Dell OpenManage Printer Essentials User's Guide

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

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

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

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Introduction

Dell OpenManage™ Printer Essentials (OMPE) is a state-of-the-art printer management software, with light-weight architecture. Its easy-to-use modern web interface provides all the features essential for effective printer management in a corporate network.

With OMPE, administrators can easily manage and monitor both Dell and non-Dell printers. OMPE provides complete status information of the printer fleet with a friendly and organized user interface.

Using OMPE, administrators can:

- Minimize printer down time with the help of real-time status monitoring and easy-to-understand status views.
- Group printers to ease printer management across multiple printers.
- Copy configuration settings from one printer to other printers.
- Define and apply policies to configure printers. Enforce policies on non-conforming printers.
- Configure email alerts to get real-time printer status.
- Generate reports for the printer fleet and send it through email.
- Remotely configure and upgrade printers with the latest firmware.
- Remotely monitor printer consumables and order for replenishments.

Key features

OMPE provides the following features for simple and effective printer management:

User friendly interface - OMPE provides an overview of the printer fleet in the dashboard and printer list to monitor and track printer related events.

Discovery - When new printers are added to the network, OMPE discovers the printers and retrieves printer parameters for management.

Grouping - OMPE provides logical grouping of printers based on selected printer characteristics for ease of printer management.

Locating printers using Maps - Printers in the network can be located using maps to quickly troubleshoot issues.

Updating printer firmware - Printer firmware for all printers in the fleet can be updated at the same time.

Scheduling - Printer management tasks can be executed without user intervention using the schedule feature.

Sending alert emails - OMPE can be configured to notify administrators about printer centric events by sending alert emails.

Setting policies - The configuration settings for all printers of a particular model can be simultaneously monitored or configured by enforcing policies.

Ordering for Supplies - OMPE monitors the toner, fuser and drum levels for the printer fleet, and provides an option to order for printer replenishments when the consumables are low.

OMPE architecture

OMPE is a web-based application deployed on a tomcat web server engine. It is installed in a local server on an IPv4 LAN network with printers and other components.

OMPE uses Simple Network Management Protocol (SNMP) to discover printers. It uses both SNMP and Hypertext Transfer Protocol (HTTP) to retrieve and set printer parameters.

OMPE uses a private database to store information retrieved from printers, settings, configuration and user data.

OMPE communicates with Dell Cloud Connect Server to retrieve printer firmware files, templates, warranty information, online licensing and send printer data if Dell Print Metering service is enabled. An internet connection is required to communicate with Dell Cloud Connect Server.
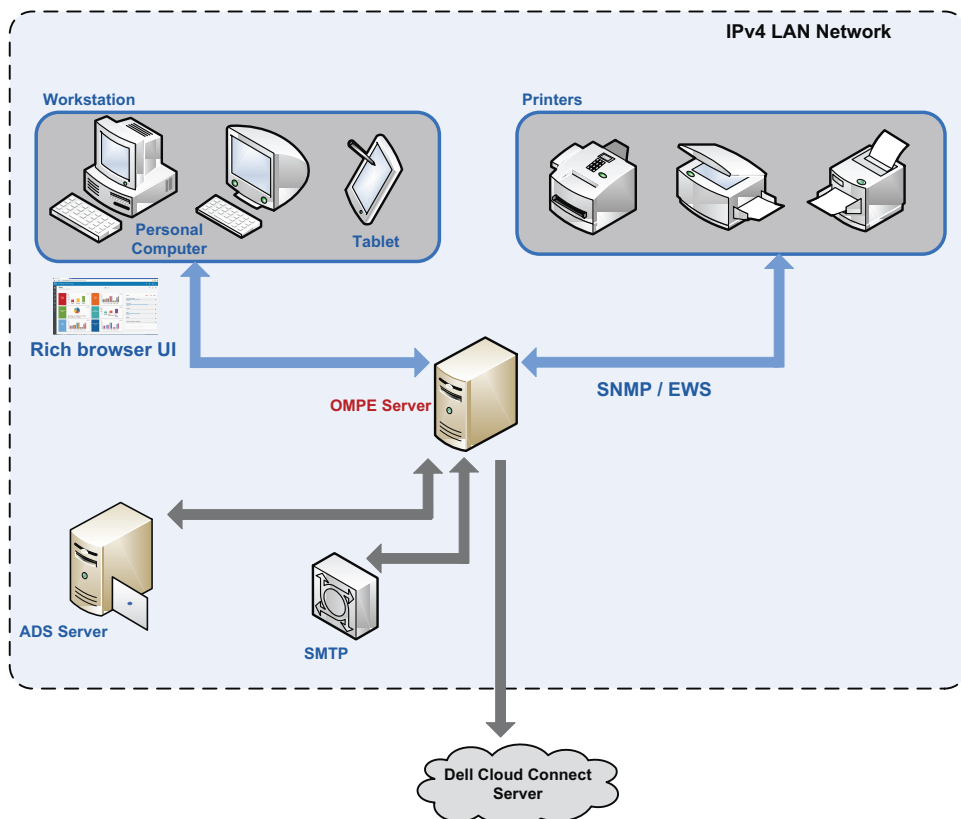
Product support

For more information, check the Dell support website at
http://www.dell.com/support.

Online help

OMPE online Help provides detailed information about using the software for
managing your printer fleet. To display the online help window, click the help icon in Title
bar menu and click **Online Help**. OMPE displays context sensitive help for the
feature currently being used.

License management

After the initial installation of the software, you can use a 30 day trial of the full featured version of OMPE. To use a fully licensed version, a permanent license for OMPE can be easily obtained by providing the customer information to Dell. On license requisition, you will receive an activation key to activate the OMPE license. OMPE license activation is done in the **Get License** widget.

To open the **Get License** widget:

> From the Login window, click **Click to Activate License**.
>
> **OR**
>
> Click � in Title bar menu and click **License**.

After expiry of the 30 day trial, the OMPE login window is still accessible through which you can open the **Get License** widget for license activation.

Activating license online

To activate license online, the OMPE server must have internet connectivity. On receiving the activation key from Dell, OMPE automatically activates the full version.

1. From the **License Activation Mode** list, select **Online**.
2. Enter customer details in the fields provided.
3. To add any remarks, enter the remarks in the **Remarks** field.
4. If you want a Dell representative to contact you to know more about the license, select **Yes**. Else select **No**.
5. Click **ACTIVATE**.

   The customer information is validated by Dell. On successful validation, OMPE is automatically activated.

Activating license offline

To activate license offline, you can send the customer information by mail from any system to Dell. On successful validation, the activation key is sent to the email address provided in customer information details. The activation key received can be used to activate OMPE offline.

1. From the **License Activation Mode** list, select **Offline**.
2. If you already have an activation key, select **Yes**.
3. Enter the activation key in **License Activation Key** field.
4. If you need to procure a license, click **No.**
5. Enter customer information details in the fields provided.

6. Click **ACTIVATE**.

NOTE: Please ensure that your system's SMTP settings are correctly setup for Dell to receive the activation request. For more information, see SMTP configuration.

Getting Started

OMPE is installed using the OMPE installer package available in the Dell website. The installer package is equipped with all the prerequisites including templates for supported printer models. The installer package can also upgrade from OMPMv2.

The OMPE installer package installs Java as a prerequisite prior to installation. OMPE uses port 80 or 8080 for web interface.

Installing OMPE

1. From support.dell.com, navigate to Printers ➔ Printing Solutions ➔ Dell OpenManage Printer Essentials.

📝 **NOTE:** The navigation path may vary in the actual website.

2. Download and run the OMPE installer package.

📝 **NOTE:** You must be logged in with administrative privileges.

The InstallShield Wizard begins.
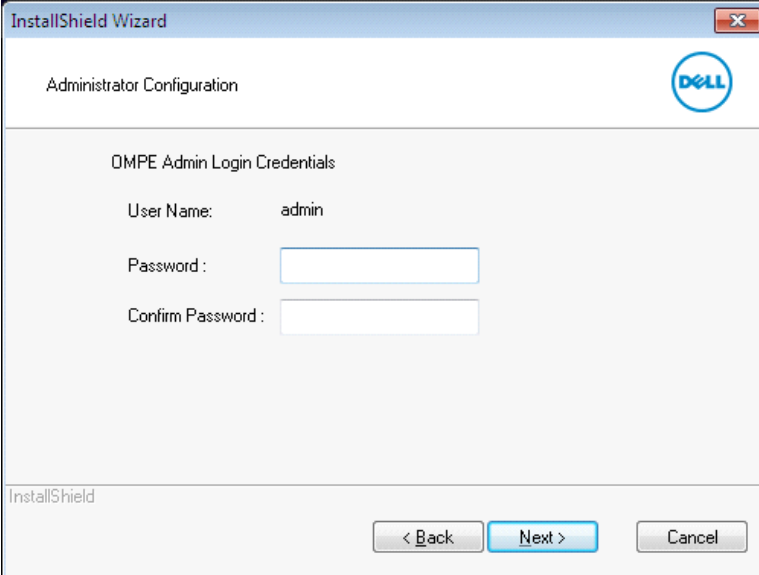
3. Select the language of your choice before installation.

📝 **NOTE:** If the operating system fails to recognize any language supported by OMPE, the English version is installed.

4. In the InstallShield wizard welcome window, click **Next**.

5. Read the OMPE Software License Agreement and OMPE Personal Information Collection and Use statements. Select **Yes** for both to accept the terms and proceed with the installation.

6. Click **Next**.

7. Read the OMPE Printer Data Collection and Use statement to enable sending printer data to Dell. If you agree to send printer data to Dell, select **Yes**.

8. Click **Next**.

9. InstallShield installs OMPE in the default location C:\<Program Files>\Dell Printers\OMPE. To choose a different location, click **Browse**.

10. Click **Next**.

11. If you want to use the system credentials for OMPE login, setup Active Directory Service (ADS) authentication. For more information, see Setting up ADS. Otherwise, click **Next**.

12. If you setup ADS, you can use windows credentials to log in to OMPE using Single Sign-On. To configure Single Sign-On, see Setting up Single Sign-On.

13. Select HTTP Port as 80 or 8080.

14. To create a desktop shortcut, select **Create Desktop Shortcut**.

15. Click **Next.**

16. By default, a user with administrator privileges is configured with user name **admin**. Enter a valid password in the **Password** field.

17. Reenter the password in the **Confirm Password** field.

18. Click **Next.**

19. If OMPMv2 is previously installed in your system, the InstallShield prompts for data migration from OMPMv2 to OMPE.
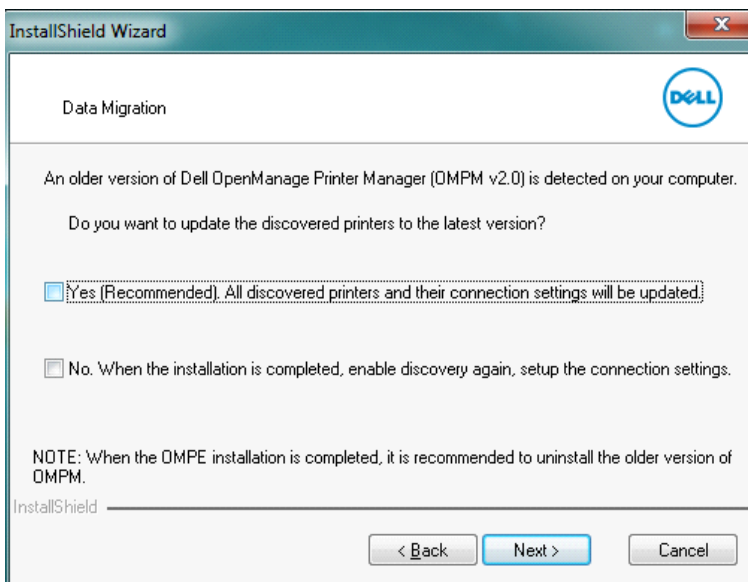
20. To update all discovered printers from OMPMv2 to OMPE, select **Yes**. Else select **No**.

21. Click **Next**.

22. To review or change any installation settings, click **Back.**

23. Click **Install**.

    The **Setup Status** window displays the status of OMPE installation in a progress bar.

 NOTE: The normal installation time is approximately five minutes.

24. On successful installation, InstallShield displays a message indicating installation is complete.
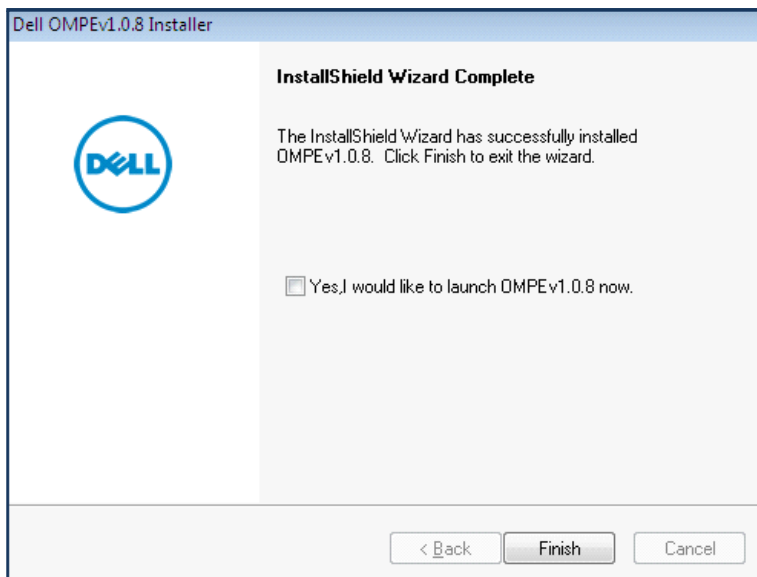
25. To launch OMPE immediately, select the check box.
26. Click **Finish**.

Setting up ADS

You can use Active Directory Service (ADS) to authenticate and authorize users to log in to the OMPE server using their system credentials.

1. In the ADS configuration window, select **Use Active Directory LDAP Authentication**.

NOTE: Active Directory Service uses Lightweight Directory Access Protocol (LDAP) for authentication.

2. Enter the following Active Directory properties:
   - ADS Domain Name *
   - ADS Domain Controller *
   - ADS Port Number *
3. For a secured connection, select **Use SSL Connection**.
4. To choose the SSL certificate file, enter the file path in the **ADS SSL Certificate** field or click **Browse** to navigate to the file.
5. Click **Next**.

On successful configuration of ADS, the installer continues with configuring Single Sign-On.

Setting up Single Sign-On

Using the Single Sign-On feature, an Active Directory user can log in to OMPE using the windows credentials.

📝 **NOTE:** Single Sign-On can be set up only at the installation stage.

1. During installation, complete Active Directory Service (ADS) Configuration and click **Next**.

📝 **NOTE:** Active Directory Service (ADS) must be configured before proceeding with Single Sign-On configuration.

2. In the **Single Sign-On configuration** window, select **Use Single Sign-On**.
3. In the configuration window, enter **Kerberos Domain Controller Name**, **Kerberos Realm**, **Principal Name**, and **Keytab File Name** in the respective fields.

📝 **NOTE:** Please contact your system administrator for exact values.

