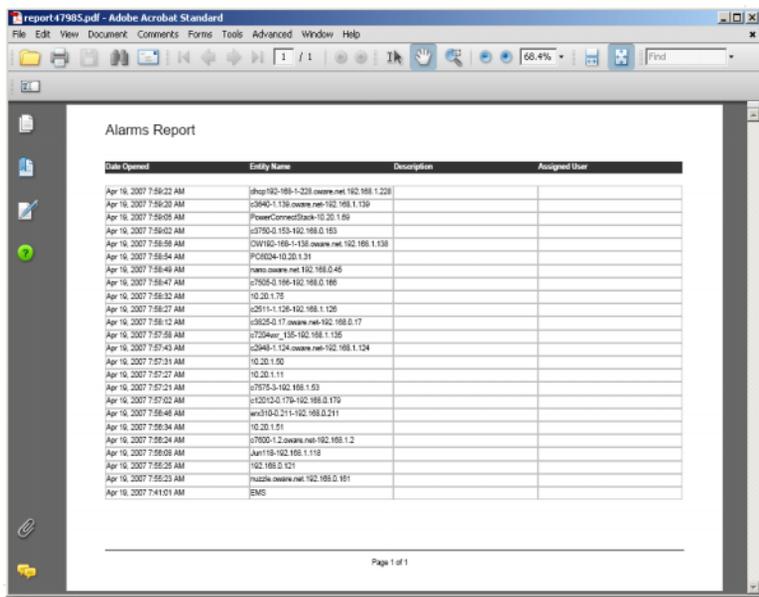


Figure 1-13. Printed Alarms (pdf)

You can print or save this report from Acrobat. If you do not have the free Acrobat reader, you can download it from www.adobe.com.

Click the **Edit** button in a detail panel to edit fields related to the selected Alarm, then click **Apply** to save those changes and they go to the selected device. Many Snap-Ins are available. Select them with the (+) button, just like the other screen. Not all snap-ins contain editable information.

Settings not supported on a device appear as **N/A** or **Not Available**. Some settings may be available, but are not alterable (you cannot write them to the device). Those fields remain disabled when you enter edit mode.

If you double-click on a resource, it will take you to the **Properties** page. This page provides access to all details panels in one central view, grouped by function. This allows you to access less frequently used fields without changing the layout of the details panels.

Common Tasks

Managing Layouts

When you select a manager, or view in the **Navigation Panel** a view appears (like Figure 2-1). The screen can display multiple detail panels with information about the device selected in the top panel.

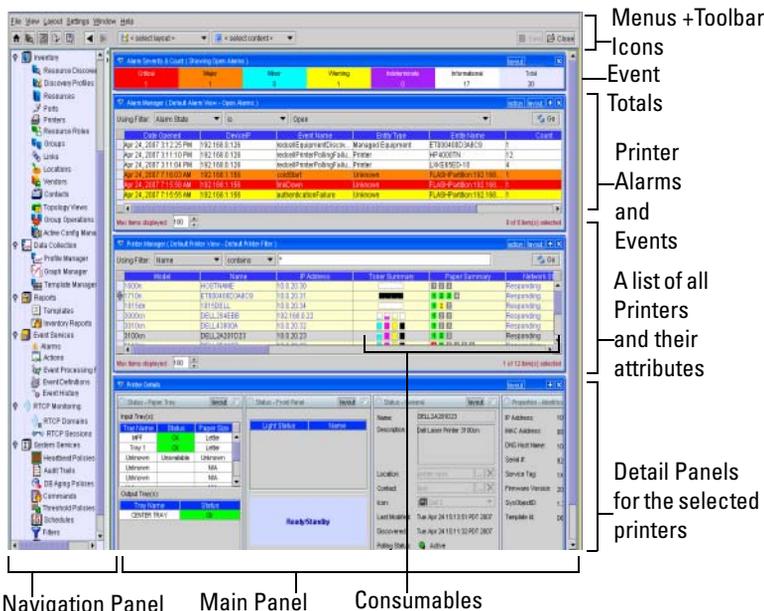


Figure 2-1. Default View

The detail panels portion of the screen is also configurable. Nodes that appear in the navigation panel depend on the installed options.

Creating and Selecting Screen Layouts

You can customize the layout of the Device view by adding, removing, or reordering the sub panels. Changes to this layout can be saved. In addition OpenManage™ Printer Manager remembers the last layout.

If you change the screen appearance, the screen layout that appears just before closing the client is the same one that appears when you restart the client. This is true for different users even when they share the same computer.

You can save and select layouts later using the **Select Layout** control shown in Figure 2-2. The easiest way to change the layout is to drag and drop the sub panels to a new location. However, you can manually edit the layout by selecting the **Layout**→ **New Layout** menu to open the menu editor.

