PrintFleet Enterprise

User Guide

PRINTFLEET™

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PrintFleet Enterprise Administrator’s Guide.

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Chapter 1 Introduction

Welcome to PrintFleet Enterprise—a complete remote print management system designed to help owners, sales representatives, service technicians, and administrative personnel grow and streamline their business.

This is a comprehensive guide covering all aspects of administering and using the PrintFleet Enterprise system, including:

- Using the Printer Data Collector Agent
- Using PrintFleet Optimizer
- Administering PrintFleet Enterprise

This chapter discusses:

- Device support
- Installation requirements
- Installing PrintFleet Enterprise
- Obtaining software updates

1.1 Device support

PrintFleet strives to develop vendor-neutral software products, and to support as many models of printers, copiers, fax machines, and multifunction peripherals as possible. However, our products do not support all models available in the market. PrintFleet is continuously adding model support into our software products.

Supported models are not all supported to the same extent. For example, one model may be supported for all available data types, while another may only be supported for specific data types, such as device description and life page count.

PrintFleet software products collect information from networked imaging devices. Stand alone devices are not supported. Locally connected devices can be partially supported by using the PrintFleet Local Print Agent add-on application.

If you find a model that is not currently supported, contact PrintFleet Technical Support to inquire about possible future support. In North America, call toll free at 1-866-382-8320 Option 1. In Europe, Middle East, or Africa, call +41 62 777 41 58.

Table 1 lists the data types that the Printer Data Collector Agent (DCA) attempts to collect from networked imaging devices during a network scan.

Table 1: Types of data collected by the Printer DCA

IP address	toner cartridge serial number
device description	maintenance kit levels
serial number	non-toner supply levels
meter reads (multiple)	asset number
monochrome or color identification	location
LCD reading	MAC address
device status	manufacturer
error codes	firmware
toner levels	miscellaneous (machine specific)

Warning

PrintFleet uses the media access control (MAC) address of the network interface card (NIC) to identify devices. Once a NIC is associated with a device in PrintFleet, you should try to avoid replacing the NIC for that device. This is especially true if the NIC you are using as a replacement has previously been used in another device in your PrintFleet database, as this can cause the data from the two devices to be combined. If you need to replace a NIC with a previously used NIC, please contact Technical Support.

The Local Print Agent collects the following data types:

- Device driver name
- Device manufacturer
- Communications port

Note

Additional data collection (such as counts, toner level, and supplies) from local devices depends on the data the device itself supports.

1.2 Installation requirements

To purchase PrintFleet Enterprise, there are a series of requirements that must be met. If you are not using PrintFleet hosting services, you must provide a server with appropriate server software in preparation for your PrintFleet Enterprise installation. There is a different set of requirements for PrintFleet Enterprise clients using hosting services than PrintFleet Enterprise clients who are independently hosting their system.

For more information, see the following appendices:

- "PrintFleet Enterprise Installation Requirements Agreement" on page 123
- "PrintFleet Enterprise Hosted: Requirements Agreement" on page 125
- "Data Collector Agent Checklist and Installation Requirements" on page 140

1.3 Installing PrintFleet Enterprise

PrintFleet's Technical Support team installs the PrintFleet Enterprise software.

If you are using PrintFleet hosting services, you must first meet the requirements described in "PrintFleet Enterprise Hosted: Requirements Agreement" on page 125. Prior to PrintFleet installing your system, you must create a DNS 'A' (address) record with your domain. An SSL 128-bit security certificate will be requested and installed on your behalf.

If you are independently hosting your PrintFleet Enterprise system, you must first meet the requirements, described in "PrintFleet Enterprise Installation Requirements Agreement" on page 123. Prior to PrintFleet installing your system, you must create a DNS 'A' (address) record with your domain, and request and install an SSL 128-bit security certificate.

According to the timeline of your requirements agreement, PrintFleet Technical Support remotely installs your PrintFleet Enterprise software components.

Creating a DNS 'A' (address) record

An 'A' (address) record ties a hostname to an IP address. In this case, you must tie your chosen hostname (Internet address) for your PrintFleet Optimizer web console to the public IP address of your PrintFleet server. This enables your PrintFleet server to handle the traffic for PrintFleet Optimizer.

To create a DNS 'A' record:

1. Choose a hostname to access the PrintFleet Optimizer web console. Usually this is a subdomain of your existing corporate domain. For example, if the domain for your corporate website

is `www.yourdomain.com`, your PrintFleet Optimizer hostname can be: `printfleet.yourdomain.com`.