4. Click **Next** to confirm the settings and continue installing OMPE.
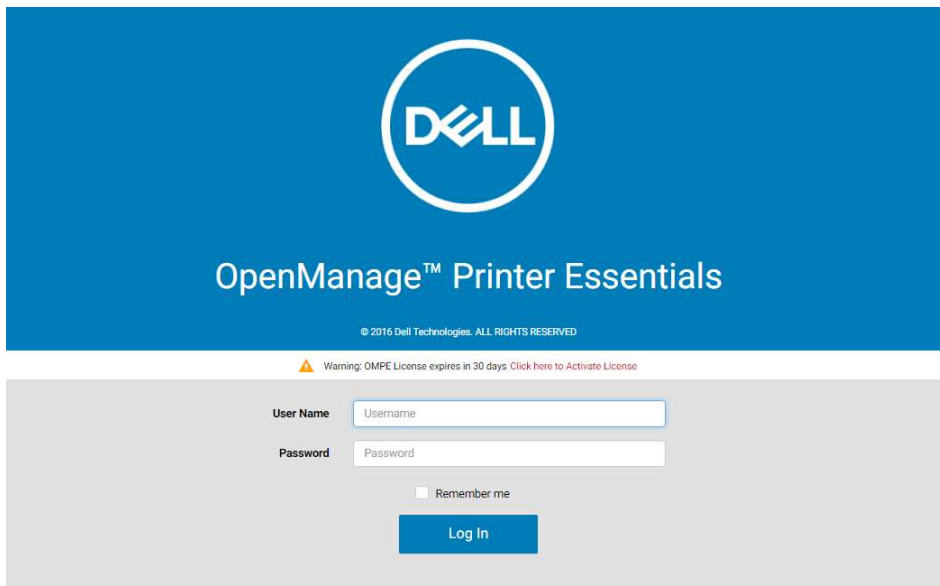
Starting OMPE

You can log in to OMPE with or without Single Sign-On.

1. Double click on the desktop shortcut for OMPE or access the URL

   http:// ipaddress:<Port>

   where *ipaddress* is the IP address of the OMPE server. Alternatively, domain name of the OMPE server can be used instead of the IP address. *Port* is the HTTP port selected during installation.

📝 **NOTE:** If the HTTP port is set as 80 during installation, it is not necessary to type the port number in the URL.

   The **Login** window is displayed.

Warning: OMPE License expires in 30 days Click here to Activate License

| User Name | Username |
| Password | Password |

☐ Remember me

Log In

2. Enter a valid username and password.

3. For OMPE to remember your username and password, select **Remember me**.

4. If you want to log in using Single Sign-On, select **Use Windows login credentials**.

NOTE: If you have not configured Single Sign-On during installation, this check box will not be visible.

NOTE: This feature is supported on IE, Chrome, Mozilla Firefox and Edge web browsers. The check box to use Windows login credentials will not be visible in other web browsers.

5. If you are using the evaluation version of OMPE, a warning message in the Login window displays the number of days remaining for license expiry.

6. To activate the license from Login window, in the warning message click **Click here to Activate License**.

   The **Get License** widget is displayed.

7. Select the mode of license activation and continue. For more information, see Product support.

8. Click **Log In**.

📝 **NOTE:** If an activation key is entered, the warning message is not displayed during subsequent login.

📝 **NOTE:** The host name-IP address mapping entry must be added to the **hosts** file on Windows machine.

Uninstalling OMPE

You can uninstall OMPE from the Start menu or using Add/Remove Programs in the Control Panel.

To uninstall from the Start menu:

Click **Start ➙ All Programs➙ Dell Printers➙ OMPE ➙ Uninstall**

While uninstalling, OMPE prompts for database retention. If you choose to retain the database, all OMPE components except the database will be deleted. If you choose to not retain the database, it will be deleted along with all other OMPE components.

Upgrading OMPE

When a new software upgrade for OMPE is available, OMPE notifies the user in the **Notification** widget. To download the new software, click **Download Now** in the new software notification event.

To check the availability of new software upgrade, click 🔵 in the title bar and select **Check for Software Update**. OMPE checks for the availability of a new software version and provides a link to download the software installer. To install the new version of OMPE, double click on the installer and follow the installation procedure. For more information on installation procedure, see Installing OMPE.

OMPE user interface

OMPE's rich user interface is designed for both desktop and tablet and can be accessed using a web browser.

The OMPE user interface consists of the following basic elements:
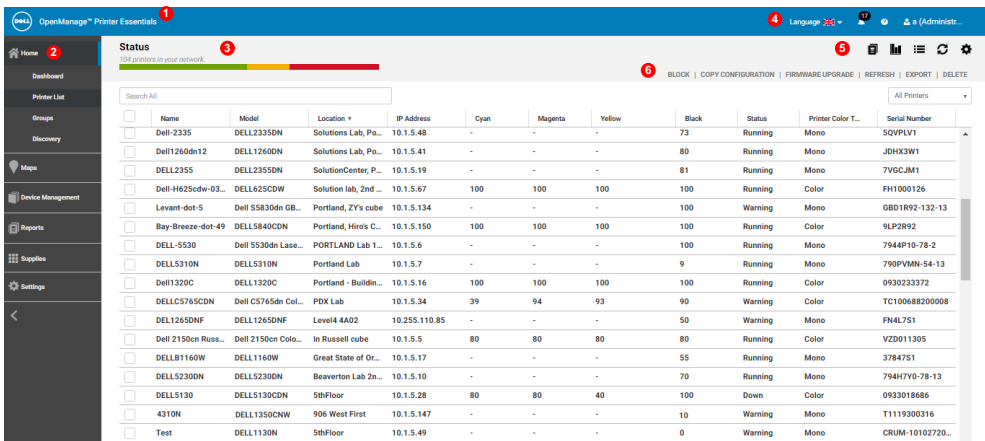
① Title bar
② Navigation pane
③ Workspace window
④ Title bar menu
⑤ Quick-launch toolbar
⑥ Action menu

Title bar

The title bar displays the OMPE title which consists of a menu with the following drop-down menu buttons:

- 🔔 - Displays the **Notification** widget that notifies status of important events and operations. For more information, see Notification widget.

📝 **NOTE:** The number of unread notifications is displayed above the notification icon (🔔⑦).

- ❓ - Displays a drop-down menu with the following system related commands:
  - Help Contents
  - Online Help
  - Feedback
  - Support
  - Logs
  - Export System logs
  - License
  - Check for Software Update
  - About
- 👤 - Helps to log out of OMPE.

Navigation pane

All printer management operations supported by OMPE are organized in separate windows. A window is the main work area of OMPE where you can view and manage printers. To access various windows in OMPE, use the menu commands in the Navigation pane on the left side of the OMPE screen.

The following table lists the various windows accessible from the Navigation pane and its functions:

Menu command	Description
Home >	
Dashboard	Provides an overview of printers in a dashboard.
Printer List	Provides an overview of printers in a printer status list.
Groups	To create and manage printer groups.
Discovery	To perform printer discovery in various modes.
Maps	Uploads and mark printers on the uploaded maps.
Device Management >	
Firmware	Upload or update printer firmware.
Policy	Create policies and check for its conformance and enforce policies.
Alerts	Send emails to users about printer related events.
Templates	Upload or update printer templates[*].
Schedules	Create and manage scheduled tasks.
Connections	Configures and update SNMP and EWS settings.
Reports	Generates reports on printer resource utilization.

Menu command	Description
Supplies	Orders for consumables.
Settings >	
Preferences	Configure the dashboard and printer list views and enable or disable printer data upload to Dell Print Metering.
SMTP	Configure SMTP settings.
Proxy	Configure the proxy settings for OMPE.
Users	Enables user account management.
Cleanup	Remove unwanted data history from the database.
Backup	Generate database backup.

*A template file defines how a parameter supported by OMPE is retrieved or set on the associated printer.

NOTE: In the navigation pane, a blue band on the right of a menu command indicates that the corresponding window is active.

NOTE: To view the contracted menu in the navigation pane, click ◀ at the bottom of the navigation pane. Conversely, to view the expanded format of the menu, click ▶ .

Elements in the workspace window

Each workspace window consists of the following elements:

Quick-launch toolbar - Toolbar with links to common functions in the window.

Action menu - Menu with commands to perform printer specific operations on selected printers.

NOTE: The action menu is enabled only when one or more printers are selected.

Lists - List of related parameter details of the printer fleet.

Keyword search box - To search for a keyword in a list, enter the keyword in the search box provided on top of the list.

Widget - Separate dialog boxes with editable fields to perform printer specific operations.

Customizing Lists

OMPE displays printer details in a list form for clarity and easy management. You can customize lists displayed in OMPE with simple list operations like search, sort, pagination and filtering.

Each list in the workspace window consists of the following basic elements:

① Column header
② Row selection check box
③ Keyword search box
④ Group selection box
⑤ Pagination

The following operations can be performed on a list:

Pagination

For a multi paged list, you can select the page number and number of items per page to be displayed in the pagination area provided at the bottom left of each list.

Keyword search

To search for a keyword in a list, enter the keyword in the search box provided on top of the list.

Printer group selection

To display the list of printers from a printer group, select the printer group from the group selection box on the top right corner of the list.

Changing the column position

To change the position of columns in a list, drag the column header to the required position.

Sorting

It is possible to sort a list based on the order of items in a single column. Click on the column header to sort rows of the list in ascending (indicated by an upper arrow ▲) or descending (indicated by a down arrow ▼) order of data in the column.

Filtering a list

By filtering a list, the list displays selected columns.

1. Click the drop-down arrow next to any column header in the list.
2. Select **Columns**.

   A list box with all column headers of the list is displayed.
3. To display a column, select the column header in the list.
4. To hide a column, clear the check box next to the column header in the list.
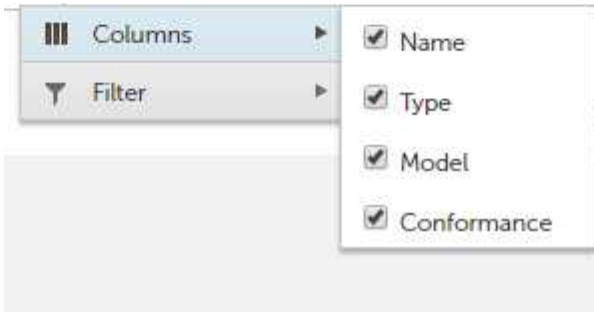
Filtering a list column

By filtering a column, the list displays only the rows with selected values in a column.

1. Click on the drop down arrow next to the column header.
2. Select **Filter**.
3. Select the condition for the filter in **Show items with value that** drop-down box.
4. Enter or select the filter value.
5. Click **Filter**.
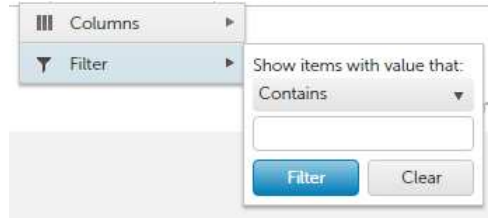
Discovery

Before Dell OpenManage Printer Essentials (OMPE) can manage network printers, it needs to discover the printers on the network. OMPE detects and identifies all printers connected to a network based on their IP address. After discovery, the printers are automatically placed in predefined groups and displayed in the printer status list. The details of all discovered printers are stored in OMPE database.

OMPE discovers printers using Simple Network Management Protocol (SNMP) on IPv4 Local Area Network (LAN). All printers that comply with RFC3805, 1213 and 2790 standards[1] are discovered by OMPE.

OMPE is capable of discovering printers in various modes either immediately or scheduled for a later time. The various discovery modes available are briefed in the table below:

Discovery mode	Description
Local subnet mode	Discovers all printers within the local subnet.
Single IP mode	Discovers printers in a specified IP address. It is the fastest mode to discover a single printer and is suitable when a new printer is commissioned.
IP range mode	Discovers printers in a specified IP range. This mode is useful for initial discovery of printers in a large network. It is recommended to run this during off peak hours, since it is time consuming.

1. **Request for Comments (RFC)** is a type of publication from the Internet Engineering Task Force (IETF) and the Internet Society that defines methods and behavior of internet connected systems.

Discovery mode	Description
Subnet mask mode	Discovers all printers across a subnet. For example, when IP address is 192.168.0.1 and subnet mask is 255.255.255.0, OMPE searches for printers in IP address ranging from 192.168.0.1 to 192.168.0.255.
CSV import mode	Discovers printers with IP addresses imported from a comma separated value file. It is the fastest way to discover multiple printers with a known IP address distributed across multiple subnets.

The user can save the current discovery settings in a discovery profile for future use. A printer can be blocked to exclude it from discovery. For more information on blocking printers, see Blocking a printer.

Discovering printers

When no printers have been discovered yet, OMPE automatically prompts the user to discover printers. Click **OK** in the dialog box to launch the **Discovery** widget.

ⓘ OpenManage™ Printer Essentials

No printers discovered.
Click ok to discover printers.

☐ Dont show me again.

OK   CANCEL
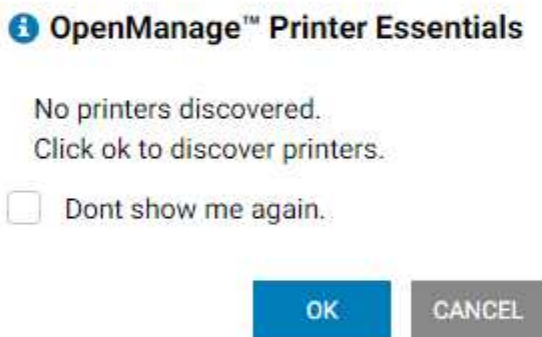
To manually launch the **Discovery** widget:

1. Launch the Dell OpenManage™ Printer Essentials.

2. In the navigation pane, click **Home** ➤ **Discovery**.

📝 **NOTE:** If the estimated time taken for discovery exceeds 30 minutes, then a warning message is displayed indicating a potential delay and prompting the user to continue.

The **Discovery** widget is displayed on the right side of the dashboard. The **Discovery** widget consists of two tabs:

- New Discovery - To start a new discovery
- Edit Discovery - To modify an existing discovery profile

Selecting discovery criteria

To discover printers, you have to select various options for printer discovery in the **Discovery** widget.

📝 **NOTE:** While a discovery is in progress, the user can initiate another discovery which begins after the current discovery is complete.

1. To use a previously saved discovery profile, from the **Select Discovery** list select the profile name.

2. Select the SNMP Options as **SNMPv1/v2** or **SNMP v3**.

📝 **NOTE:** By default, **SNMP v1/v2** option is selected. The selected SNMP option is saved on starting discovery and reused in subsequent discoveries.

3. For **SNMP v1/v2** option provide a valid **SNMP Community Name**.

📝 **NOTE:** The **SNMP Community Name** field is mandatory and must not be left blank.

📝 **NOTE:** Printers whose community name does not match are not discovered.

4. For **SNMP v3** option provide the following details:

User Name - Enter a valid user name. This field is mandatory.

Authentication and Privacy Options - To enable Authentication and Privacy profiles, select the corresponding check boxes.

📝 **NOTE:** By default, both Authentication and Privacy options are selected. You can select both Authentication and Privacy, only Authentication or none.

Authentication Password - Enter a valid password used by the authentication protocol for message authentication.

Confirm Password - Reenter the authentication password for confirmation.

Authentication Algorithm - Select the required authentication protocol: (**MD5**) or Secure Hash Algorithm (**SHA**).

Privacy Password - Enter a valid password used by the privacy protocol for message encryption and decryption.

Confirm Password - Reenter the privacy password for confirmation.

Privacy Algorithm - Select the required privacy protocol: Data Encryption Standard (**DES**) or Advanced Encryption Standard (**AES**).

NOTE: Password should have a minimum of 8 characters and not exceed 255 characters. If the entered and confirmed passwords do not match then **Confirm Password** field is highlighted in red. Reenter the password to confirm.

5. From the **Discovery Mode** list, select the printer discovery mode as Local subnet, Single IP, IP range, Subnet mask or Comma Separated Value (CSV) import.

NOTE: By default, Local subnet mode is selected.