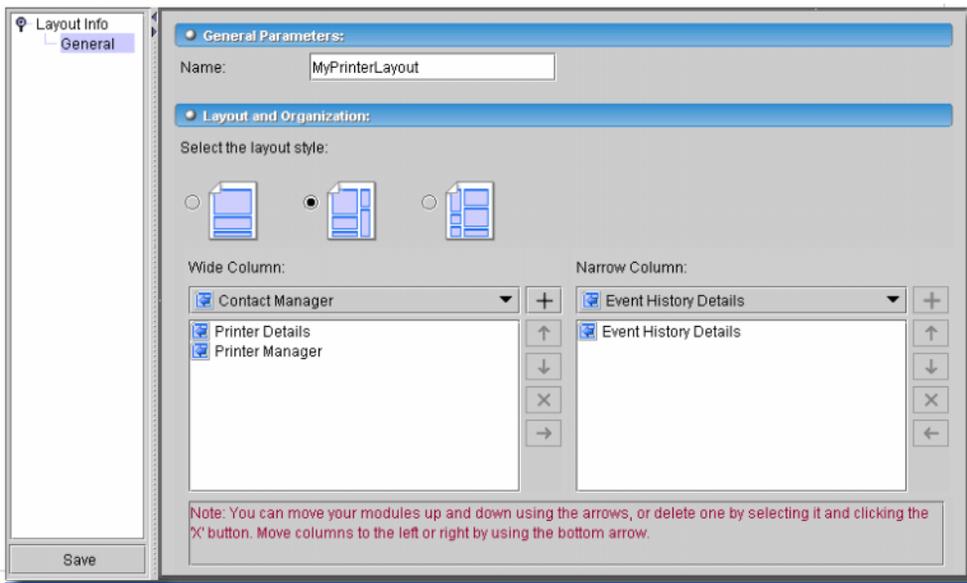


Figure 2-2. Layout Editor

You can select a single column or wide/narrow or narrow/wide two-column arrangement, and then select the content for each column. A pick list above the column's content lets you select what else can go in that column. Click the plus (+) button to add content you have selected in the pick list. When you select content in a column, you can also click up/down arrows to re-arrange the order in which content appears. The right/left arrows let you move the selected content from one column to another in the two column screens. Figure 2-2 shows an example of configuring a two column layout.

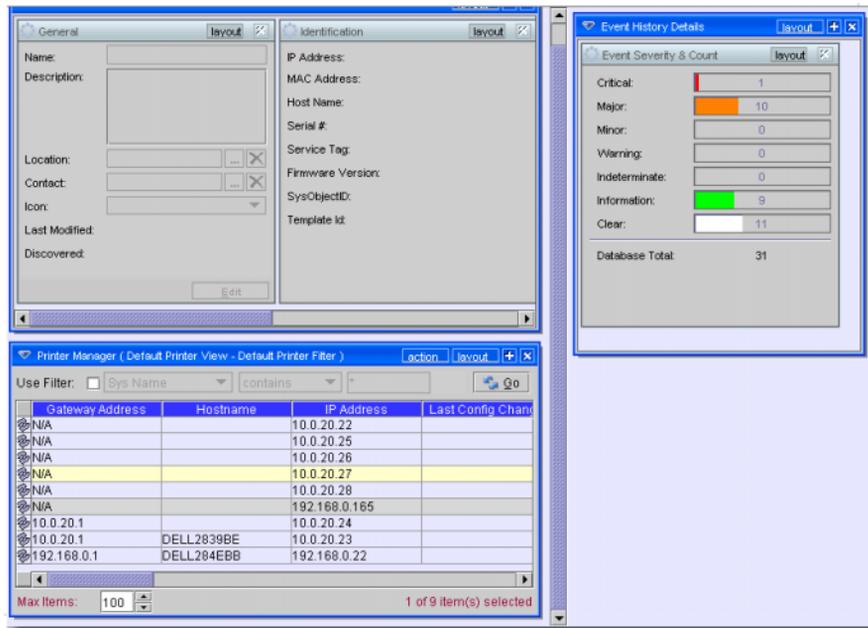


Figure 2-3. Customized Layout

Once you configure a customized layout, it remains configured for you as a user no matter what client machine you log in on, as long as your client points to the same application server. You can even add content with **Select Content**, the pick list next to **Select Layout** when you use a custom layout. You can delete sub-screens with the X in their upper right corner..

➔ **NOTICE:** If you delete all content, the custom layout preserves that empty screen as the default for that selection. You must either **Add Content** with the pick list at the top of the screen, or go to **Layout**→ **Edit Layout** when your empty layout is open to re-add content.

📄 **NOTE:** Sub-panels within a layout do not appear in the Window menu described in *Managing Multiple Screens*. Only layouts arranging these sub-panels appear there, and only these take advantage of the back/forth browser buttons.

📄 **NOTE:** You can also create layouts “on the fly” by using the **Select Content** pick list at the top of the screen to add content to a layout. Use the X at the upper right corner of a panel to make that panel disappear. As with edited layouts, alterations are preserved when you close the client, and re-appear when you log in again.

Minimizing sub-panels

The borders of sub-panels display triangles that are minimize buttons for the individual panels. Clicking this button minimizes that sub-panel. The remaining sub-panels automatically resize to fill in the remaining space.

Column Drag and Drop

You can drag and drop columns to rearrange them. You can also add columns by clicking the plus button (+) to the right of Layout in a panel. Then, either select a column name and click **Add Column**, or drag and drop the column name into the table (nowhere else). The column appears at the far right of the listed columns. You can remove an existing column from the display by dragging it up off the table. A large X appears when you have dragged it far enough.

Administering the Application

This software controls access to your network resources and device data, and offers many forms of automation that may prove invaluable. Here are some examples:

- You can configure multiple security levels (read-only access, read/write-access, administrative access, and so on) and multiple types of users (user groups). The next section briefly describes this. For additional information, consult *Security*, in the *User Guide*.
- You can automate and schedule a variety of operations (see Scheduling Operations)
- You can automate a variety of other tasks (See Frequently Asked Questions for more).

The following sections describe these examples. For more information about any of this, consult the *User Guide*.

Users and User Groups

You can configure multiple security levels (read-only access, read/write-access, administrative access, and so on) and multiple types of users (user groups). The application's **User Manager**, shown below, lets you create and manage users, and associate information with them like passwords, group membership, and contact information. Select **Settings**→ **Permissions**→ **User Manager** to display the **User Manager**.