2. Have your network administrator create a DNS ‘A’ record for your chosen hostname using the public IP address of your PrintFleet server. For example, an ‘A’ record for PrintFleet’s corporate domain can be:

   ```
   www.printfleet.com    A  64.85.73.21
   ```

   In this case, `www.printfleet.com` is the hostname and `64.85.73.21` is the public IP address of the web server.

   After you create your DNS ‘A’ record, you can use your chosen hostname to access the PrintFleet Optimizer system from the Internet.

Requesting and installing an SSL 128-bit certificate

If you independently host your PrintFleet Enterprise system, you must request and install an SSL 128-bit certificate for your PrintFleet Enterprise server. This ensures the security of data transmissions from the DCAs at customer locations to your server.

For IIS 6.0, you must do the following steps prior to requesting a certificate:

- Create a DNS 'A' record with your company domain name. See “Creating a DNS ‘A’ (address) record” on page 3.
- Choose a certificate authority to purchase an SSL 128-bit certificate from.

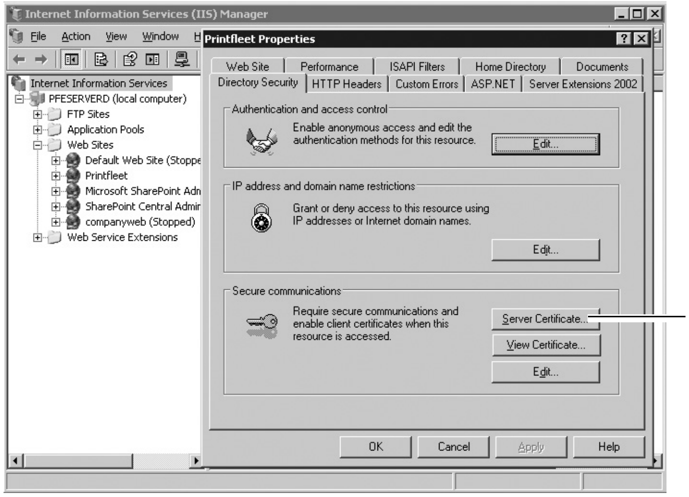
Note	PrintFleet recommends purchasing SSL certificates from www.verisign.com or www.thawte.com. There are known problems with certificates purchased from some issuing companies, and it is suggested you purchase your certificate from a company recommended by PrintFleet.

For all other versions of IIS, see your network administrator.

To request an SSL 128-bit certificate:

1. While logged into your PrintFleet server, click **Start**, click **Control Panel**, and then double-click **Administrative Tools**.
2. Double-click **Internet Information Services (IIS) Manager**.
3. Under **Internet Information Services**, expand your local computer, expand **Web Sites**, and then right-click the PrintFleet web site and click **Properties**.

4. Click the **Directory Security** tab, and then click **Server Certificate**.



Enable anonymous access and edit the authentication methods for this resource.

Grant or deny access to this resource using IP addresses or Internet domain names.

Require secure communications and enable client certificates when this resource is accessed.

Click to create a server certificate

5. Click **Create a new certificate**, and click **Next**.
6. Click **Prepare the request now, but send it later**, and click Next.
7. Type in a name for the certificate, select `1024` from the **Bit length** box, and click **Next**. The name is for your records only, but choose an easily identifiable name, such as the name of your print management department or program.
8. In the **Organization** box, type in your company name, and in the **Organizational Unit** box, type in the relevant department. Click **Next**.

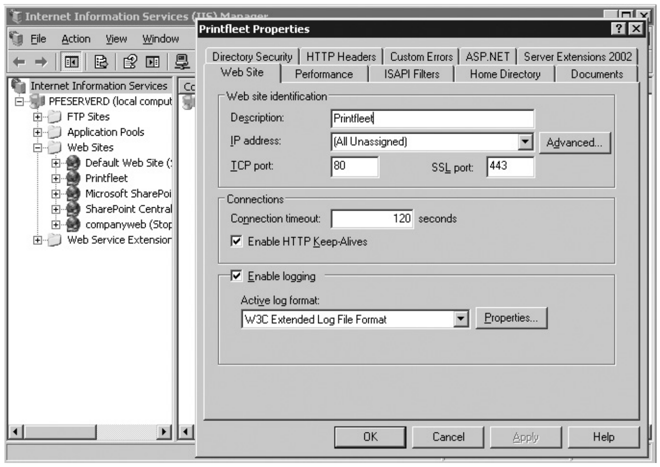
Warning	If you decide to change the hostname for your PrintFleet Optimizer web console at a later date, you will need to request and install a new SSL certificate.