6. For **Single IP** mode, in the **Discovery Mode Input(s)** field, enter a valid printer IP address.

DISCOVERY   ×

NEW DISCOVERY   EDIT DISCOVERY

Select Discovery

No Discovery Profiles   ▼

SNMP Options

⦿ SNMP V1/V2   ◯ SNMP V3

SNMP Community Name

public

Discovery Mode

Local Subnet   ▼

Threshold:

Slower   Faster

Warning: Higher speed would use more system resource.

Run Now   Later

☐ Save in discovery profile

Apply

NOTE: You can enter wildcard character '*' in the last segment of IP address to discover printers. For example, when you enter 192.162.49.* OMPE searches for printers in IP address ranging from 192.162.49.1 to 192.162.49.255.

7. For **IP Range** mode, in the **Discovery Mode Input(s)** field, enter the start and end IP address in the **From** and **To** fields.

8. For **Subnet Mask** mode, in the **Discovery Mode Input(s)** field, enter the **IP address** and **Subnet Mask.**

9. For **CSV Import** mode, in **Discovery Mode Input(s)**, click **Upload** and select the .csv file to import**.**

NOTE: You can create a CSV file for a set of printers by specifying the list of IP addresses in a comma separated list in ANSI text format and save it as.txt file.

NOTE: A CSV file with the list of IP addresses cannot have any wildcard characters.

10. Select the system resource usage for printer discovery (ranging from one to four) by adjusting the slider in the **Threshold** option.

NOTE: Selecting smaller threshold values results in lesser usage of system resource. Hence, slowing the speed of discovery.

11. Click **Apply**.

Scheduling a discovery

In the Discovery widget, **Run Now** option is selected by default for immediate discovery. You can schedule a discovery profile to be performed once by selecting the **Later** option.

1. In the **Discovery** widget, select **Later**.

2. From the **Schedule Task** list, select the schedule frequency.

3. From the **Schedule to Run** and **Time** drop-down lists, select schedule date and time.

4. To add any notes, enter the notes in the **Schedule Notes** field.

5. Enter a name for the schedule in the **Profile/Schedule Name** field.

NOTE: This field is mandatory.

6. Click **Apply**.

Saving a discovery profile

You can save the current discovery settings in a discovery profile for later use.

1. In the **Discovery** widget, select **Save in discovery profile** check box.

2. Enter a name for the discovery profile in the **Profile/Schedule Name** field.

3. Click **Apply**.

Editing discovery profile

You can modify the discovery settings of a saved discovery profile using this option.

1. In the **Discovery** widget, click **Edit Discovery** tab.
2. From the **Select Discovery** drop-down list, select the name of discovery profile to be changed.
3. Edit the profile settings as required.
4. Click **Update**.

Deleting a discovery profile

1. In the **Discovery** widget, click **Edit Discovery Profile** tab.
2. From the **Select Profile** drop-down list, select the discovery profile to be deleted.
3. Click **Delete**.

Stopping a discovery

When a discovery is in progress, you can terminate the operation in progress.

1. Place the mouse pointer on 🔔 in the title bar.
2. The **Notification** drop-down window displays the status of ongoing discovery in the progress bar.
3. To stop the ongoing discovery operation, click ■ in the Discovery progress bar.

Dashboard

The **Dashboard** provides an overview of the printer parameters by displaying real time statistics of the printer fleet with the help of graphical charts.

The **Dashboard** also provides information on the status of all ongoing and completed operations in the **Notification** widget on the right side of the dashboard.

To view the dashboard:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Home ➝ Dashboard**.

The **Dashboard** window consists of the following elements:

①	Status bar	⑤	Notification widget
②	Quick-Access toolbar	⑥	Operation type filter
③	Dashboard charts	⑦	Status severity filter
④	Chart Action menu	⑧	Progress bar

You can switch between dashboard and list view using the quick-access toolbar.

To view the dashboard, from the quick-access toolbar, click ![icon].

You can customize the dashboard to:
- Change the position of the charts using drag-and-drop operation.
- Select a chart to be hidden or displayed.
- Select refresh interval for a chart.

To customize the dashboard view, click ⚙. For more information, see Customizing dashboard view.

Status bar

The status bar shows the total number of printers in the network and the percentage of printers in each of the following states:
- **OK** - Displayed in green indicates that the printers are in good health and in normal condition.
- **Warning** - Displayed in orange indicates that at least one consumable is below the threshold or the printer operation panel displays a warning.
- **Critical** - Displayed in red indicates that the printers are in one of the following states: Unable to print, Printer offline or Printer is out of service.

Dashboard charts

OMPE provides five predefined charts:
- Device Status
- Toner Levels
- Policy Conformance
- Drum Levels
- Fuser/Roller Levels

Selection of charts

1. From the **Dashboard** view, click ➕.

   A pop-up menu is displayed.
2. Select the check box corresponding to the chart to be displayed.
3. To hide a chart, in the pop-up menu clear the check box for the corresponding chart.
4. Click **Save**.

Viewing charts

You can view dashboard charts for a group of printers in pie or column type. When you hover the mouse pointer on a section of the chart, a pop-up displays the value of the section.

In a column chart, to view the list of printers belonging to a column, click on the column. A pop-up displays a complete list of printers belonging to the column in the chart. The number of printers in the list is displayed above the chart name as shown below.

NOTE: You can search for a printer within the list using the search bar in the pop-up.
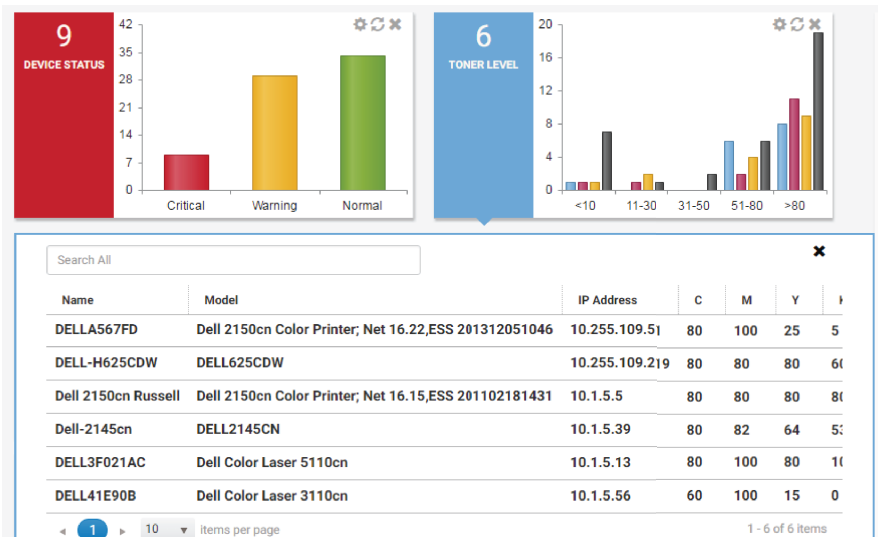
Changing dashboard chart settings

You can change the chart settings using the action menu inside the dashboard chart.

1. From the chart action menu, click ⚙.
2. To select the type of chart as column or pie chart, from the **Chart type** list select the type of chart to be displayed.

NOTE: The Toner Levels, Drum Levels and Fuser/Roller Levels charts can be displayed as column charts only.

3. To view the chart for a printer group, from the **Change group** list select the printer group.
4. To change the chart name, enter a name for the chart in the **Name of the widget** box.
5. Click **Save**.
6. To refresh the chart, click ↻.

Notification widget

OMPE consists of several operations that are either system generated or initiated by the user. The **Notification** widget displays the status summary and progress of all OMPE operations. The status of the following OMPE operations are displayed as separate progress bars:

- Discovery
- Health Poll
- EWS Poll
- Status Poll (SNMP)
- Internet Connection

For an ongoing operation, the progress bar displays the estimated time required to complete the operation.

NOTE: You can also view the **Notification** widget from the notification icon(🔔) in the title bar.

In the **Notification** widget you can start or stop an operation from the progress bar with the help of 🟢 and 🟥 buttons respectively.

NOTE: You can not stop an ongoing Internet communication operation.

In the **Notification** widget, unread status summaries are displayed in bold and the number of unread status summaries are displayed above the 🔔 icon in the title bar.

In the **Notification** widget, you can filter the list of status summaries displayed based on the operation type and severity of operation.

- Filters based on operation type - Discovery, EWS, Firmware, License, Map, Print metering, Policy, Templates, and Warranty.
- Filters based on severity of operation status - Critical state (🔴), Warning state(⚠️), Normal state (ℹ️).

NOTE: The number of events with the severity status is displayed next to the severity icon.

Filtering the notification list

1. To filter the status summary list based on the type of operation, from the operation type drop-down list, select the type of operation.

   The status summary of events of the selected type of operation is displayed.

2. To further filter the list based on the severity, click on the required severity status icon.

Printer List

The **Printer list** view displays printer details in a list format with various parameters listed in separate columns. You can easily analyze and monitor printer details using list features like sorting, searching or filtering. Basic operations such as firmware upgrade, deleting a printer, copying printer configuration, printer blocking and exporting data are also available in the list view.

To view the printer status list:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Home** → **Printer List**.

The **Printer list** window consists of the following elements:

①	Status bar	④	Printer group selection box
②	Quick-Access toolbar	⑤	Keyword search
③	Action menu	⑥	Printer status list

You can switch between dashboard and list view using the quick-access toolbar.

To go to list view:

From the quick-access toolbar, click ▤.

You can customize list view by selecting the columns to be displayed in the printer status list. For more information, see Customizing list view.

Status bar

The status bar indicates the total number of printers in the network and the percentage of printers in each of the following states:

- **OK** - Displayed in green indicates that the printers are in good health and in normal condition.
- **Warning** - Displayed in orange indicates that at least one consumable is below the threshold or the printer operation panel displays a warning.
- **Critical** - Displayed in red indicates that the printers are in one of the following states: Unable to print, Printer offline or Printer is out of service.

To view the printer list for each status separately, click the corresponding color on the status bar.

Viewing printer details

To view a printer's details, click on the printer name in the printer status list. The printer details widget displays the detailed information of all parameters associated with the printer. To view the printer details of the previous or next printer in the printer status list, click **Previous** or **Next**.

NOTE: Not all parameters are available for non-Dell printers.

The parameters are grouped into the following tabs in the widget:

- General
- Info
- Printer Settings
- Email
- Network Setting
- Address Book
- Consumables
- Warranty

The parameter fields that cannot be retrieved by OMPE are empty. This could be due to mismatch in SNMP or EWS settings of the printer because of which OMPE is unable to communicate with the printer.

NOTE: To view more parameters in the tabs, set the printer EWS username and password in the **Connections** window. For more information, see Updating connection settings.

To modify parameters for a printer, in the printer details widget edit the fields required and click **Apply**. If the printer is assigned to a location in a map, to locate the printer on a map click **Locate On Map**.

![NOTE icon] **NOTE:** Fields that cannot be modified in the printer details widget are in grey.

Printer operations

The printer list view also provides links to common printer operations that are discussed below.

Blocking a printer

You can stop OMPE from retrieving status parameters from a printer by blocking the printer.

1. From the printer status list in the **Printer list** view, select the printer(s).

![NOTE icon] **NOTE:** To select printers from a group, from the group selection box, select the printer group.

2. From the action menu, click **BLOCK**.

A dialog box is displayed.

3. Click **OK** to confirm.

✎ **NOTE:** Blocked printers will be moved to **All Blocked Printers** group. For more information, see Groups.

Unblocking a blocked printer

OMPE will resume to retrieve status parameters from a blocked printer when you unblock the printer.

1. From the group selection box in the **Printer list** view, select **All Blocked Printers** group.
2. From the printer status list, select the printer(s).
3. From the action menu, click **UNBLOCK**.

    A dialog box is displayed.
4. Click **OK** to confirm.

Deleting a printer

You can delete a printer and its associated data from OMPE.

1. From the printer status list in the **Printer list** view, select the printer(s).

✎ **NOTE:** To select printers from a group, from the group selection box, select the printer group.

2. From the action menu, click **DELETE**.

    A dialog box is displayed.
3. Click **OK** to confirm.

✎ **NOTE:** Deleted printers can be rediscovered during the next discovery.

Exporting printer data

You can export the complete parameter details of one or more selected printers in the printer status list to a file in CSV format.

1. From the printer status list in the **Printer list** view, select the printer(s).
2. From the action menu, click **EXPORT**.

    A message box is displayed indicating successful file download.
3. Click **OK** to save the file.

Updating firmware

You can update firmware of one or more printers to its latest version from the Dell Cloud Connect server repository.

📝 **NOTE:** Firmware upgrade is performed only for Dell printers with available templates.

1. From the printer status list in the **Printer list** view, select the printer(s).

📝 **NOTE:** To select printers from a group, from the group selection box select the printer group.

2. From the action menu, click **FIRMWARE UPGRADE**.

   The **Firmware Upgrade** widget is displayed.

📝 **NOTE:** If multiple printers are selected, firmware for each printer is updated to its latest version available in the Dell Cloud Connect server.

3. The printer model number and current version number are displayed in **Model** and **Current Version** fields.

4. From the **Update to** list, select the version number for the updated firmware.

📝 **NOTE:** If the latest firmware update for a printer is not available in the Dell Cloud Connect server, manual firmware update option is provided. For more information, see Updating firmware manually.

5. The publish date and release notes are displayed in the **Release Notes** field.

6. To select the firmware tool, click **Advanced Options**.

7. From the **Tool Name** list, select the firmware tool.

8. The command for the selected tool is displayed in the **Tool Parameter** field.

9. To update immediately, click **Now**.

10. To schedule the task for a later time, click **Later**.

11. Enter a name for the schedule in **Schedule Name** field.

📝 **NOTE:** This field is mandatory.

12. From the **Schedule to run on** and **Time** drop-down list, select the schedule date and time.

13. To add any notes, enter the notes in the **Schedule Notes** field.

14. Click **OK**.

Copying configuration

OMPE enables you to copy the configuration of a printer to one or more printers of the same printer model.

⚠ **CAUTION:** Previous configuration of the printer will be lost on copying a new configuration.

1. From the printer status list in the **Printer list** view, select the printer(s).

📝 **NOTE:** To select printer(s) from a group, from the group selection box, select the printer group.

2. From the action menu, click **COPY CONFIG**.

   The **Copy Configuration** widget is displayed.

3. Select the group of parameters to be copied.

4. Click **Next**.

   The **Copy Configuration > Select Printers** page displays the printer model number, parameter options selected for copying and the printer list.

5. From the printer list, select the printers for which the configuration is to be applied.

6. From the action menu, click **APPLY**.

   A dialog box is displayed.

7. Click **OK** to confirm.

📝 **NOTE:** The copying of configuration will be skipped if the printer is offline.

Generating printer status list report

You can generate a report of printer status list displayed in the **Printer list** view in CSV or PDF format. The report can be saved in a file or sent through email.

1. From the quick-access toolbar, click ⬛.

   The **Report** widget is displayed.

2. Select the report delivery options as **Email** or **Save**.

📝 **NOTE:** By default, only the **Save** option is selected.

3. From the **File Type** list, select the file format as **Comma Delimited** or **PDF**.

4. From the **Schedule Task** drop-down list, select the frequency to generate reports as **Now**, **Daily**, **Weekly** or **Monthly**.

📝 **NOTE:** By default, **Now** is selected for immediate report generation.

📝 **NOTE:** When you schedule report generation, the generated report is sent through email only.