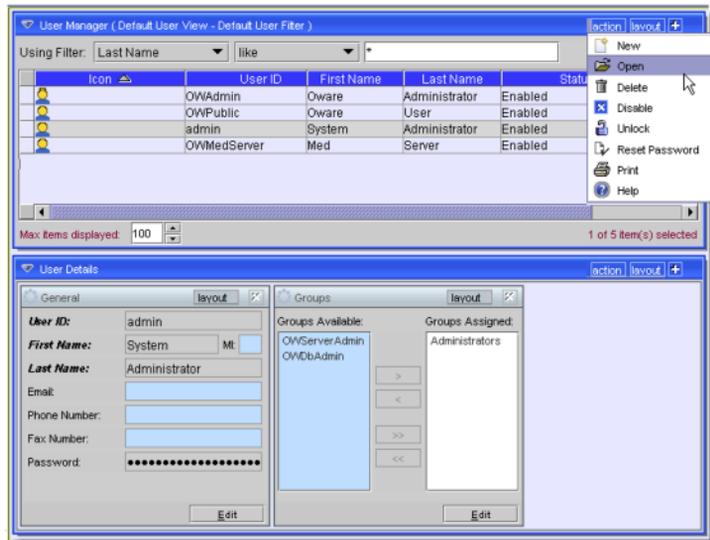


Figure 2-4. User Manager

NOTE: This application comes with system users like OWAdmin. These are normal and cannot be deleted.

Click **action**→ **New** to create a new user, or **action**→ **Open** to edit a user you have selected from the list. When you open the User (or User Group) editor, you can also configure permissions (see "Functional Permissions" on page 32).

NOTE: Best practice is to configure users, put them in a group (see "User Groups" on page 32), then assign permissions to the groups. Permissions accessible from individual users' screens override group permissions, so tailoring individual permissions is still possible.

User Groups

The User Group Manager lets you create user groups. Open this manager from **Settings**→ **Permissions**→ **User Group Manager**. Initially, a Group is simply a name and a description.

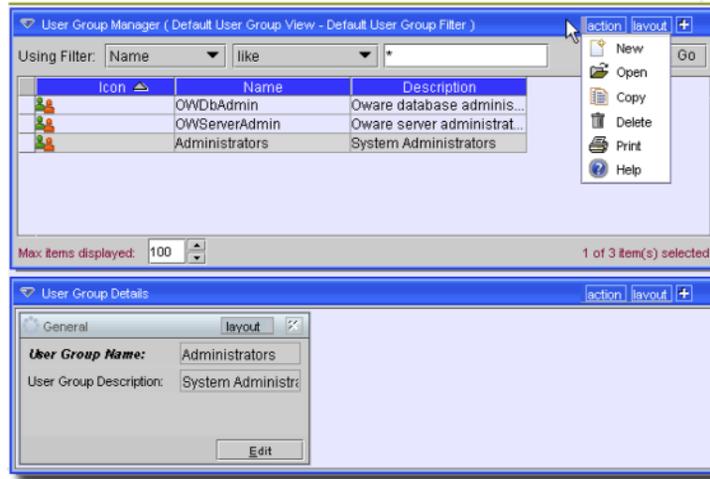


Figure 2-5. User Group Manager

Click **New** or select a group and click **Open** to modify a group. You cannot delete some groups; for example, you cannot delete Administrators.

Once created, however, application administrators typically associate individual users with groups and grant permissions to users based on their association with a group.

Functional Permissions

The **User Groups** page lets you associate system functions (permissions) with individual users or with user groups. Select **Settings**→ **Permissions**→ **Functional Permissions** to display the **Functional Permissions** page, shown in Figure 2-6.

 **NOTE:** Functional permissions are global and additive with other permissions. If you have a group permission and a functional permission set, the result is a union, not an intersection of the two.
Also: Best practice is to add users to user groups with the appropriate functional permissions rather than alter individual user functional permissions.

Grant permissions by selecting a predefined function and then create a list of groups and/or individual users authorized to perform that function. You can further refine permissions by defining a set of actions (read, write, execute, and so on) that each group or user can perform when exercising the function.

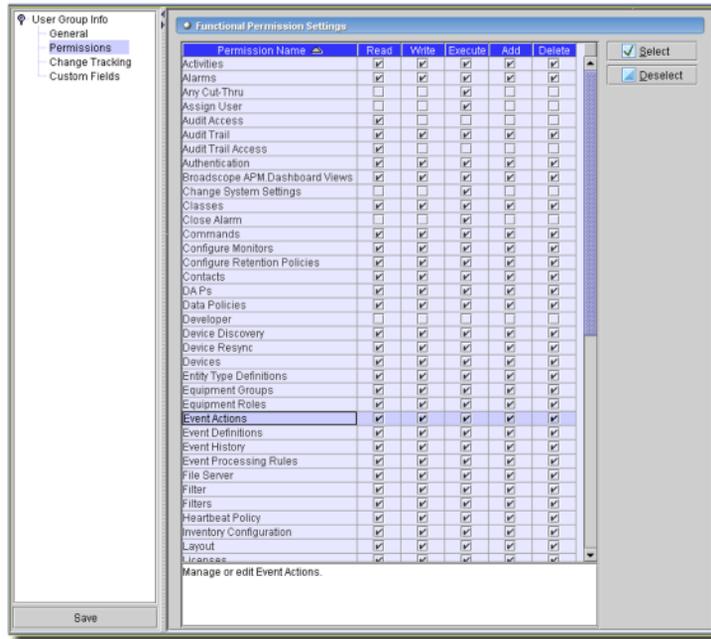


Figure 2-6. Functional Permissions Page

Configure permissions by checking the actions that appear in the row with the permission. These determine a user’s capabilities within the application. Generally, the following describes the effects of enabling these actions:

Action	Default Behaviour
execute	When checked, this action lets you launch a particular manager and query for elements. Alternatively this action can control a specific application function, (typically described by the permission name) like provisioning a policy.
add	This enables the New menu item on the action menu. If you do not check this action, then the New menu item does not appear
read	When checked, this enables the Edit menu item on the action menu.
write	When checked, this enables the Save button within editors.
delete	When checked, this enables the Delete menu item on the action menu within managers.

The functional permissions that use these actions appear in this screen. Select a permission, and in the Group editor, the description appears at the bottom of the screen.