9. In the **Common Name** box, type in the hostname for your PrintFleet Optimizer web console as chosen in "Creating a DNS 'A' (address) record" on page 3, and click **Next**.
10. Enter your **Country/Region**, **State/province**, and **City/locality**, and then click **Next**.
11. Enter a file name for the certificate request, for example, `cert.txt` and click **Next**.
12. Click **Next** on the summary screen to generate your certificate request (also called a CSR).
13. Follow the instructions from your chosen certificate issuing authority to order your certificate. This can consist of emailing your certificate request file (CSR), or copying and pasting the contents of the file into a webform. You may also need to provide your company's IRS or provincial business number.
14. When you receive your certificate(s) (you may receive root, intermediate, or other certificates in addition to your SSL certificate), save and unzip them to the desktop of your

PrintFleet server in preparation for installation. In most cases, you will receive your certificate(s) within 48 hours.

To install your security certificate(s):

1. Right-click the certificate file and select **Install Certificate**.
2. After you install the certificate(s), click **Start**, click **Control Panel**, and then double-click **Administrative Tools**.
3. Double-click **Internet Information Services (IIS) Manager**.
4. Under **Internet Information Services**, expand your local computer, expand **Web Sites**, and then right-click the PrintFleet web site and click **Properties**.
5. Click the **Web Site** tab.
6. Enter `80` in the **TCP Port** box, and `443` in the **SSL port** box. Click **OK**.



Description: Printfleet
IP address: (All Unassigned)
TCP port: 80
SSL port: 443
Connection timeout: 120 seconds
☑ Enable HTTP Keep-Alives
☑ Enable logging
Active log format: W3C Extended Log File Format

7. Restart the computer to complete the installation.
8. Test the security certificate by pointing an Internet browser to `https://`*`yourchosenhostname`* and confirm that the lock icon appears on the status bar.

Arranging your PrintFleet software installation

PrintFleet Technical Support installs all required software to support PrintFleet Enterprise Server. To install DCA, see “Installing and activating the DCA” on page 9. To install Local Print Agent, see “Managing local devices with Local Print Agent” on page 25.

Onsite technical training is required and is designed to address any issues and prepare your designated PrintFleet Administrator(s) to launch the system.

Your PrintFleet software installation is arranged according to either “PrintFleet Enterprise Installation Requirements Agreement” on page 123, or “PrintFleet Enterprise Hosted: Requirements Agreement” on page 125, depending on whether or not you use PrintFleet hosting services. Contact your PrintFleet representative for further details on arranging your software installation.

1.4 Obtaining software updates

New software releases are available on a periodic basis.

To update the DCA software, see “Updating the DCA software” on page 29.

To obtain updates for PrintFleet Enterprise components other than the DCA, contact PrintFleet Technical Support.

1.5 Contacting Technical Support

PrintFleet Technical Support is detailed in Schedule A: PrintFleet Maintenance and Support in Appendix C: PrintFleet Enterprise License Agreement.

Contact PrintFleet Technical Support at support@printfleet.com. In North America, call toll free at 1 (613) 549-3221 Option 1. In Europe, Middle East, or Africa, call +41 62 777 41 58.

Chapter 2 Using the Printer Data Collector Agent

The Printer Data Collector Agent (DCA) is a software application that collects information from supported printers, copiers, fax machines, and multifunction peripherals on a network, and transmits the data back to your PrintFleet Enterprise server.

Data from locally connected devices can also be collected, provided that the Local Print Agent application is installed on each computer connected to a local printer.

For more detailed information on device support, and for a list of data types that are collected, see “Device support” on page 1.

This chapter discusses:

- Distributing the DCA software
- Managing the DCA service
- Configuring communication settings
- Configuring network scan settings
- Managing local devices with Local Print Agent
- Viewing queue, archive, and log files
- Configuring language and read/write settings
- Updating the DCA software
- Understanding the network load associated with the DCA

Note	If you have also purchased PrintFleet Suite Pro, you will have helpful built-in features for configuring and optimizing your DCA settings (consult the *PrintFleet Suite Pro User Guide* for further details): • Use PrintFleet Auditor to perform network scans with various settings until you are happy with the scan performance and results—these settings can then be replicated in the DCA. • Use PrintFleet Asset Tracker to embed missing data to the non-volatile memory of imaging devices, including serial number, asset number, location, and department.

2.1 Distributing the DCA software

As a PrintFleet administrator, you can distribute the DCA software by any method you want. For example, you can provide it as a download on your website, have it loaded onto a USB, or burned onto a CD.

An easy and accessible way of distributing the DCA software is by using the DCA Install function included in PrintFleet Optimizer. This allows anyone with access to PrintFleet Optimizer to quickly install a DCA from any Internet connected computer.