5. Select the required schedule options for the selected frequency.
   - For **Daily** schedule, select the time from the **Time** drop-down list.
   - For **Weekly** schedule, select the day and time from the **Day** and **Time** drop-down lists.
   - For **Monthly** schedule, select the date and time from the **Date** and **Time** drop-down lists.
6. To add any notes, enter the notes in the **Schedule Notes** field.
7. From the **Select Users** list, select registered users who will receive the report through email.

NOTE: This field is mandatory.

8. Enter email address of the unregistered users in the **Email Address** field.

NOTE: Email addresses must be separated by comma.

9. Enter the subject of the email in the **Subject** field.
10. Click **Save**.

Groups

The **Groups** feature enables logical grouping of printers based on the printer characteristics. This helps administrators to perform several operations on multiple printers in a group at once.

OMPE supports three types of printer groups:

- **System** - Default groups pre-defined by OMPE. You cannot create, modify or delete system groups.
- **Manual Selection** - Groups with no rules defined. You can add individual printers from the network to manual selection groups.
- **Rule Based** - Groups for which the user defines the rules. OMPE dynamically adds printers with parameters satisfying the rules into the rule based group.

NOTE: If a printer satisfies the rules of more than one group, it will be added to multiple groups.

OMPE defines the following system groups:

- **Color**- Group of all color printers.
- **Mono** - Group of all monochromatic printers.
- **Critical** - Group of printers that are in the critical state. A critical state for a printer can be: Unable to print, Printer is offline or Printer is out of service.
- **Warning** - Group of printers that are in the warning state. A warning state for a printer can be: Input tray out of paper, Output tray full, One or more consumables low or Warning status sent by the printer.
- **Normal** - Group of printers that are in the normal state. All printers in this group have good health and are working normally.
- **All Printers** - All discovered printers in the network belong to this group. The **All Printers** group is the superset of all groups.
- **All Blocked Printers** - Group of printers that are blocked. Usually printers in maintenance are assigned to this group.

NOTE: The **All Blocked Printers** group is exclusive to all other groups. Blocked printers cannot belong to any other printer group.

To open the **Groups** window:

1. Launch the Dell OpenManage^{TM} Printer Essentials.
2. In the navigation pane, click **Home** → **Groups.**

The **Groups** window displays a list of all available printer groups and its details. To view the list of printers present in a group, in the **Name** column click on the group name.

Adding a group

You can create both manual selection and rule based printer groups using this option.

Adding a manual selection group

1. From the action menu, click **CREATE**.

   The **Create Group** widget is displayed.
2. Select **Manual Selection**.
3. Click **Next**.
4. Enter a name for the group in the **Enter the group name** field.
5. Click **Next**.

   The **Groups > Create Group > Manual Selection** window displays the printer list.
6. Select printers to be added to the group.

✎ **NOTE:** You can search for printers using the search box on top of the list.
7. Click **Save**.

Adding a rule based group

1. From the action menu, click **CREATE**.

   The **Create Group** widget is displayed.
2. Select **Rule Based Selection**.
3. Click **Next**.
4. Enter a name for the group in the **Enter the group name** field.
5. Click **Next**.

   The **Rule Based Group** widget is displayed.
6. Select the rules for printer selection from the drop-down lists in the **Search Option**.
7. From the first drop-down list, select the printer attribute.
8. From the second drop-down list, select the condition.
9. In the text box, enter the attribute value to evaluate the condition.
10. To add an additional rule, from the last drop-down list select the rule operators as either **AND** or **OR.**

An additional rule selection row is displayed.

11. Select the additional rule by repeating steps 7 to 10.

✎ **NOTE:** You can click ✖ to remove a rule.

12. Click **Save**.

Printers satisfying the specified rules are displayed in the **Groups > Create Group > Rule Based Selection** window.

13. From the action menu, click **SAVE**.

✎ **NOTE:** To change the rule for a group, click **Update Rule** from the action menu.

Editing a group

You can modify printers in both manual selection and rule based groups by editing it.

Editing a manual selection group

1. From the groups list in the **Groups** window, select the manual selection group.

2. From the action menu, click **EDIT**.

The **View** widget is displayed.

3. Enter the name of the group in **Enter the group name** field.

4. Click **Next**.

The printer list is displayed.

5. To add printers to the group, select the printers from the printer list.

6. To delete printers from the group, clear the check box for the printers you want to remove.

7. From the action menu, click **SAVE**.

Editing a rule based group

1. From the groups list in the **Groups** window, select the rule based group.

2. From the action menu, click **EDIT**.

The **View** widget is displayed.

3. Enter the name of the group in **Enter the group name** field

4. Click **Next**.

The **Rule Based Group** widget is displayed.

5. Select the new rule from the drop-down lists in the **Search Option.**

6. Click **Search**.

All printers satisfying the defined rule are displayed in the
Groups > Edit Group > Rule Based Selection window.

NOTE: To change the rule, from the action menu click **UPDATE RULE**.

7. From the action menu, click **SAVE**.

Deleting a group

You can delete manual selection or rule based groups from the **Groups** window
or **Edit Group** window.

NOTE: When you delete a group, printers in the group are not deleted from
the database.

1. From the group list in the **Groups** window, select the group.
2. From the action menu, click **DELETE**.

   A dialog box is displayed.
3. Click **Delete** to confirm.

To delete a group from the **Edit Group** window:

1. From the group list in the **Groups** window, select the group.
2. From the action menu, click **EDIT**.

   The **View** widget is displayed.
3. Enter the name of the group in **Enter the group name** field
4. Click **Next**.

   The **Groups > Edit Group** window is displayed.
5. From the action menu, click **DELETE GROUP**.

Maps

Using the **Map** feature, location of network printers can be graphically represented on a map of the enterprise network. Maps reduce the time taken for troubleshooting because they help administrators to quickly identify the location of faulty printers.

Using OMPE the user can upload a map and add printers to it. Printers are displayed as pins (📍) on a map. The pins (📍) indicate the printer's location, updated health status and configuration.

To open the **Map** window:

1. Launch the Dell OpenManage^{TM} Printer Essentials.

2. In the navigation pane, click **Maps**.

The Maps window consists of the following elements:

① Map selection list
② Map
③ Select Printers list
④ Printer status legend
⑤ Zoom tool

Adding a map

You can upload a map in JPEG, PNG or BMP formats to OMPE using this option.

🖉 NOTE: If there are no maps uploaded to OMPE, only the add map button (➕) is enabled in the **Map** window.

1. In the navigation pane, click **Maps**.

   The **Map** window is displayed.

2. On the quick-access toolbar, click ➕.

   The **Add Map** widget is displayed.

3. Enter a name for the map in the **Name** field.

4. To choose the map file that you want to upload, click **Browse**.

5. Click **Save**.

Adding printers to a map

Before adding printers to a map, you must add printers to the **Select Printers** list. Then you can drag the required printers from the **Select Printers** list to the map.

🖉 NOTE: A printer can be added to only one map at a time.

Editing the select printers list

The **Select Printers** list displays a list of printers selected for the map.

1. From the map selection drop-down list, enter or select the map name.

2. From the action menu, click **ADD PRINTERS**.

   A list of discovered printers is displayed in the

   Map> Select printers to be added to the map window.

3. From the group selection menu, select the printer group.

4. To add printers to the **Select Printers** list, from the printer list select the printers to be added.

5. To remove printers from the **Select Printers** list, from the printer list clear the check box next to the printers that you want to remove.

🖉 NOTE: You can search for printers in the search box on top of the list.

6. From the action menu, click **SAVE**.

Adding printers on the map

Printers can be added to the map from the **Select Printers** list.

1. Drag the printer pins (📍) from the **Select Printers** list to relevant locations on the map.
2. From the action menu, click **SAVE.**

📝 **NOTE:** The **Select Printers** list displays only printer pins (📍) that have not been added to the map.

Viewing printer details

The **Map** window displays the map and the **Select Printers** list.

To view the details of a printer on the map, place the mouse pointer on a printer pin (📍). A callout is displayed with printer details such as name, model, IP address, location, and status.

📝 **NOTE:** To hide the **Select Printers** list, click ➡ on the upper right corner of the map. To view the hidden **Select Printers** list click ⬅.

📝 **NOTE:** The color of a printer pin (📍) indicates the printer's health status such as 📍 Normal, 📍 Warning or 📍 Critical.

Deleting printers on a map

When printers are physically moved from one location to another, it must be updated on the map. You can change the location of printers on a map by drag-and-drop operation. To delete printer pins (📍) from a map, you must delete the printer from the map.

1. From the map selection drop-down list, enter or select the map name.
2. On the map, click on the printer pin (📍) that you want to delete.

    A pop-up menu is displayed.
3. Click **Delete**.

    A dialog box is displayed.
4. Click **Delete** to confirm.

📝 **NOTE:** Printers are deleted from both the map and the **Select Printers** list.

Clearing a map

All printers marked on a map can be removed by clearing the map.

1. From the map selection drop-down list, enter or select the map name.
2. On the quick- access toolbar, click ⊗.

NOTE: All printers are deleted from the map and the **Select Printers** list.

Editing a map

You can change the image file of an existing map using the **Edit Map** feature.

1. On the quick-access toolbar, click ✏.

   The **Edit Map** widget is displayed.
2. Enter the map name in the **Name** field.
3. To choose the new map file, click **Browse**.
4. Click **Save**.

The **Map** window displays the newly uploaded map.

NOTE: To change the printers marked on a map, you must edit the **Select Printers** list. For more information, see Editing the select printers list.

Deleting a map

1. From the map selection drop-down list, enter or select the map name.
2. On the quick-access toolbar, click 🗑.

   A dialog box is displayed.
3. Click **Delete** to confirm.

NOTE: When you delete a map, the **Select Printers** list associated with the map is also deleted, but the printers are available in the database.

8

Firmware

The **Firmware** feature enables you to upgrade firmware for printers manufactured by Dell. OMPE enables firmware upgrade for printers from its repository. OMPE uses curl or lpr (Line Printer Remote) tool to upgrade printer firmware. You can also upgrade the firmware for a printer manually by uploading the firmware file.

The firmware upgrade feature is also available from the printer list view in the **Home** window. Firmware upgrade can be performed immediately or scheduled for a later time.

To open the **Firmware** window:

1. Launch the Dell OpenManage^{TM} Printer Essentials.
2. In the navigation pane, click **Device Management** ➞ **Firmware**.

The **Firmware** window displays a list of printers and the firmware details. The fields in the list are:

Field	Description
Name	Name of the printer.
Model	Model number of the printer.
Current Version	Current version of firmware in the printer.
Updated On	Date on which the current version was installed.
Other Version	Indicates if an updated firmware version is available.
Status	Indicates the current status of the printer.
IP Address	IP address of the printer.
Location	Location of the printer.

NOTE: You can select firmware details of a printer group or search for printers using the group selection box and search bar on top of the list respectively.

Updating firmware from Dell Cloud Connect server

To update firmware for a printer you can choose from multiple firmware versions available in the Dell Cloud Connect server.

NOTE: To update firmware, you need an internet connection to get connected to the Dell Cloud Connect server.

1. From the printer list in the **Firmware** window, click **Available** corresponding to the printer.

   The **Firmware Upgrade** widget is displayed.

2. The current firmware version installed in the printer is displayed in the **Current Version** field.

3. From the **Update to** list, select the version for firmware update.

   The selected firmware version's date of publishing and release notes are displayed in the **Release Notes** field.

4. To select the firmware tool, click **Advanced Options**.

   The **Tool Name** and **Tool Parameter** fields are displayed.

5. From the **Tool Name** list, select the firmware tool.

6. The command for the selected tool is displayed in the **Tool Parameter** field.

7. By default, **Now** is enabled to run firmware upgrade immediately. To schedule the task for a later time, click **Later**.

8. Enter a name for the schedule in the **Name** field.

9. From the **Schedule to run on** and **Time** drop-down list, select the schedule date and time.

10. To add any notes, enter the notes in the **Schedule Notes** field.

11. Click **OK**.

NOTE: The status of firmware download from Dell Cloud Connect server is displayed in a pop-up when you click ⚡ in the quick-access toolbar.

NOTE: Please check your proxy server settings if necessary to receive the list of firmware versions from the Dell Cloud Connect server. For more information, see Changing proxy settings.

NOTE: If you select multiple printers for firmware upgrade, the firmware of each printer is upgraded to its latest version.

Updating firmware manually

You can manually update firmware of one or more printers by uploading the required firmware file from the local storage.

NOTE: A printer model can be associated with only one firmware tool.

1. On the quick-access toolbar, click ⬆.

The **Firmware> Manual Update** window displays a list of printers and its firmware details.

2. From the **Model** list, select the printer model.

3. To choose the firmware file you want to upload, click **Browse**.

4. To select the firmware tool, click **Advanced Options**.

The **Tool Name** and **Tool Parameter** fields are displayed.

5. From the **Tool Name** list, select the firmware tool.

6. The command for the selected tool is displayed in the **Tool Parameter** field.

7. To select a printer group, from the group selection box select the printer group.

8. From the printer list, select the printer(s).

9. By default, **Now** is enabled to run firmware upgrade immediately. To schedule the task for a later time, click **Later**.

10. From the **Run on** and **Time** drop-down lists, select the schedule date and time.

11. Enter a name for the schedule in the **Schedule Name** field.

NOTE: This field is mandatory.

12. To add any notes, enter the notes in the **Schedule Notes** field.

13. Click **Update**.

9

Policy

Administrators can define and audit policies for printers in the network using the **Policy** feature. This helps administrators to identify and correct any deviation in the configuration of the printer fleet.

The **Policy** feature enables administrators to define, check for conformance and enforce policies for printers in the network. You can define the following type of policies in OMPE:

- Print - To configure printing settings such as orientation, color mode and so on.
- Copy - To configure printer copy settings.
- Email - To configure SMTP settings for sending emails.
- Fax - To configure the fax settings.
- FTP - To configure the file transfer protocol settings.
- General - To configure general settings such as location, language, format of the date and so on.
- Network - To configure network settings for printer communication.
- Paper - To configure the paper settings such as paper size, input tray. and so on.
- Scan - To configure scan settings.
- Security - To configure SNMP and HTTP security settings.

Policies are defined for a specific printer model. If a printer does not conform to a policy, you can enforce the policy on the printer. You can perform policy conformance and enforcement operations immediately or schedule for a later time.

NOTE: After a printer is discovered, the policy defined for its printer model is automatically applied.

To open the **Policy** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Device Management → Policy**.

Adding a policy

You can create a new policy for a printer model using this option.

1. From the action menu, click **CREATE**.

   The **Policy > Create Policy** window is displayed.

2. Enter a name for the policy in the **Policy Name** field.

3. From the **Model** list, select the printer model.

4. To copy the current attributes of a printer as the policy settings, from the **Printer** list select.

5. From the **Type** list, select the type of policy.

6. Select the required settings for the policy type in the **Settings** field.

7. Click **Save**.

NOTE: To enforce the policy immediately after creation, click **Save & Enforce**. The **Policy > Enforce Conformance** window is displayed for policy enforcement. For more information, see Enforcing a policy.

Viewing policy status

You can view the list of policies in the **Policy** window. The conformance status for each policy is displayed in the **Conformance** column as one of the following:

- Running - Indicates policy is being applied.
- Check - Indicates the policy has been applied. To check for policy conformance, click **Check**.
- Re-check - Indicates the applied policy has been checked for conformance. To check for conformance again, click **Re-check**.
- ⚠ Re-Enforce - Indicates the policy has been violated. To enforce the policy, click **Re-Enforce**.

NOTE: To view details of the policy violation, click ⚠ in the policy list.

Viewing printer list

You can view a consolidated policy conformance status list for all printers in the **Printer List**.