NOTE: Functional permissions are global and additive with other permissions. If you have a group permission and individual functional permissions set, the result is a union, not an intersection of the two. Also: Best practice is to add users to user groups with the appropriate functional permissions rather than alter individual user functional permissions.

To see the details about how to do this, consult *Security* and *Functional Permissions* in the *User Guide*.

Scheduling Operations

You can schedule many of this software's actions. Open the **Schedules** screen either from **File**→ **Open**→ **Network Services**→ **System Services**→ **Schedules** or from the navigation pane.

The screenshot shows a configuration window for 'Device Resync'. The left pane has a tree view with 'Device Resync', 'Parameters', and 'Schedule Info' (selected). The right pane contains scheduling options:

- Starting On:** Month: October, Day: 4, Year: 2005, Hour: 9, Minu...: 34, am, pm
- Stopping On:**
 - By Date and Time**: Month: October, Day: 4, Ye...: 2005, Hour: 9, Min...: 32, am, pm
 - By Occurrence**: Number Of Occurren...: 1
 - Never**
- Recurrence:** Recur: Every, 1, Day/s
- Enable Schedule**

A 'Save' button is located at the bottom left of the window.

Figure 2-7. Schedules

Click **New**, then select an operation (Group Operations, Inventory Reports, Resynchronization, and so on), and configure the selected option.

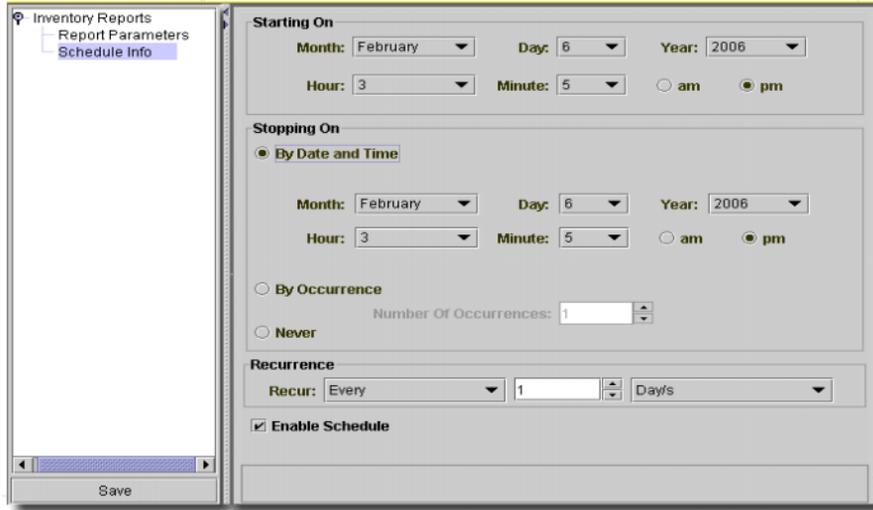


Figure 2-8. Schedule Editor

Finally, select the schedule timing, frequency, and so on. See the *User Guide* for more information about scheduling capabilities.

 **NOTE:** You can set up a recurring discovery of an IP range that automatically adds any new networked devices to those already in your inventory.

Common Tasks

The following are common tasks done when you manage devices:

- Change (or view) a device setting — Right click the listed device and select **Open**. The subsequent screens let you see and change device settings when you elect to save your changes. You can also use the **Detail** panels.
- Create a group — Groups let you change settings on multiple devices. Select listed devices (Ctrl+click to select several), and right click. Select **Add to Group**, to add to an existing group, or **New Group** to create a new group with the selected devices. Selecting **Group Op** lets you do things to the entire group of devices. See the *User Guide* for details.

Mapping

In addition to their listing in the **Inventory** screen, discovered resources can appear in a topology mapping.

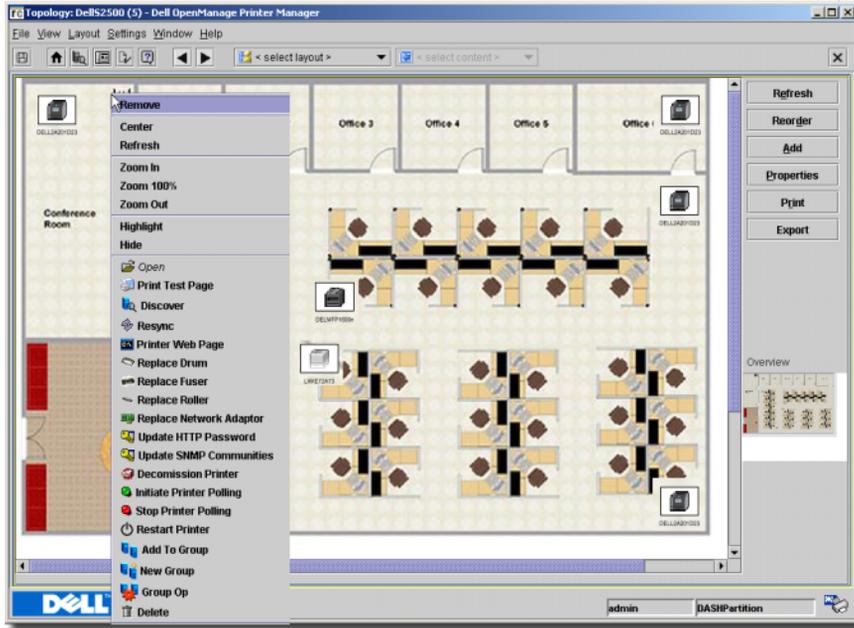


Figure 2-9. PrintersEquipment in a Topology

To see discovered equipment in such a map, do the following:

- 1 Open **Topology View** from the navigation panel, or with **File**→ **Open**→ **Inventory**→ **Topology Views**.
- 2 Click **New** to begin configuring a view.
- 3 Click **Add**.
- 4 In the subsequent screen, click **Equipment** (you can also add contacts, for example).
- 5 In the next screen, select the inventory that you want to map. You can Ctrl+Click to select multiple items.
- 6 Click **Select**.
- 7 The equipment appears, represented as icons on a blank (white) screen. You can re-arrange these icons by clicking and dragging them. The icons display the color of the highest value alarm (critical / red is the highest) that most recently came from that device.
- 8 Select a background by clicking **Properties**, then selecting a background from the pick list. To add graphics to those listed, click the command button (...) to the right of the pick list, and select the graphic file. As long as the graphic is a **.jpg**, **.gif** or **.png** file, it can appear behind the icons.
Notice that, within the view, you can make a larger display than appears in this screen and click and drag the gray square in the **Overview** (bottom, right) panel to select the area in the larger view screen.
You can also right-click an item to see a menu of additional options (see the *User Guide* for details). For example, you can:
 - Alter the magnification of the view with the **Zoom** options.
 - Open a web session with the selected printer with the **Direct Access** option.Not all selections work with all printers. Consult the *User Guide* for more details about the available functionality of this screen.
- 9 Click **File**→ **Save** to preserve this view.

See *Title Bar* in the *User Guide* for more about the right-click menu.

Reports

Reporting includes a defined report combined with a report template. The report definition itself selects the printers to query and the (reusable) template selects which of the available attributes of those printers appear in the report.

The first reports you create about discovered printers are typically done with the included report templates that come with your software. To create a report with an existing template, open **File**→ **Open**→ **Network Services**→ **Reports**→ **Inventory Reports**, or click the icon in the navigation window.

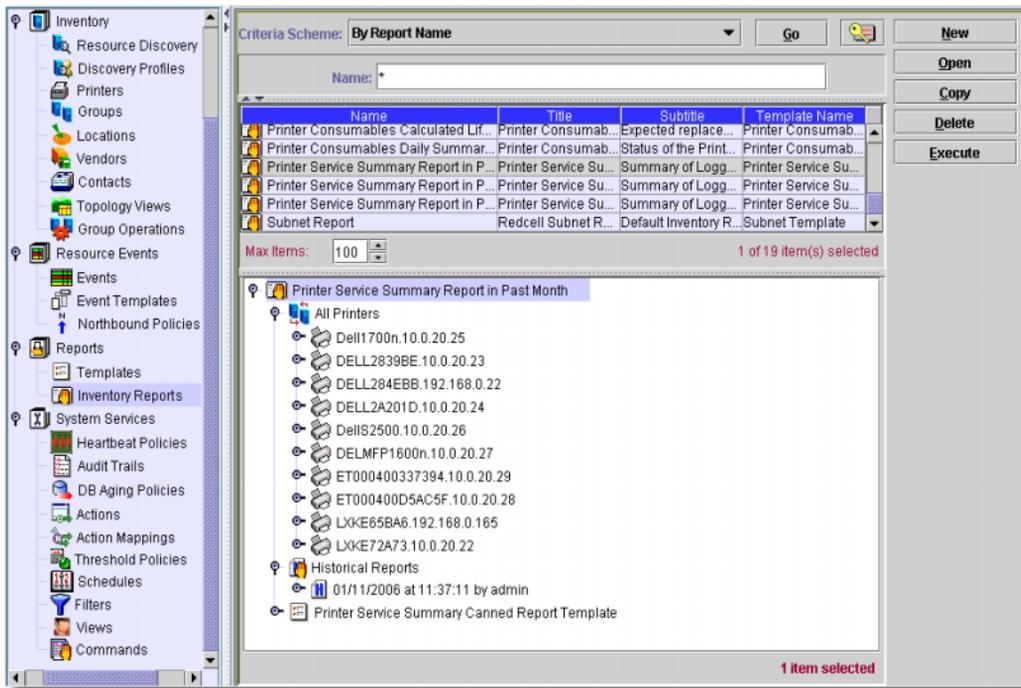


Figure 2-10. Report Manager

Although you can limit what appears by using the filter at top of this screen, by default, all reports appear listed. The printers they report about, and their associated templates appear as nodes in a tree in the lower panel.

NOTE: To create reports about some printer properties, you must initiate polling on the selected printers before generating the report. For Trend Reports, you must set thresholds polled. See Trend Reporting, the online help, or the *User Guide* for additional information.

See the *User Guide* for instructions about creating or altering Report templates themselves, and assigning them to reports.

To see a report after selecting it, click **Execute**.

Dell Printer Asset Report

Report Created: Tue May 23 08:02:40
admin

Printer Inventory Assets Sorted By Model
Filter Summary: No Filter Specified for Equipment Group: All Printers.

Model	IP Address	Location	Name	Asset Tag	Age (Days)	Total Pages Printed	Status
1600n	10.0.20.30	John's Office	HOSTNAME		0	1237	Online
1600n	10.0.20.27	John's Office	1600HOSTNAME		0	596	Online
1700n	10.0.20.25	John's Office	Dell11700nED	6666677		13799	Online
1815dn	10.0.20.34		DELO000FOA5E2CD		190	1531	Offline
3000cn	192.168.0.22	John's Office	DELLC84EBB	6666677	190	991	Online
3100cn	10.0.20.23	John's Office	DELLC201D23	6666677	0	642	Online
5100cn	10.0.20.24	Next to Cindy's Office	DELLC201D	55555566	0	2011	Online
S2500	10.0.20.26	John's Office	De11S2500	6666677	0	763	Online
W5300	10.0.20.22	Next to Cindy's Office	LXEE72A73-2	6666677	0	107	Online

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Save Close

Figure 2-11. Executed Report

Click the **disk** icon to save the report as a pdf (Acrobat), HTML, or CSV (comma-separated value) file. Click the **printer** icon to send this report to a printer.



NOTE: For pdf printing to work correctly, you must have the Acrobat reader installed. This is available, free, from www.adobe.com. If you are using a Web Client, this may look different, too.

Also: You can save a report from the web client, but cannot export its contents.