1. From the quick-access toolbar, click ☰.

   The **Policy > Printer List** window is displayed.

2. The printer list displays all policies defined for a printer in the corresponding policy type column.

NOTE: To enforce a violated policy, click ⚠.

Name	Model	IP Address	Print	Copy	Paper
DELL1350CNW	DELL1350CNW	10.255.109.43			
Color Printer S3840cdn	DELLS3840CDN	10.255.108.254	S3840_PrintPolicy	⚠ S3840_CopyPolicy	
Color Printer S3840cdn	DELLS3840CDN	10.255.109.80			
ET0084EDB0490	DELL5840CDN	10.255.109.93			
Color MFP S3845cdn	DELLS3845CDN	10.1.5.152	S3845_PrintPolicy	S3845_CopyPolicy	
DELLC481DD	DELL1760CNW	10.255.109.152			
DELL-H625CDW	DELL625CDW	10.255.109.219			
Dell-H815dw-EB30C0	DELL815DW	10.255.110.53	⚠ Dell815_PrintPolicy	Dell815_CopyPolicy	
DEL1265DNF	DELL1265DNF	10.255.110.85			
DELL2355	DELL2355DN	10.1.5.19			

Viewing policy widget

To view policy details in a separate widget, click on the policy name in the policy list in **Policy** window. The **Policy** widget is displayed with the following tabs:

- **Details –** displays the detailed policy settings.
- **Violation –** displays a policy violation list with a list of printers that have violated the policy.

Place the mouse pointer over ⚠ to display a callout with details of the policies violated by the printer.

Checking for conformance

When a policy is defined, you can confirm if the policy is applied on the printers by checking for conformance immediately or on a scheduled time.

1. From the policy list in the **Policy** window, select the policy.

2. From the action menu, click **CHECK CONFORMANCE**.

   The **Policy > Check Conformance** window for the policy and printer model is displayed.

NOTE: Policy conformance check can also be initiated by clicking **Check** from the policy list for the policy.

3. From the printer list, select the printer(s).

4. To check for conformance immediately, from the action menu click **CHECK NOW**.

   A message box confirms that the conformance check is in progress.

5. To schedule conformance check, from the action menu click **CHECK LATER**.

   The **Schedule Conformance** widget is displayed.

6. From the **Schedule** list, select the frequency for conformance checking as **Once**, **Daily**, **Weekly** or **Monthly**.

7. From the **Schedule to run on** and **Time** drop-down list, select schedule date and time.

8. To add any notes, enter the notes in the **Schedule Notes** field.

9. Click **Apply**.

Editing printer list for a policy

A policy is defined for a specific printer model. You can add or remove printers belonging to the selected printer model to follow a policy.

1. From the policy list in the **Policy** window, select the policy.

2. From the action menu, click **EDIT PRINTER**.

The **Policy > Edit Printer** window is displayed with the policy name and printer model.

3. From the printer list, select the printers for which the policy has to be applied.
4. Click **Update**.

Enforcing a policy

When a policy is violated, you can impose the policy on a printer by enforcing it. You can enforce a policy immediately or schedule for a later time and date.

1. From the policy list in **Policy** window, select the policy.
2. From the action menu, click **ENFORCE**.

   The **Policy > Enforce** window for the policy and printer model is displayed.

NOTE: Policy enforcement can also be initiated by clicking **Re-Enforce** from the policy list.

3. From the printer list, select the printer.
4. To enforce the policy immediately after creation, from the action menu click **ENFORCE NOW**.

   A message box confirms that policy enforcement is in progress.

5. To schedule policy enforcement for a later time, from the action menu click **ENFORCE LATER**.

   The **Schedule Enforcement** widget is displayed.

6. From the **Repeat** list, select the frequency for enforcement as **Once**, **Daily**, **Weekly** or **Monthly**.
7. From the **Schedule to run on** and **Time** drop-down lists, select the schedule date and time.
8. Click **OK**.

NOTE: Before enforcing a policy, you must set the printer EWS password for the printers in **Device Management** ➞ **Connections**. For more information, see Updating connection settings.

Editing a policy

You can modify an existing policy using this option.

1. From the policy list in the **Policy** window, select the policy.
2. From the action menu, click **EDIT**.

   The **Policy > Edit Policy** window is displayed.
3. Reconfigure the policy.
4. Click **Save**.

NOTE: To save and enforce the policy immediately, click **Save & Enforce**. The **Policy > Enforce Conformance** window is displayed. For more information on enforcing a policy, see Enforcing a policy.

Deleting a policy

You can remove a defined policy by deleting it. When a policy is deleted, the default settings are restored for printers conforming to the policy.

1. From the policy list in the **Policy** window, select the policy.
2. From the action menu, click **DELETE**.

   A dialog box is displayed.
3. Click **OK** to confirm.

Alerts

The **Alerts** feature enables administrators to configure and manage email alerts based on printer parameter values. This helps you to be informed about key printer centric events without connecting to OMPE.

Alerts are configured for a printer group. OMPE can send email alerts to both registered and unregistered users. You can configure alerts in OMPE for the following printer events:

- Low consumable levels for Toner, Fuser, Roller or Drum
- SNMP traps by the printer
- Warranty expiry
- Policy audit violations
- Printer is offline

The **Alerts** feature can also be used to create trouble tickets in supported applications like KACE, BMC REMEDY and SERVICE NOW.

To open the **Alerts** window:

1. Launch the Dell OpenManage^{TM} Printer Essentials.
2. In the navigation pane, click **Device Management ➝ Alerts**.

The **Alerts** window displays a list of configured alerts and its details. The fields in the alerts list are:

Field	Description
Alert Type	Type of the printer event for which alert is configured.
Threshold (% / Hrs/ Days)	Value of the parameter at which alert is sent. (**%** for printer consumables, **hrs** for printer offline event, **days** for warranty expiry)
Group Name	Printer group for which the alert is config-ured.
Registered Users	Registered users in OMPE database who will receive the alert email.

Field	Description
Email address	Email address to which the alert is sent. Unregistered users can be added to receive alerts using this field.

Email alerts are sent by OMPE using Simple Mail Transfer Protocol (SMTP). For more information on SMTP configuration, see SMTP configuration.

Configuring email alerts

1. From the action menu in the **Alerts** window, click **CREATE.**

   The **Alert** widget is displayed.

2. From the **Alert Type** list, select the type of printer event for which the alert is to be generated.

3. Enter the threshold value in the **% Remaining** field.

NOTE: This field is mandatory.

4. From the **Group Name** list, select the printer group for which the alert is configured.

5. From the **Select Users** list, select the registered users to receive the alert by email. For more information on registering users, see Adding an user account.

6. Enter the email address of unregistered users in the **Email Addresses** field.

NOTE: Email addresses must be separated by comma.

7. Enter an appropriate subject in the **Subject Line** field.

NOTE: OMPE provides a default subject for the each alert type. If the **Subject Line** field is left blank, the default subject is used.

8. The **Mail Body** field displays the predefined message with variables for the email.

NOTE: OMPE has predefined email content for each type of alert. The variables in the email content are converted to actual values when the email is sent.

9. To add any notes to the email, enter the notes in the **Append Note to Email** field.

10. To use the trouble ticket option, select **Enable Trouble Ticket Option**.

    For configuring trouble tickets, see Using trouble ticket option.

11. Click **Save**.

Using trouble ticket option

To send trouble ticket alerts, you can choose from the available templates or create your own custom trouble ticket templates.

1. From the action menu in the **Alerts** window, click **CREATE**.

   The **Alert** widget is displayed.

2. From the **Alert Type** list, select the type of printer event to generate a trouble ticket.

3. Enter the threshold value in the **% Remaining** field.

4. From the **Group Name** list, select the printer group for which the trouble ticket is configured.

5. Select **Enable Trouble Ticket Option** to use trouble ticket option.

6. From the **Trouble Ticket System Option** list, select the trouble ticket template to be used.

7. The **System Email** field displays the system email id.

8. The **Subject Line** field displays the predefined subject for a printer event with variables. The variables are converted to actual values when the trouble ticket is sent.

9. The **Mail Body** field displays the predefined content of the trouble ticket with variables. The variables are converted to actual values when the trouble ticket is sent.

   NOTE: The default content of a trouble ticket template is saved as a .txt file in the Alert template folder of OMPE. To change the template, you can edit the .txt file and save it.

10. To add any notes to the email, enter the notes in the **Append Note to Email** field.

11. Click **Save**.

Editing an alert

You can reconfigure an existing alert or trouble ticket by editing it.

1. From the alerts list in **Alerts** window, select the alert.

2. From the action menu, click **EDIT**.

   The **Alert** widget is displayed.

3. Reconfigure the alert.

4. Click **Update**.

Deleting an alert

You can stop sending alerts or trouble tickets for a printer event by deleting the alert.

1. From the alerts list in **Alerts** window, select the alert.
2. From the action menu, click **DELETE**.

   A dialog box is displayed.
3. Click **Delete** to confirm.

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Templates

Templates are Extensible Markup Language (XML) files having a preset format and define all printer parameters managed by OMPE. Every printer model supported by OMPE is associated with a template. A template file defines how a parameter supported by OMPE is retrieved or set on the associated printer. Templates also store information about printer discovery, and firmware upgrade.

Templates used by OMPE are open and non-proprietary. OMPE associates templates for all supported printers during installation. OMPE keeps track of any new template versions available for its printers in the Dell Cloud Connect server. When a new template version is available, OMPE marks it as available in the **Templates** window. You can update to a new template version or create your own custom template and manually register it.

This feature enables the user to register, update, and activate templates for printers in the network.

To open the **Templates** window:
1. Launch the Dell OpenManage^{TM} Printer Essentials.
2. In the navigation pane, click **Device Management** → **Templates**.

The **Templates** window displays a list of printer models in the network and the templates associated with it. The fields in the template list are:

Field	Description
Model	Model number of the printer
Template Name	Name of the template file
Type	Type of template: • Base - OMPE provided template that can be updated from the Dell Cloud Connect server repository. • Custom - User created template.
Vendor	Vendor for the template
Upload Date	Date on which the template was uploaded

Field	Description
Update	Indicates if a template update is available
Action	Activate - Activates the template Deactivate - Deactivates the template

Updating a template

When an updated template version is available in the Dell Cloud Connect server repository, you can update it to any template version from the available list.

📝 **NOTE:** To update a template, you need an internet connection to get connected to the Dell Cloud Connect server.

1. From the template list in the **Templates** window, click **Available** in the **Update** column.

   The **Template Update** widget is displayed.

2. The printer model number and the current template version is displayed in the **Model** and **Current Version** fields.

3. From the **Update to** list, select the new version.

   The published date and release notes of the selected version is displayed in the **Release Notes** field.

4. To activate the new template, select **Activate**.

📝 **NOTE:** The template that is currently active will be automatically deactivated.

5. Click **Update**.

📝 **NOTE:** Please check your proxy server settings if necessary to receive templates from the Dell Cloud Connect server. For more information, see Changing proxy settings.

Using custom templates

You can create a custom template for any printer to customize templates provided by OMPE or add new templates to printers for which a template is not defined. A custom template must be in XML format and can be uploaded manually. Before using custom templates, you must register them.

To register a new template:

1. From the action menu in the **Templates** window, click **NEW TEMPLATE**.

   The **New Template** widget is displayed.

2. Enter a name for the template in the **Name** field.

3. To choose the template file you want to upload, click **Browse**.

4. To activate the template, select **Activate**.

5. Click **Register**.

Deleting a template

You can delete a custom template using this option.

NOTE: A base template and an active template cannot be deleted.

NOTE: When a printer has a single template associated with it, you cannot delete the template.

1. From the template list in **Templates** window, select the template.

2. From the action menu, click **DELETE**.

   A dialog box is displayed.

3. Click **OK** to confirm.

Activating a template

A printer model can have multiple templates associated with it. But only one template can be active at a time. All the templates available for a printer model are displayed in the template list in **Templates** window. You can activate any one template from the multiple templates available to be used by the printer model.

NOTE: A printer model will always have one base template, but can have zero or more custom templates.

1. From the template list in the **Templates** window, click **Activate** in the **Action** column corresponding to the template.

   A dialog box is displayed prompting you to confirm.

2. Click **OK**.

NOTE: By default, the base template is active.

Deactivating a template

When a custom template is active, you can deactivate the custom template to activate another available template.

1. From the template list in the **Templates** window, click **Deactivate** in the **Action** column corresponding to the currently active template.

2. From the **Select Template** list, select the template to be activated.

3. Click **OK**.

✎ **NOTE:** When you deactivate a custom template, the base template is automatically activated.

Schedules

The **Schedules** feature in OMPE enables you to add, edit or delete schedules for various printer management operations. The following predefined schedules are always active and cannot be modified in OMPE:

- Health Poll
- Status Poll
- Alert Monitor
- EWS Poll
- Consumables Estimation Poll
- Firmware Update Poll
- Warranty Update Poll
- Template Update Poll
- Print Metering Poll

In addition to the predefined schedules, the following tasks can be scheduled in OMPE:

- Discovery
- Report Generation
- Firmware Upgrade
- Policy
- Database Backup
- Database Cleanup

To open the **Schedules** window:

1. Launch the Dell OpenManage^{TM} Printer Essentials.
2. In the navigation pane, click **Device Management ➝ Schedules**.

The **Schedules** window displays a list of OMPE scheduled tasks and its details. The fields in the schedules list are:

Field	Description
Name	Name of the scheduled task
Type	Type of operation

Field	Description
Notes	Notes entered by the user while adding a schedule
Status	Current status of scheduled task such as Running, Completed (✔), Recurring (↻), or Next
Schedule	Indicates the time and date of the next schedule*

* For a completed schedule, indicates the time and date of completion.
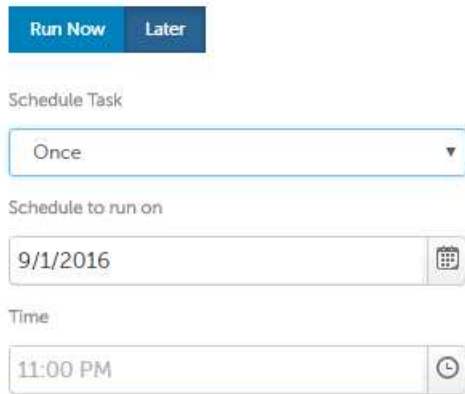
Adding a schedule

You can add a new scheduled task from the **Schedules** window or from the task configuration page.

    1. From the action menu, click **CREATE**.

       The **Add Schedule** widget is displayed.

    2. From the **Schedule Type** drop-down list, select the task to be scheduled.

       The corresponding task widget is displayed.

    3. Select the task configuration and the required schedule time and date.

Scheduling a task

All tasks that can be scheduled have options to perform the operation immediately or at a later time.

By default, the **Run Now** button is enabled to run the task immediately.

    1. Click **Later**.

The schedule options are displayed.

2. From the **Schedule Task** list, select the required schedule frequency as **Once**, **Daily**, **Weekly** or **Monthly**.

3. From the **Schedule to run on** and **Time** drop-down lists, select the schedule date and time.

NOTE: The task is repeated based on the selected frequency at the schedule time and date.

Editing a schedule

To reschedule a task, you can edit an existing schedule from the **Schedules** window.

NOTE: Editing a schedule will not modify the task configuration settings.

1. From the schedules list in the **Schedules** window, select the schedule.

2. From the action menu, click **EDIT SCHEDULE**.

    The **Edit Schedule** widget is displayed.

3. From the **Schedule Task** drop-down list, select the required frequency for operation.

4. Edit the fields in **Schedule Options** as required.

5. Click **Update.**

NOTE: You cannot edit a scheduled task that is running.