Click the **Save** button at the bottom of this report to preserve it in your application's database. To close the report, click **Close**.

You can run a report repeatedly, and view historical reports in the application database. Select the report in **Report Manager**, then click **Open**. Select the **Historical** tab.



Figure 2-12. Reports - Historical View

You can also use this software’s **Schedules** screen to automate report generation. If you want to have a recurring report, scheduling is the most convenient way to arrange it. Automatically generated reports are archived in this **Historical** tab. See the *User Guide* for more about scheduling.

Refer to *Pre-Configured Dell Printer Reports* in the *User Guide* for more information about the pre-configured printer reports reports that come with this software.

Trend Reporting

To collect data about printers' performance, polling must be active on that printer. It is active by default, but may have been deactivated. To activate polling, right-click a listed printer (Ctrl+click to select multiple printers) and select **Initiate Printer Polling** from the context menu that subsequently appears. This collects data for all but trend reports. For trend reporting, you must edit a threshold policy to determine what kind of data you want to collect (see *Thresholds For Reports* for an introduction to this).

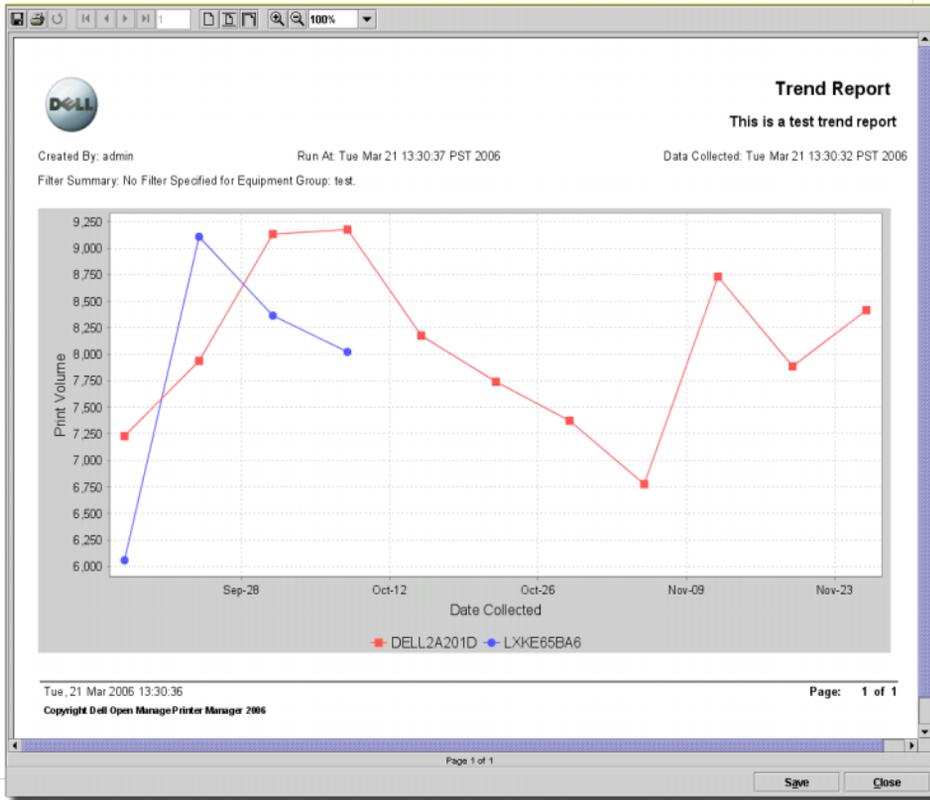


Figure 2-13. Trend Report

A trend report requires a matching template, and pre-existing data (stored by polling the selected equipment).

Fields for Trend Reporting

The following fields support collection of trend data:

- Toner Use
- Print Volume
- ...and so on

To see what kind of data you can collect, create a new **Trend Report** report template, and see the fields that appear in that screen

Thresholds For Reports

You must pre-configure the polling thresholds in the **Threshold Policies** screen if you want to see useful data in this report.

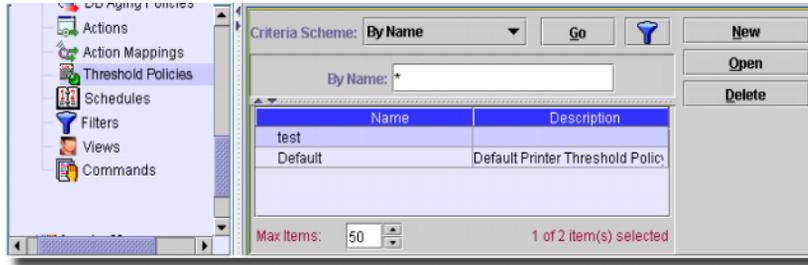


Figure 2-14. Threshold Policies

To edit threshold policies, open the **Threshold Policies** screen from the menu item under **File**→ **Open**→ **System Services**→ **Threshold Policies**, or from the navigation panel. See your *User Guide* or online help for additional information about setting thresholds.

Managing and Ordering Consumables

When you first install this software, the process of ordering replacement toner, fusers and drums is automated. You can also click the link in the navigation pane to get instructions about ordering toner.



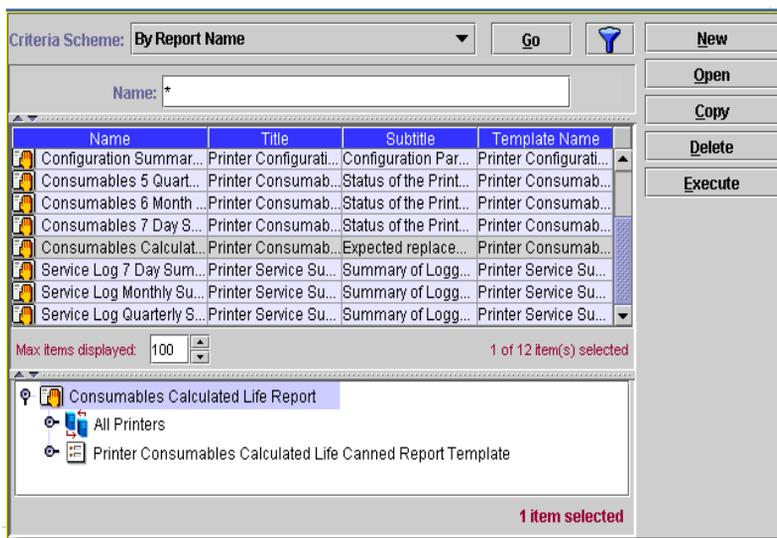
Figure 2-15. Order Toner Link

In addition to clicking the **Order Toner** link in the Status screen, you can order from the **Printer Consumables Calculated Life** report.

If you confirm you are a Dell Premier Customer in **Settings**→ **Configuration**→ **Control Settings**→ **Customer Settings** (a checkbox activates this kind of ordering) if you set that up. The website order page reflects this selection.

Here are typical order tasks for the report

Execute (or schedule) the Consumables Calculated Life Report:



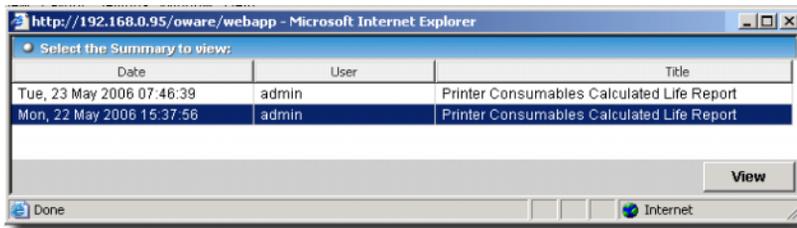
- 1 Select the **Calculated Life Report** in **Inventory Reports**. You can expand the turner in the lowest panel to see what printers and template this report uses. By default, this reports on the **All Printers** group. You can customize the printers reported on and other parameters, like the reporting period by clicking **Open** when you select this report. See the *User Guide* for details.
- 2 Click the **Execute** button.
- 3 The report appears with a summary of the consumables' remaining life for all printers.



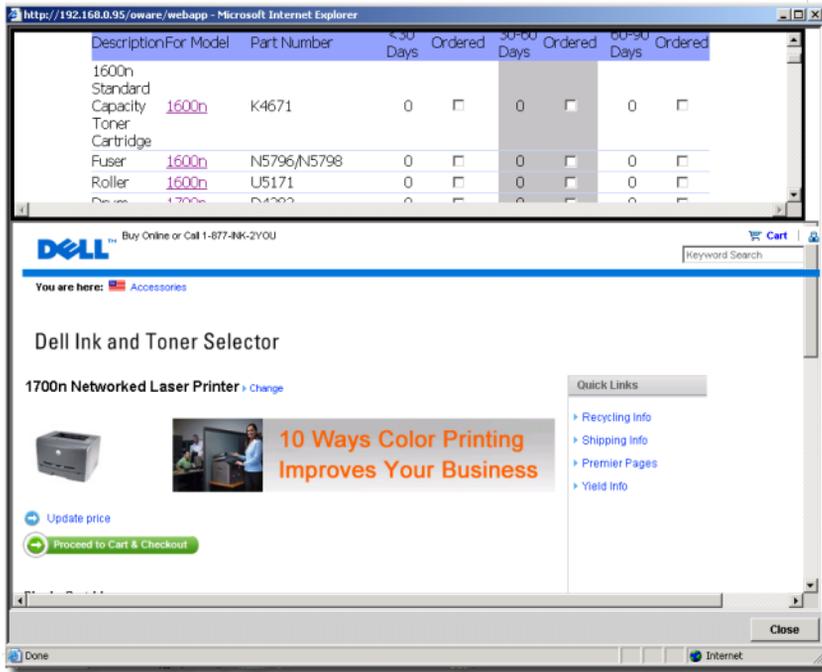
Figure 2-16. Printer Consumables Calculated Life

This report displays the printer, listing its consumables under its Model, Name, and so on. Individual consumables appear with the percentage used in printing the detected volume of printed pages and a calculated remaining replacement time frame.

- This report has an **Order** button below it. Clicking that opens the **Consumables Assistant** in your default browser (or displays a link to **Consumables Assistant** if your browser has a pop-up blocker). The first screen to appear lists the available consumables reports to view.



- 5 Select a report and click **View** to get to the next screen which lists all reported printers in a panel at its top.



- 6 When you click a printer name, the link opens the ordering page at the bottom of the screen.

NOTE: If you are a premier customer (activated in **Settings**→ **Configuration**→ **Control Settings**→ **Customer Settings**, you may have to log in before you get to the consumables order page for the printer.

Notice that the top of this order screen displays the projected consumables needs in columns for less than 30 days, 30-60 days, and 60-90 days. These columns also display a checkbox to remind you what printers you have ordered consumables for. The lower panel handles all ordering, shipping and payment.

- 7 Click any model number link for printers that need toner (for example), and the order screen appears below.
- 8 Follow the instructions on the bottom panel (after you log in, if you are a premier customer), and add ordered consumables to your shopping cart. Click **Proceed to Cart & Checkout** when you have selected the items you need.
- 9 If you need to order more consumables for another printer, click that model number link in the upper panel, and add those items to the cart.
- 10 Click **Check Out**, and follow the instructions to enter shipping and payment information. You only need to do this once if you create an account.
- 11 Once you confirm your order, your consumables are on their way to you.

Troubleshooting

Frequently Asked Questions

The following answer common questions that arise when you are managing your equipment. For more details, refer to the *User Guide*.