Deleting a schedule

You can delete one or more scheduled tasks from the **Schedules** window.

1. From the schedules list in the **Schedules** window, select the schedule(s).

2. From the action menu, click **DELETE**.

    A dialog box is displayed.

3. Click **Yes** to confirm.

NOTE: You cannot delete a scheduled task that is running.

Connections

OMPE communicates with printers using Simple Network Management Protocol (SNMP) and printer Embedded Web Server (EWS). OMPE uses SNMP for printer discovery and EWS for retrieving printer status parameters.

During installation, OMPE is configured with default connection settings which can be changed by the administrator to suit the network environment.The **Connections** feature enables you to modify the SNMP and EWS connection settings for one or more printers in the network.

To open the **Connections** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Device Management → Connections**.

It is recommended to keep both SNMP and EWS settings in synchronization to communicate successfully between OMPE and the printer. If SNMP and EWS settings are modified before OMPE installation, the printer will not be discovered or some printer parameters will not be retrieved or both.

Updating connection settings

1. From the printer list in the **Connections** window, select the printer(s).
2. From the action menu, click **UPDATE**.

   The **Update Connection** widget is displayed.
3. For **SNMP v1/v2** connection, enter the valid read and write community names in the **SNMP Read Community** and **SNMP Write Community** fields respectively.
4. For **SNMP v3** connection, enter the user name in the **User Name** field. This field is mandatory.
5. To enable Authentication and Privacy profiles, select the corresponding check boxes.

NOTE: By default, both Authentication and Privacy options are selected. You can select both Authentication and Privacy, only Authentication or none.

6. Enter the following details:

Field	Description
Authentication and Privacy Options	Select the corresponding check boxes to enable Authentication and Privacy profiles.
Authentication Password	Enter a valid password used by the authentication protocol for message authentication.
Confirm Password	Reenter the authentication password for confirmation.
Authentication Algorithm	Select the required authentication protocol: Message Digest Algorithm (**MD5**) or Secure Hash Algorithm (**SHA**).
Privacy Password	Enter a valid password used by the privacy protocol for message encryption and decryption.
Confirm Password	Reenter the privacy password for confirmation.
Privacy Algorithm	Select the required privacy protocol: Data Encryption Standard (**DES**) or Advanced Encryption Standard (**AES**).

NOTE: The password should have a minimum of 8 characters and not exceed 255 characters. If the entered and confirmed passwords do not match then **Confirm Password** field is highlighted in red. Reenter the password to confirm.

7. For **EWS Settings,** enter the valid EWS login ID and password in the **Login ID** and **Login Password** fields.

8. Click **Save**.

NOTE: The connection settings will be used by OMPE to communicate with the printer and not applied to the printer.

Testing a connection

You can test the SNMP v3 connection status for one or more printers using this option.

1. From the printer list in **Connections** window, select the printer(s).

2. From the action menu, click **TEST CONNECTION**.

NOTE: If the SNMP v3 settings are empty, the **TEST CONNECTION** button is disabled.

    The status of the connection test is displayed in the progress bar.

3. If the test is successful, OMPE displays a message box prompting you to save the CSV report. If the test fails, an error message is displayed.

On completion of testing, OMPE stores a consolidated report of success and failures for each IP address in a CSV file.

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Reports

Reports enables the administrators to get quick access to real time printer management information regularly. The **Reports** feature enables consolidation of data from one or more printers for generation of the following report types:

- Device usage - It is a report on the number of pages printed within a snap shot period.
- Printer asset/ Inventory - It is a report on the status of the printers.
- Consumable usage - It is a report on the levels of printer consumables such as toner, fuser and image drum.
- Current printer firmware - It is a report on the details of the current printer firmware.
- Policy Compliance - It is a report on the policy conformance of printers.

To open the **Reports** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Reports**.

OMPE supports generation of reports in the PDF or comma delimited (csv) format. You can generate reports immediately or schedule it for a later time to be saved or sent through email.

Previewing a report

You can preview reports by filtering printer information based on one or more criteria given below:

- Printer group - You can view the report for a selected printer group.
- Keyword search - You can view the report of printers whose criteria match the keyword entered in the search box.
- Report type - You can view reports of the predefined types.

1. From the **Report Type** list in the **Reports** window, select the type of report or a user defined printer group.
2. Select the criteria for the report type wherever applicable:
   - For consumable usage type, enter the threshold in the **Less Than Percentage Remaining** field.
   - For Device usage type, from the **From** and **To** drop-down lists select the snap shot period.

3. To filter the report for a printer group, from the group selection menu select the printer group.
4. To filter the report with a specific keyword, enter the keyword in the search box.
5. Click **Preview** to view the report.

✐ **NOTE:** You can customize the previewed report to display selected columns, change the position of columns, and sort or filter rows using list operations. For more information, see Customizing Lists.

Generating report file

You can save the previewed reports in a file and send through email to registered and unregistered users.

1. Preview the report with required criteria. For more information, see Previewing a report.
2. From the report preview, select the printer(s).
3. From the quick-access toolbar, click ▣.

    The **Report** widget is displayed.
4. Select the report delivery options as **Email** or **Save**.

✐ **NOTE:** By default, only the **Save** option is selected.

5. From the **File Type** list, select the file format as **Comma Delimited** or **PDF**.
6. From the **Select Users** list, select registered users who will receive the report through email.

✐ **NOTE:** This field is mandatory.

7. Enter email address of the unregistered users in the **Email Address** field.

✐ **NOTE:** Email addresses must be separated by comma.

8. Enter the subject of the email in the **Subject** field.
9. From the **Schedule task** list, select the frequency to generate reports as **Now**, **Daily**, **Weekly** or **Monthly**.
10. From the **Schedule to Run** and **Time** drop-down lists, select the schedule date and time.

✐ **NOTE:** When you schedule report generation, the generated report is sent through email only.

11. Click **Save**.

A dialog box is displayed as shown below.

⊕ OpenManage™ Printer Essentials

Report is generated successfully.
Please click YES to save and view the
file or click NO to save the file only.

| YES | NO |
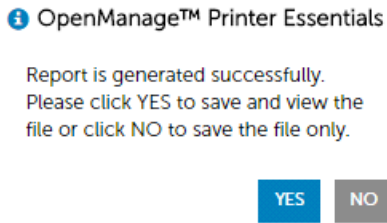
12. Click **Yes** to save the report and view the file immediately.

Supplies

The **Supplies** feature helps you to monitor consumables required and order replenishments for printers in the network. Using this feature you can:

- View the consumables required.
- Generate report of consumables to be ordered - for a single printer or printer group.
- Order for consumables via Dell website.
- Generate an alert when a consumable reaches the threshold value.

You can view consumable information of printers based on the percentage of consumables remaining.

To open the **Supplies** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Supplies**.

Viewing an order

You can view the consumables order information for printers in the **Supplies** window.

1. From the group selection box, select the printer group.
2. Enter the threshold value for percentage of consumables remaining in the **Percentage remaining less than(%)** field.
3. Click **Preview**.

Ordering consumables

You can filter the previewed order report to place an order for consumables for selected printer models.

1. From the group selection box in the **Supplies** window, select the printer group.
2. Enter the threshold value for percentage of consumables remaining in the **Percentage remaining less than(%)** field.
3. From the action menu, click **ORDER**.

    The **Supplies > Order** page displays printer wise details of the number of consumables required.

✏ **NOTE:** You can increase or decrease the number of consumables ordered.

4. Click **Order Consumable**.

    The Dell website is open for making the purchase.

Configuring an alert

When a consumable is low, you can send an email alert to registered or unregistered users.

1. From the group selection box in the **Supplies** window, select the printer group.
2. From the quick-access toolbar click ▣.

    The **Alert** widget is displayed.
3. Select the criteria for printer consumable information in the **Percentage remaining less than (%)** field.
4. Configure the alert. For more information, see Configuring email alerts.
5. Click **Save**.

NOTE: An alert for low consumable can also be configured from the **Alerts** window.

Settings

This feature enables you to configure the SMTP connection, change proxy settings, configure ADS and customize preferences for OMPE.

SMTP configuration

Dell OpenManage Printer Essentials (OMPE) uses Simple Mail Transfer Protocol (SMTP) to send email alerts. The **SMTP** window enables you to configure the SMTP settings in OMPE.

1. In the navigation pane, click **Settings** → **SMTP**.
2. Enter the SMTP server address for outgoing emails in the **SMTP Server field**.
3. Enter the TCP/IP port name on the server used for SMTP email services in the **SMTP Port field**.
4. Enter the email address of registered user in the **Email From Address** field.
5. To enable SMTP server authentication, select **SMTP Server requires authentication?**
6. If TLS encryption is required, select **SMTP Server requires TLS encryption?**
7. Enter the username for logging into SMTP server in the **SMTP Server Login** field.
8. Enter the password for logging into SMTP server in the **SMTP Server Password** field.
9. You can check the SMTP settings configured by sending a test mail.
   To send a test mail, click **Send Test Mail.**
10. Click **Save**.

Changing proxy settings

You can modify the proxy settings for OMPE using this option.

1. In the navigation pane, click **Settings** → **Proxy**.
2. To enable proxy server, select **Enable Proxy Server**.
3. Enter IP address in the **IP Address** field.
4. Enter port number in the **Port** field.
5. Click **Save**.

Configuring ADS

If Active Directory Service (ADS) is not setup during installation, you can configure it using this option.

1. In the navigation pane, click **Settings** ➞ **ADS**.
2. To use Active Directory LDAP Authentication, select **Active Directory LDAP Authentication**.
3. Enter the domain name in the **ADS Domain Name** field.
4. Enter the domain controller in the **ADS Domain Controller** field.
5. Enter the port number in the **ADS Port Number** field.
6. To use SSL connection, select **Use SSL Connection**.
7. To choose the ADS SSL Certificate file, click **Upload**.
8. Click **Save**.

Customizing preferences

The **Preferences** feature of OMPE enables you to customize the home page view and set the refresh intervals for polling.

Customizing dashboard view

You can customize the dashboard view to display selected widgets.

1. In the navigation pane, click **Settings** ➞ **Preferences**.
2. In the **Select Widgets** group, select the widgets to be displayed.
3. Click **Save**.

Customizing list view

You can customize the list view to display selected columns.

1. In the navigation pane, click **Settings** ➞ **Preferences**.
2. In the **Select Columns** group, select the columns to be displayed.
3. Click **Save**.

Customizing printer data upload

You can enable or disable Dell Print Metering service to upload printer data to the Dell Cloud Connect server.

1. In the navigation pane, click **Settings** ➞ **Preferences**.
2. From the **Printer Data Collection** box, select **On** or **Off** to enable or disable Dell Print Metering service.
3. Click **Save**.

Customizing polling cycles

OMPE monitors printers using polling mechanism. Polling in OMPE involves three cycles: Health, Status SNMP, and Status HTTP.

- Health poll - Printer parameters such as printer status, page count and supply level are retrieved during Health poll. These parameters change frequently and are important to determine printer readiness.
- Status poll - Parameters such as tray status, network configuration and printer settings are checked during status poll. These parameters do not change frequently.

Using the **Preferences** feature, you can set the refresh interval during which OMPE polls the server, retrieves and displays printer information.

NOTE: The duration of polling cycle depends on the number of printers that are managed by OMPE.

To change the refresh intervals:

1. In the navigation pane, click **Settings** → **Preferences**.
2. To change the widget refresh interval, enter the required interval time (in minutes) in the **Widget Refresh Interval** field.
3. To change the refresh interval for maps, enter the required interval time (in minutes) in the **Refresh Map Interval** field.
4. To change the refresh interval for printer health cycle, enter the required interval time (in minutes) in the **Refresh Interval for Printer Health** field.
5. To change the refresh interval for SNMP printer status cycle, enter the required interval time (in minutes) in the **Refresh Interval for Printer Status (SNMP)** field.
6. To change the refresh interval for HTTP printer status cycle, enter the required interval time (in hours) in the **Refresh Interval for Printer Status (HTTP)** field.
7. Click **Save**.

User Management

The **Users** feature enables administrators to create users, define their roles and manage their privileges in OMPE. OMPE also supports Active Directory (AD) based authentication for its users.

OMPE maintains two user roles:

- Administrator - Can perform all the OMPE tasks.
- User - Can perform only permitted tasks.

The privileges of administrator and user in OMPE are given in the table below:

Feature	Administrator Role	User Role
Group management	View, Add, Delete, and Modify	View only
Discovery	View and Schedule	No access
Printer inventory management	Add printer to group, Delete printer from group, View and Edit printers in a group, Block printers	View only
Apply printer settings	View and Modify	View only
Reports management	View and create reports	View and create reports
Alerts management	View, Add and Remove alerts	No access
Manage application settings	View, Add and Modify OMPE settings	View only
Template management	Register new templates, Update current templates	No access

Feature	Administrator Role	User Role
Policy management	Add, Check for conformance, Enforce and delete policies	No access
Supplies management	Order for consumables	Order for consumables
Software update	Configure software updates	No access
User management	View, Add, Modify, and Delete users	No access
Logs	View	No access
Maps	Add, Edit and Delete maps	View only

To open the **Users** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Settings ➔ Users**.

Adding an user account

Administrators can add a new OMPE or ADS user using this option. After a new user is added, the user can log in to OMPE with the new user ID. OMPE prompts the user to set the password during first login.

Adding an OMPE user account

1. From the action menu in the **Users** window, click **CREATE**.

   The **New User** widget is displayed.
2. From the **User Type** list, select **OMPE**.
3. Enter the login name to be used in the **Login Name** field.

📝 **NOTE:** This field is mandatory.

4. From the **Role** list, select the user role.
5. Enter the **First Name**, **Last Name**, **Email Address** and **Address** in the respective fields.

📝 **NOTE:** These fields are mandatory.

6. Click **Save**.

Adding an AD user account

Before adding an AD user account, AD authentication must be successfully configured. For more information, see Configuring ADS.

1. From the action menu in the **Users** window, click **CREATE**.

   The **New User** widget is displayed.

2. From the **User Type** list, select **ADS**.

📝 **NOTE:** If ADS is not configured, this option is not enabled.

3. Enter the following AD user credentials for authentication: **ADS Username** and **ADS Password**.

4. To search for a user or a group name, in the **Look for User or Group** field enter the search string.

📝 **NOTE:** The search string can contain wildcard character '*' with at least two characters in suffix or prefix.

5. Click **Search**.

   On successful authentication, a list of matched users are displayed.

6. From the search result list, select the user or group.

7. From the **Role** list, select the role.

8. Click **Save**.

Editing an user account

You can change user role and other details of the existing OMPE users using this option.

📝 **NOTE:** You cannot change the user type and login name of the existing OMPE users.

1. From the user list in the **Users** window, select the user.

2. From the action menu, click **UPDATE**.

   The **Update User** widget is displayed.

3. Edit the fields as required.

4. Click **Save**.

Deleting an user account

1. From the user list in the **Users** window, select the user.

2. From the action menu, click **DELETE**.

   A dialog box is displayed.

3. Click **Delete** to confirm.

📝 **NOTE:** You can delete other administrators account but not your own account.

Database Backup

The **Database Backup** feature enables you to backup database immediately, or schedule database backup on a daily, weekly or monthly basis.

To open the **DB Backup Schedule** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Settings** ➔ **Backup**.

Creating a database backup

You can start a new database backup schedule using this option.