Printers

Some relatively easy-to-perform tasks include the following:

- **Delete / Decommission Printer / Stop Printer Polling** — These three methods of altering your software's relationship with a printer are available in **Printer Manager**. They do the following:
 - **Delete**— Completely and permanently removes the printer and all data from the database.
 - **Decommission Printer** – Stops any polling, heartbeat and thresholding related to the selected printer(s). This keeps any collected data for future reports. To recommit a printer, you must rediscover it. See the *User Guide* for more about decommissioning.
 - **Stop Printer Polling** – Stops polling and data collection on a printer. Useful during down time for repairs, for example.

Access these options by right-clicking a selected printer, or by clicking the **Action** button in **Printer Manager**. See the *User Guide* for information about more management options.

- Printing a test page — right-click a printer in printer manager, and select a menu item to print a test page
- Re-Start a printer — right-click a printer in printer manager, and select a menu item to re-boot a printer.
- Remove from Inventory — to remove a printer or discovered device from inventory, right click it in the printer management screen, and select **Delete**. You can also stop reporting about a printer without deleting it if you click **Decommission**.
- Web Access — You can access this software (assuming you have network access to the application server) by putting this URL in your browser:

`http://[application server name or IP address]`

- Temporary Printer Groups — Use Ctrl+Click to select multiple printers from the **Printer Manager** to create a temporary group. Right click to get the menu bar and click the **Group Op** button. This lets you select a group operation to execute against those selected printers. Currently only a single operation is available: **Copy Printer Attributes**. If you want to run the operation against a pre-defined group then start from the **Group Operations Manager**.
- Creating Dynamic Printer Groups — You can use the **Groups Manager** to create dynamic groups. Essentially, these groups are filters that let you select a group of printers to act on based on their location, type, age, vendor, and so on. See *Groups* in the *User Guide* for more information.
- Using Group Operations manager with Printer Groups — You can use the printer groups you create in conjunction with **Group Operations Manager** to configure multiple printers. Open the **Group Operation Manager**, select **Printer Group Operations**→ **Global**→ **Copy Printer Attributes**. In the next window, add the IP address of the source printer or select one by clicking the **Command** button . This is the source Printer whose attribute settings you want to copy to your target group. Select which attributes you want to copy, and initiate the mass configuration with this feature. See *Printer Group Operations* in the *User Guide* for more details.
- Mapping and Accessing Printers — In addition to a list display of printers and other equipment, this software lets you display your printers in a logical topology (with a background map, if you like). To see information about a printer in this display, simply right click it, and select **Open**. To access the printer's own HTTP (web) page, select **Direct Access** from a right-click menu. See *Topology* in the *User Guide* for more information.
- Ordering Consumables — Screens describing (toner, paper, fuser) consumables appear in the **Printer Manager**. The Status page that appears in the **Details** panel, or when you open a printer contains a link to the order web page to order from Dell. See *Managing and Ordering Consumables* for more information.
- Viewing the Windows Print Queue — You can launch the operating system print queue display that shows jobs in progress on a printer with the **Print Queue** details screen. If this screen does not appear in the **Printer Details** panel, you can also see it in the screen described in *Misc* of the *User Guide*, or click the plus (+) in the upper right corner of the **Printer Details** panel, and add it to the details screen display.

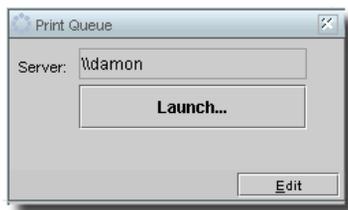


Figure 3-1. Printer Queue Detail Panel

Click **Edit** to enter the print server (either a hostname or IP address preceded by a double backslash in Windows), and click **Apply** to accept your edits. After you have configured the print server, click the **Launch...** button to open the operating system's print queue window.

- Reports — To create a report, locate it in **Inventory Reports**, described in *Reports*, of the *User Guide*. Select it, and click **Execute**, and the report appears. You can print, customize or archive the report. See the *User Guide* for more about customizing the reports.

The *User Guide* describes available “canned” reports. These include the following:

- **Printer Asset Report** — Describes the Model, IP Address, Name, Age, Print Volume, and Status for your existing, discovered inventory of printers.
- **Printer Configuration Summary Report** — Settings and values displayed depend on the capabilities of the printers.
- **Printer Consumables Summary Reports** — displays five quarters of data about the selected printers
- **Printer Consumables Calculated Life** — Individual consumables appear with the percentage used in printing the detected volume of printed pages and a calculated remaining replacement time frame.

 **NOTE:** The **Calculated Life** report contains a link to help you order consumables that are running out.

- **Printer Service Report Summary** — Summarizes logged service activities for the selected equipment for the last Month, Quarter, and Day in three separate reports.

For all reports about data and duration, you must activate printer polling or thresholds.

Additional Troubleshooting

This section discusses some troubleshooting techniques. See the *User Guide* for more.

Name Resolution

If your network does not have DNS, you can also assign hostnames on a Windows platform in the file `%windir%\system32\drivers\etc\hosts`. Here, you must assign a hostname in addition to an IP address in the system. Here are some example hosts file contents (including two commented lines where you would have to remove the # sign to make them effective):

```
#      102.54.94.97      rhino.acme.com          # source server
#      38.25.63.10      x.acme.com              # x client host
127.0.0.1      localhost
```

 **NOTICE:** This software supports installation to only the local file system. Avoid installing to shared drives.

Common Issues

The following list contains possible issues and some suggested sources and resolutions for these issues:

Application does not start:

- Check whether the IP address of server has changed.
- Ensure the database is large enough. See *Modifying the MySQL File Systems* in the *User Guide*

Device data does not appear:

- Ensure the SNMP, HTTP credentials are correct (consult your network administrator)
- Check whether SNMP, HTTP is enabled on device

Network configuration issues:

- Ensure that your firewall is not preventing access to the devices you want to manage.

Equipment values are not configurable:

- Ensure the SNMP, HTTP credentials are correct (consult your network administrator)