1. From the action menu in the **DB Backup Schedule** window, click **NEW**.

   The **DB Backup** widget is displayed.
2. Enter a name for the schedule in the **Name** field.
3. From the **Schedule Task** list, select the required schedule frequency as **Run Now**, **Run Once**, **Run Daily**, **Run Weekly** or **Run Monthly**.
4. Select the required schedule options for the selected frequency.
   - For **Once** schedule, select the date and time from the **Day** and **Time** drop-down lists.
   - For **Daily** schedule, select the time from the **Time** drop-down list.
   - For **Weekly** schedule, select the day and time from the **Day** and **Time** drop-down lists.
   - For **Monthly** schedule, select the date and time from the **Date** and **Time** drop-down lists.
5. To add any notes, enter the notes in the **Schedule Notes** field.
6. Click **Add**.

NOTE: The backup of the database is available in the OMPE install directory.

Deleting a database backup schedule

1. From the database backup schedule list **DB Backup Schedule** window, select the schedule.
2. From the action menu, click **DELETE**.

   A dialog box is displayed.
3. Click **Delete** to confirm.

Restoring database

1. Close OMPE.
2. Place the OMPE backup folder on the local machine.

📝 **NOTE:** By default OMPE places the back up files in <OMPE Installdirectory>\Dell Printers\OMPE\backup\folder.

3. Open a command prompt and change the directory to <OMPE Install directory>\DellPrinters\OMPE\scripts.
4. Run the batch with the syntax: Restore.bat <backup file path>.

Example: Restore.bat "C:\ProgramFiles\DellPrinters\OMPE\backup\mybackup_261120161255.bak"

📝 **NOTE:** The restore scripts stops and starts the OMPE services and takes few minutes to execute.

📝 **NOTE:** DB backup also takes a backup of alert configurations, schedules, templates and plugins, which can be restored to another OMPE installation. Any existing alert configuration, schedules, templates and plugins on that machine will be overwritten with the backed up data.

Database Cleanup

The **Database Cleanup** feature facilitates removal of unused data history from the OMPE database for improved performance.

OMPE maintains minute wise and hourly data in its database which is summarized on a daily basis. This process of summarizing detailed data for storage is called Roll-Up operation. Database roll-up reduces the number of records in the database, hence, increasing OMPE system response.

By default, OMPE performs roll-up on a daily and monthly basis. It maintains daily information for one year and monthly information permanently till you delete it. Using **Database Cleanup** feature, you can perform database cleanup immediately, or at a later time or on a monthly schedule.

To open the **DB Cleanup Schedule** window:

1. Launch the Dell OpenManage™ Printer Essentials.
2. In the navigation pane, click **Settings** → **Cleanup**.

Cleaning the database once

You can perform database cleanup immediately, or at a later time using this option.

⚠ **CAUTION:** During database cleanup, the audit and system logs are cleaned up without maintaining their summaries.

1. From the action menu in the **DB Cleanup Schedule** window, click **NEW**.

   The **Cleanup** widget is displayed.
2. Enter a name for the task in the **Name** field.
3. From the **Schedule Task** list, select **Once**.
4. To cleanup database immediately, select **Run Now**.
5. To cleanup database later, select **Later**.
6. From the **Schedule to Run** and **Time** drop-down lists, select schedule date and time.
7. From the **Delete items older than (in months)** list, select the number of months for which data has to be retained. Data older than the selected number of months will be deleted.
8. Click **Add**.

Scheduling monthly database cleanup

1. From the action menu in the **DB Cleanup Schedule** window, click **NEW**.

   The **Cleanup** widget is displayed.

2. Enter a name for the task in the **Name** field.

3. From the **Schedule Task** list, select **Monthly**.

4. From the **Schedule report monthly on day** list, select the day of the month the cleanup has to be performed.

5. From the **Time** drop-down list, select the schedule time.

NOTE: The monthly schedule will be performed every month on the selected time and date.

6. From the **Delete items older than (in months)** list, select the number of months for which data has to be retained. Data older than the selected number of months will be deleted.

7. Click **Add**.

Deleting a database cleanup schedule

1. From the database cleanup schedule list in the **DB Cleanup Schedule** window, select schedule.

2. From the action menu, click **DELETE**.

   A dialog box is displayed.

3. Click **Delete** to confirm.

Logs

OMPE logs all activities initiated by the user or the system. These activity logs can be viewed, archived and exported for troubleshooting.

To open the **Logs** window:

1. In the title menu bar, click 🔵.
2. Click **Logs**.

The **Logs** window display details of all OMPE activities such as the type of event, user/system that triggered the event, timestamp and the action performed.

	User Name	Action Type	Action Taken	Date
☐	SYSTEM	User	User admin logged in	8/12/2015 13:00:02
☐	admin	User	User admin changed his/her password	8/12/2015 13:02:15
☐	admin	Groups	Device with Serial Number(s):8253, Dell 3464287 were added to...	9/12/2015 09:10:00
☐	SYSTEM	User	User admin logged in	8/12/2015 13:00:02
☐	admin	User	User admin changed his/her password	8/12/2015 13:02:15
☐	admin	Groups	Device with Serial Number(s):8253, Dell 3464287 were added to...	9/12/2015 09:10:00
☐	admin	User	Alert has been added successfully	7/04/2016 09:10:00
☐	admin	User	ADS configuration updated successfully	7/04/2016 09:10:00
☐	admin	SYSTEM	Scheduled report generation completed successfully	7/04/2016 09:10:00

Logs

Search

EXPORT

◄ ① ► 10 ▼ items per page   1 - 9 of 9 items

Exporting logs

Logs are exported in Excel format.

1. From the action menu in the **Logs** window, click **EXPORT**.

   A dialog box is displayed.
2. Click **Export** to continue.

Troubleshooting

OMPE provides logs to indicate problematic events in the system. Each log displays an error code that provides information about an error that has occurred in the application. OMPE logs are available in the <OMPE Install Dir>\ Dell Printers\OMPE\client\logs folder. This section lists the error codes generated in OMPE with its solutions.

Error code	Error message	Troubleshooting steps
09980001	Configuration file missing or corrupted.	1. Check if the OMPE.cfg file is available at <OMPE Install Dir>\OMPE.cfg. 2. Contact OMPE software vendor or re-install the software if the file is missing and or problem persists.
09980002	Unable to connect to DB.	1. Check if OMPE.fdb file is opened by any other client. Since this is a embedded version only one connection is allowed. 2. Check if <OMPE Install Dir?\Firebird directory is missing / removed. 3. Contact software vendor or reinstall the software. 4. Check if the environment variable for Firebird is removed. If environment variable is missing, reinstall the software or set the environment variable correctly.
10480001	SNMP communication failed.	1. Check if printer's SNMP configuration has changed since discovery. 2. Check if SNMP version V2C / V1 community name has been modified. 3. Ensure that SNMP configuration for the printer is correctly configured in OMPE connection settings.
10380001	No Printers discovered.	1. Check if expected printers are within the given discovery range and printers that are not discovered are accessible from the OMPE host machine. 2. Ensure that SNMP configuration for the printer is correctly configured in OMPE connection settings.
09980003	Login screen not loading.	1. Check if OMPE service is started. You can do this via windows services. 2. If the service is not in started state, try starting it. If it does not start after multiple trials, check if the web server ports configured during installation are used by another web server. 3. Contact software vendor if the above steps does not solve your problem.
10280001	Unable to receive emails.	Ensure that SMTP configuration is correct using the Test feature.
10280002	Policy alert not received.	Ensure that SMTP configuration is correct using the Test feature.
10380001	Policy conformance could not be checked.	1. Check if the device for which policy conformance failed is accessible from the OMPE host machine. 2. Check if the parameter values configured for the policy is acceptable for the printer.
10380002	Could not enforce policy.	1. Check if the parameter values configured for the policy is acceptable for the printer. 2. Check if the printer is accessible from the OMPE host machine. 3. Check if connection settings for that printer in OMPE is correctly configured.

Error code	Error message	Troubleshooting steps
10380003	Policy already exists for this printer <Policy Name>.	Check and remove the policy of the same type before adding a new policy for the same printer.
10480001	Add printer to map failed.	**1.** Check if the printer is available and managed by OMPE. **2.** If the printer is deleted inadvertently from OMPE, discover the printer again.
10580002	Could not set the values for printer <Printer IP>.	**1.** Check if the printer is accessible from the OMPE host machine. **2.** Check if connection settings for that printer in OMPE is correctly configured.
10580001	Template registration failed. Same version template already present.	Check if the version number of the template being registered is same as the active template.
10580002	Template upgrade failed. Could not connect to Dell Cloud Connect server.	**1.** Check if the internet connection from the OMPE host machine is functioning. **2.** Configure proxy configurations if required.
10580003	Template delete failed. Base template cannot be deleted.	User cannot delete the base template provided by OMPE. Custom templates added by the user can be deleted.
10780001	No Firmware Updates available.	Start the Internet connection poll in the Notification widget.
10780002	Firmware Update Poll Unable to connect to Dell Cloud Service.	**1.** Goto Settings > Proxy page to configure proxy server settings. **2.** Start the internet connection poll in the Notification widget.
10780003	Firmware upgrade failed.	**1.** If lpr tool is used for deployment, check that 'LPR/LPD' port(515) and 'Software Download' options are enabled on the printer. **2.** If curl tool is used for deployment, check that EWS password of the printer is updated with proper values in the Connections page.
10880001	Warranty information is not available as service tag(s) is not present on Dell Cloud Service OR Dell Cloud Service is not responding at this moment.	Start the Internet connection poll in the Notification widget.
10880002	Warranty Update Poll unable to connect to Dell Cloud Service.	**1.** Goto Setting->proxy page to configure proxy server settings. **2.** Start the Internet connection poll in the Notification widget.
10880003	Warranty information can't be fetched for some of the service tag(s) as they are not registered in Dell Product Registration.	Check if printer is registered with the Dell.

Frequently Asked Questions

This chapter provides context wise solution for issues and concerns that users may encounter while using OMPE. For example, to view FAQs for Alerts, scroll down to the Alerts section in this chapter.

Installation

Q. "I am running OMPMv2 version on my server and would like to transition to OMPE"

To upgrade, you can run the OMPE installer on the same machine where OMPMv2 is running. The OMPE installer will automatically detect OMPMv2 and migrate printer data and connection settings to OMPE. After successfully installing OMPE, you can uninstall OMPMv2.

Q. "While installing OMPE I get an error saying both ports 80 and 8080 are in use"

For hosting its web application, OMPE uses port 80 or 8080. To install OMPE, either of the ports must be free. The installer checks the availability of either of the two ports prior to continuing with setup. If you see this error please uninstall the conflicting SW, or contact your network admin and look for a suitable machine in which atleast one of these two ports is available.

Discovery

Q. "I am unable to discover a printer though the printer is online and I have entered the printer IP correctly in the discovery widget."

a. Go to SNMP settings on Printer EWS/ Front panel.

b. Configure SNMP read community.

c. Ensure the printer is accessible from OMPE server. Use the ping command line tool to confirm this.

d. In discovery settings of OMPE, type the correct IP address and community name.

e. Reinitiate the discovery.

f. If the problem still persists it could be that the printer does not support standard SNMP MIBs which OMPE expects. Contact Dell Support.

Q. "I started the discovery but I do not see my printers in OMPE even after waiting for a long time"

a. If you are on a large enterprise network, to speed up the discovery it is suggested to run multiple discoveries with smaller target ranges.

b. If the problem still persists, restart OMPE service by running RestartOMPEService.bat from the Install folder and then reinitiate the discovery.

Printer Status

Q. "My OMPE reports printer as offline even when the printer is up and connected to the network"

a. Ensure the printer is accessible from OMPE server. Use the ping command line tool to confirm this.

b. From the navigation pane, click **Device Management → Connections**.

c. Ensure the SNMP community name is correctly set for the printer.

d. Open the printer details widget from the list view and click **Refresh**.

e. Wait for a few minutes to see the updated printer status.

Q. "My OMPE reports all discovered printers as offline "

a. Ensure printer network is accessible from the OMPE server.

b. Confirm that the OMPE server is not disconnected from network.

c. From the Notification widget, start the Health Poll.

d. Wait for a few minutes to see the updated printer status.

Printer Details

Q. "Many parameters in printer details widget of Dell Printers are empty."

Q. "Set operation on all parameters in printer details widget of Dell Printers is failing."

OMPE uses SNMP and HTTP protocols to query printers and retrieve their current status and configuration. The SNMP interface retrieves printer status, while the HTTP interface queries on printer EWS to retrieve configuration and other general information of the printer. In order to retrieve parameters and set values, the printer expects correct access details which include SNMP community name, EWS user name and password. Follow the procedure below to configure these access credentials.

a. From the navigation pane, click **Device Management → Connections.**

b. Ensure the SNMP community name is correctly set for the printer.

c. Ensure the EWS user name and password is correctly set for the printer.

d. Click **Test Connection** and ensure the test is successful.

e. Open the printer details widget from the list view and click **Refresh**.

f. Wait for a few minutes to see the updated printer status.

g. Now retry your Set operation.

Q. "Consumable Tab on Printer Details shows Collecting Data"

 OMPE uses current usage data to calculate the percentage toner remaining and pages remaining. It is likely that OMPE has not gathered enough usage data to calculate the forecast. This may take several days before it can calculate the forecast. If the problem persists contact Dell Support.

Q. "My printers in the network do not show the same level of detailed information like other Dell printers"

It may be likely that your model is not supported in current version of OMPE. In order to add enhanced support (Only read-only) for your model, you will have to develop custom template. For more information on how to develop and register custom templates, see Using custom templates section and Appendix B: Template Components.

Firmware

Q. "Firmware window is blank"

OMPE maintains and accesses firmware catalogue of all supported models from Dell Cloud Connect Server. In order for OMPE to access the firmware catalogue, administrators should configure OMPE so that it successfully connects to this external server. Follow the instructions below to configure this connectivity.

a. Check if you are able to access the following link on your browser:

https://s3-us-west-2.amazonaws.com/url-mapper-devtest/printers/dell/connectivity/InternetConnectivity.txt

b. Check if your enterprise network requires a HTTP proxy configuration. Configure the HTTP proxy in the Settings window

c. In the Notification widget, click **Internet Connection**.

d. Wait for a few minutes and check if the problem is resolved.

e. Contact your network administrator and ensure network firewalls do not block traffic to Dell Cloud Connect Server.

Q. "Firmware window does not show all the printer models in my network"

Firmware update in OMPE is only supported for Dell printer models.

Q. "Firmware update to the printer fails even after multiple retries"

a. Check if EWS user name and password is correctly set on the printer.

b. Check if firmware download is enabled on the printer.

c. From the navigation pane, click **Device Management** ➞ **Connections.**

d. Ensure EWS user name and password is correctly set for the printer.

e. Click on Test buttons on Connection settings and ensure the test is successful.

Policy

Q. "Policy enforcement does not work in my OMPE"

a. Check if EWS user name and password is correctly set on the printer.

b. Open Connection Settings from the navigation panel of OMPE.

c. Ensure EWS user name and password is correctly set for the printer.

d. Click **Test Connection** and ensure the test is successful.

Alerts

Q. "How do I configure OMPE to send SNMP traps as alerts from OMPE?"

a. Add OMPE host IP address as trap destination for the printers that you want to send alerts from OMPE.

b. Create an alert of type SNMP Traps in OMPE.

Q. "I created an alert and selected enable trouble ticket option, but trouble tickets are not created for alert conditions."

a. Confirm that you have configured the trouble ticket system to generate tickets using email.

b. Ensure that OMPE alert template is updated to have the same email ID configured in the trouble ticketing system.

NOTE: Copy of installed alert templates can be located at: C:\Program Files\Dell Printers\OMPE\server\webapps\ROOT\conf\alert_templates.

Q. "I updated trouble ticket template but the changes are not reflected in OMPE alert screen or tickets does not contain all the fields that I had configured in the template."

a. If the OMPE screen does not display values from updated screens, please refresh your browser by pressing Ctrl+F5.

b. Ensure that the alert type selected matches the trouble-ticket alert template.

c. Ensure that the variable is used in the intended context.

d. It could be possible that parameter does not have a value.

Q. "How do I configure alerts for SNMP traps in OMPE?"

a. Enable SNMP Traps on the printer.

b. Register OMPE server IP address or host name as SNMP trap receiver on the printer.

c. Create an alert by selecting Alert Type as "SNMP Traps".

Q. "I am getting too many alerts from OMPE"

OMPE has inbuilt alert suppression mechanism to ensure that repeat alerts are not sent to users. For all unresolved errors it sends repeat alert every 6 hours and this interval is configured in the OMPE configuration database. To increase this suppression interval, kindly contact Dell Support.

Q. "OMPE is not sending all alerts to me."

It is likely that OMPE alert is not configured to the correct printer group. The thresholds set may need to be reviewed. Kindly contact Dell support if you are still unable to get all email alerts.

Reports

Q. "I am unable to open a generated report."

a. Ensure the latest version of Adobe Acrobat reader is available in the machine where the OMPE is accessed from.

b. Ensure popup blocker is disabled for the OMPE site.

Q. "Scheduled reports are not reaching my mail box."

a. Ensure that the SMTP settings are correctly configured in OMPE.

b. Follow the instructions provided under Alerts section of FAQ.

Warranty

Q. "OMPE does not show warranty information for some of my printers"

OMPE shows warranty information for only registered Dell products. If you are able to view warranty for some but not all products in your network, contact Dell Support. If you are unable to view warranty information for any of the printers, then check your internet connectivity status from OMPE server. Contact your network administrator and ensure that the traffic to Dell warranty server is not blocked.

Templates

Q. "OMPE shows Available under Update column of Template Window."

A template enables OMPE to retrieve and set values for printer parameters. Dell maintains a repository of the latest templates on Dell Cloud Connect server. OMPE running in your premise polls this server on a periodic basis and notifies

the user when an update or a new template is available. Customers can install the update by clicking on 'Available' link and following the instructions in the next dialog.

Similarly, when there are templates available for newer models, OMPE will show "New" against the models for which new templates are available. You can install the templates by clicking on "New" link and following the instructions in the next dialog.

License

Q. "My 30 day trial period has expired and OMPE is not allowing me to login."

You must activate your license to login.

    a. Open OMPE and on login page, click on **Click here to activate license**.

    b. Check internet connectivity on the machine running OMPE server. If it has internet connectivity, select "Online" method of activation. If it doesn't, select "Offline" method.

    c. Follow the instructions in License management section.

Settings

Q. "I am unable to configure SMTP settings in my OMPE"

    a. Check if SMTP server is accessible from the OMPE server.

    b. Ensure that the correct IP address and port number are configured in SMTP settings.

    c. Ensure the authentication and encryption settings are correctly setup in SMTP settings.

    d. Ensure firewall on the OMPE server machine does not block outgoing SMTP traffic.

    e. Use the test feature on SMTP Settings window to confirm the connectivity.

    f. If the problem still persists, the following could be one of the reasons:

        • Your organization policy does not allow you to send emails from a third party tool.

        • Mails may be queued and scanned based on the company policy.

        • System email ID may be listed in the spam list of your mail exchange.

    g. Contact your mail administrator.

Appendix A: Trouble Ticketing system configuration for alerts in OMPE

OMPE supports trouble ticket template creation for alerts. Trouble tickets can be created in OMPE for the following ticketing systems:

- KACE
- BMC REMEDY
- SERVICE NOW

A trouble ticket is created by sending email to the ticketing system configured in OMPE. The ticketing system is configured by updating the ticket template available at the following path in the install directory:

<INSTALL_PATH>\OMPE\server\webapps\ROOT\conf\alert_templates\<TTS_NAME>\<ALERT_TYPE>.txt

The following attributes can be modified in the ticket templates:

Trouble Ticket system email ID   **%OMPE_AT_EmailId%**

Email subject line   **%OMPE_AT_EmailSubject%**

Email body   **%OMPE_AT_EmailBody%**

Appendix B: Template Components

OMPE uses SysObjectID SNMP value from RFC1213 to associate a template to a printer. OMPE compares the SysObjectID of the printer to the SysObjectID of the template and associates the printer to the template.

The components of a template are:

Template Component	Description
Properties	Defines all template specific properties.
Inheritance	Defines mapping of properties between templates.
Model info	Defines properties related to the printer model.
Template variables	Defines the properties that are to be set or retrieved from the printer model.
Translations	Defines translations which converts one property to another.
Group information	Defines all EWS parameters that belong to a specific URL grouped together to perform SET operation.
Read only parameters	Lists all parameters that can be read only.
Tray information	Defines tray computations specific to the manufacturer.
Additional information	Defines additional information such as Restart information, Restore defaults.
Language support	Identifies the current language of the printer.
Firmware information	Defines firmware commands and parameters.

Properties

It defines all the properties specific to a particular template. The properties element consists of the template ID and the template name.

Example:

```
<Properties>
        <TemplateId>DELL2335DN</TemplateId>
        <TemplateName>DELL2335DN</TemplateName>
</Properties>
```

Inheritance

It provides the parent templates from which the template inherits some properties.

Example:

```
<Inheritance>
        <Includes>
                DEFAULT,DELLCOMMON4,DELL2335DN,DELLCOMMON7
        </Includes>
</Inheritance>
```

Model info

It describes different parameters associated with the printer model. The info element defines the template property. It contains values that specify the model information and the template name to which the property is associated.

Example:

```
<Model-Info>
        <ModelInfo Name="DeviceDescription">
                <![CDATA[Dell Laser MPF 2335dn]]>
        </ModelInfo>
        <ModelInfo Name="ProcesserSpeed">
                <![CDATA[360]]>
        </ModelInfo>
</Model-Info>
```

Template variables

Describes the properties that has to be set or retrieved from the printer model. The elements of property overrides are static-reads, web-reads, snmp-reads, web-writes, and snmp-writes.

Example 1:
```
<Template-Variables>
        <Variable Name="SMTPPrimaryPassword">
        <Reads>
        <Constants>
                <Type>String</Type>
                <Value>****</Value>
        </Constants>
        </Reads>
        <Writes>
        <WebWrite>
                <Format>
                    <Type>String</Type>
                </Format>
                <ParameterName>104209:10420a</ParameterName>
        </WebWrite>
        </Writes>
        </Variable>
</Template-Variables>
```

Example 2:
```
<Template-Variables>
        <Variable Name="SerialNumber">
        <Reads>
                <SNMPReadObjectId="1.3.6.1.2.1.43.5.1.1.17.1" Repetations="1"
                 SNMPCommand="get">
                    <Format>
                        <Type>String</Type>
                    </Format>
                </SNMPRead>
        </Reads>
        </Variable>
```

```
</Template-Variables>
```

- Constants define model-related properties that are static. The Constants content element of the reads defines the static property. It also contains the type and value text elements that define storage type and value for a particular property.

Example:
```
<Variable Name="SMTPPrimaryPassword">
        <Reads>
        <Constants>
        <Type>String</Type>
        <Value>***</Value>
        </Constants>
        </Reads>
</Variable>
```

- Web-reads define the properties that can be retrieved through the web. It communicates with the printer EWS for retrieving the information. The WebRead content element of the web-reads defines the web reading property. The WebRead contains format, url, and expression elements.

Example:
```
<Variable Name="TimeCurrent">
        <Reads>
                <WebRead Rewording="false">
                    <Format>
                        <Type>String</Type>
                    </Format>
                    <Url>
                        <![CDATA[network/prn_time.htm]]>
                    </Url>
                    <Expression>
                        <![CDATA[R:prnDateAndTime ="(.*)"]]>
                    </Expression>
                </WebRead>
        </Reads>
</Variable>
```

- Snmp-reads define the properties that can be retrieved through SNMP. It communicates with the printer using object ID (OID) of a particular property for retrieving the information. The SNMPRead content element of the snmp-reads defines the SNMP reading property. The SNMPRead contains format element.

Example:

```
<Variable Name="SerialNumber">
        <Reads>
                <SNMPRead SNMPCommand="get" Repetitions="1" ObjectId=
"1.3.6.1.2.1.43.5.1.1.17.1">
                    <Format>
                        <Type>String</Type>
                    </Format>
                </SNMPRead>
        </Reads>
</Variable>
```

- Web-writes define the properties that can be set through web. The WebWrites element contains one or more typeset elements. The typeset content element defines the section for grouping of elements. Each typeset element has a WebWrite content element that contains format, action, and parameter name elements.

Example:

```
<Writes>
        <WebWrite>
                <Format>
                    <Type>String</Type>
                </Format>
                <ParameterName>GSI_SUBNET</ParameterName>
        </WebWrite>
</Writes>
```

- Snmp-writes contain one or more content elements that define the properties that can be set through SNMP. The SNMPWrites contains format element.

Example 1:

```
<Variable Name="Contact">
        <Reads>
```

```
                    <SNMPReadObjectId="1.3.6.1.2.1.1.4.0"SNMPCommand=
"get"Repetitions="1">
                        <Format>
                            <Type>String</Type>
                        </Format>
        </SNMPRead>
        </Reads>
        <Writes>
                <SNMPWriteObjectId="1.3.6.1.2.1.1.4.0"ValueType=
"SNMP_OctetString"/>
        </Writes>
        </Variable>
```

Example 2:
```
<Variable Name="Name">
        <Reads>
                <SNMPReadObjectId="1.3.6.1.2.1.1.5.0"SNMPCommand=
"get"Repetitions="1">
                    <Format>
                        <Type>String</Type>
                    </Format>
                </SNMPRead>
        </Reads>
        <Writes>
                <SNMPWriteObjectId="1.3.6.1.2.1.1.5.0"ValueType=
"SNMP_OctetString"/>
        </Writes>
        </Variable>
```

Translation

It describes all the properties required for translation from one format to another. Translation is used for retrieving information from a printer or storing information to a printer. The TranslationInfo element defines the data conversion, TranslationInfo element defines the translation from one format to another, and Validvalues element defines the valid value for a particular property in the current element. ValidValues must not be included for Boolean type data.

- **<Type>TranslationWL</Type>** - Translates value which is of type Boolean.

Example:

<Translations>

        <TranslationInfo Name="checked" value="true"/>

        <TranslationInfo Name=">" value="false"/>

        <TranslationInfo Name="true" value="1"/>

        <TranslationInfo Name="false" value="0"/>

</Translations>

- **<Type>Translation</Type>** - Translates value which is of type Biderctional.

Example:

<Translations>

        <TranslationInfoBiDirectional="true" Name="0" value="OFF"/>

        <TranslationInfoBiDirectional="true" Name="1" value="TOP"/>

        <TranslationInfoBiDirectional="true" Name="2" value="BTM"/>

        <TranslationInfoBiDirectional="true" Name="3" value="T&B"/>

</Translations>

<ValidValues>OFF,TOP,BTM,T&B</ValidValues>

Language support

It describes language property configuration for a particular printer model. The WebRead and Webwrite elements define the web reading and web writing properties. That is, it defines how to retrieve and change the current EWS language of the printer.

Example:

<LanguageSupport>

        <Property>PanelLanguage</Property>

</LanguageSupport>

Firmware information

These elements contain firmware command information required for updating the firmware for a printer model. The Command element defines the firmware tool information. The arguments element defines the information about the arguments that is essential to run the tool.

Example:
<FirmwareInformation>
<Command>curl.exe</Command>
       <Arguments>
              <![CDATA[-s -f --insecure --form file_download=@<filename>
<url>]]>
       </Arguments>
       -<Url>
              <![CDATA[FileDownload.cgi]]>
       </Url>
</FirmwareInformation>

Group information

It describes one or more variable content with Write elements that define the Properties that can be set through SNMP Write and Web Write. Parameters which have similar URL are grouped to perform SET operations. If the parameter is included with their corresponding group, the SET operation can not be performed. The group name must not be common for different URLs.

The Action element defines the URL of the particular parameter located. The PropertyName element describes the variable name, ordinal to which it belongs. The RequiredFileds element defines the required parameters which has to be sent along with the parameter which has to be SET.

Example:
<GroupInformation>
<Group Name="ABook">
       <Action><![CDATA[EX:srvcset/emlusredt00(REPLACE).htm]]></Action>
       <Property Name="AddressBook" Ordinal="1" Required="false"/>
</Group>

<Group Name="ABookDelete">
       <Action><![CDATA[EX:srvcset/emlusrdlt00(REPLACE).htm]]></Action>
       <Property Name="AddressBook" Ordinal="1" Required="false"/>
</Group>

<Group Name="ServerABook">
       <Action><![CDATA[EX:srvcset/svradredt00(REPLACE).htm]]></Action>
       <Property Name="ServerAddressBook" Ordinal="1" Required="false"/>
</Group>

```
<Group Name="ServerABookDelete">
        <Action><![CDATA[EX:srvcset/svradrdlt000(REPLACE).htm]]></Action>
        <Property Name="ServerAddressBook" Ordinal="1" Required="false"/>
</Group>

<Group Name="DELL625CDWBASICSET">
        <Action><![CDATA[printer/prtsystem.htm]]></Action>
        <Property Name="SubstituteTray" Ordinal="10" Required="false"/>
        <Property Name="PowerSaverTime" Ordinal="1" Required="false"/>
        <Property Name="JobTimeout" Ordinal="5" Required="false"/>
        <Property Name="IDPrint" Ordinal="6" Required="false"/>
        <Property Name="BannerSheetPosition" Ordinal="8" Required=
        "false"/>
        <Property Name="BannerSheetInputTray" Ordinal="9" Required=
        "false"/>
        <Property Name="TextPrint" Ordinal="7" Required="false"/>
        <Property Name="ErrorAlarm" Ordinal="2" Required="false"/>
        <Property Name="TonerAlarm" Ordinal="3" Required="false"/>
        <RequiredFields>JobTimeout,IDPrint,TextPrint,SubstituteTray,
        BannerSheetInputTray,BannerSheetPosition,PowerSaverTime,
        ErrorAlarm,TonerAlarm
        </RequiredFields>
</Group>
</GroupInformation>
```

Restart information

It describes that the printer requires a reboot when newly applied settings affect existing settings during SET operations. The URL element defines the device reboot path or link.The ParameterName defines the reboot parameter.

Example:
```
<RestartInformation>
        <URL><![CDATA[setting/setinit.htm]]></URL>

        <ParameterName>820001:Start</ParameterName>
</RestartInformation>
```

Tray information

It describes the manufacturer specific tray computations which includes computation for Permissible Trays, Manual Trays, Overview, and Printer Details.

Example:

<TrayInformation>

      <PermissibleTrays>3:-1</PermissibleTrays>

      <ManualTrays>5:-1</ManualTrays>

      <OverView>3:-1</OverView>

      <PrinterDetails>3:-1,5:-1</PrinterDetails>

</TrayInformation>

Glossary

ADS	Active Directory Service
AES	Advanced Encryption Standard
CSV	Comma Separated Values
DES	Data Encryption Standard
EWS	Embedded Web Server
HTTP	Hypertext Transfer Protocol
JPEG	Joint Photographic Experts Group
LAN	Local Area Network
MD5	Message Digest Algorithm
MIB	Management Information Base
PDF	Portable Document Format
PNG	Portable Network Graphics
SHA	Secure Hash Algorithm
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
XML	Extensible Markup Language

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