Alternately, PrintFleet Optimizer can provide access to the DCA installation file. Instructions for obtaining the DCA installation file using PrintFleet Optimizer are provided below.

To obtain the DCA installation file from PrintFleet Optimizer:

1. On the **Administration** menu click **DCA Install**.
2. Do one of the following:
   - In DCA 4.x tab, click the **Printer DCA 4.x.x.x.msi** link and save the file to the computer.
   - In DCA 3.x tab, click the **DCA_Install.msi** link and save the file to the computer.

The DCA Install screen displays the most recent release notes and other software prerequisites.

2.2 Installing and activating the DCA

The DCA should be installed on an existing networked server to collect and transmit device data. If no server is available, the DCA can be installed on a single networked computer that will remain powered on 24 hours a day, 7 days a week.

For DCA installation requirements, see “Data Collector Agent Checklist and Installation Requirements” on page 140.

Prior to installing the DCA, you should obtain the information in the following table from the network administrator at the location. This will allow you to properly configure the DCA.

Table 2: Information to Gather from the Network Administrator Prior to a DCA Installation

Find out...	Solution
if there are local devices you want to monitor.	Once the DCA is installed, you will have to enable local data collection and install Local Print Agent on applicable computers. See “Managing local devices with Local Print Agent” on page 25.
how many total printing devices reside on the network and how large the network is.	An additional DCA should be installed on a separate computer for each 10,000 imaging devices on the network or 100,000 IP addresses.
if the network uses multiple subnets.	If so, take note of the subnets and IP ranges to ensure they are all included in the network scan range.
if the network uses a Virtual Private Network (VPN) or has Wide Area Network (WAN) links.	If so, the network timeout for the DCA should be increased to 500–1000 milliseconds.
if the company has multiple offices they want monitored.	If so, a single DCA may be used if the networks are connected via a VPN, however, it is recommended that a DCA is installed at each location.

The DCA has an easy to use installation wizard that in many cases will configure the settings you need to collect data from networked printing devices. To collect data from local devices, and to further configure settings, you will need to open the DCA application after installation.

To install and activate the DCA:

1. Double-click the filename `Printer DCA 4.x.x.x.msi` installation file.
2. The Printer DCA Installation Wizard is launched. Click **Next** to continue.
3. Read through the End-User License Agreement, check **I accept the terms in the License Agreement** and select **Next** to continue. If you do not accept the terms, the installation process will not continue.

4. In the Destination Folder screen, either leave the default folder displayed, or enter a new destination folder. Click **Next** to continue.
5. In the Ready to Install Printer DCA screen, click **Install** to begin installation or click **Cancel** to exit.
6. In the Completed the Printer DCA Installation Wizard, leave checked or uncheck **Launch Printer DCA after installation** and select **Finish**.
7. After the Printer DCA is launched, in the second End-User License Agreement, select **Accept** to continue or select **Decline** to not continue.
8. In the Welcome to the Printer DCA-Setup Wizard, select the language from the drop down list and select **Next**.
9. In the Printer DCA Activation screen, enter the following:
   - Enter the server information for the server that the DCA will be sending information to in the **Server** box.
   - Enter the PIN code in the **PIN Code** box.
   - Optionally, if the location is using a proxy server that you want to configure at this point (you will also be able to do so after installation), click **Show Proxy Configuration**. See “Using proxy settings” on page 14.
   - Click **Next**.

Note	You can continue past this step without entering a PIN code, but data will not be transmitted to the server until activation is complete.

10. In the Scan Settings screen, you will be shown a list of preconfigured IP ranges that will be added to your default DCA network scan. This can be changed after installation is complete if necessary. Click **Next**.
11. In the Intelligent Updates screen, you will be given the option to disable Intelligent Updates. It is recommended that **Allow Intelligent Updates** remains selected unless there is a strong reason to turn it off. Click **Next**. See “Enabling Intelligent Update” on page 14.
12. In the Setup is Complete screen, by default, the **Open the Data Collector Agent Interface** and **Start the Data Collector Agent Service** are both selected. Optionally, you can turn off one or both of these options. Click **Finish**.

At some point over the life of the DCA installation, you may need to reactivate it, for example, if you were given an activation code with an expiry date, or if you need to redirect the DCA to a new server. You can enter a new activation code from an existing DCA installation.

To reactivate the DCA:

1. On the **Tools** menu, click **Reactivate DCA**.

2. If you are redirecting the DCA to a new server and/or port, enter the new information in the **Server** box.
3. Enter the new activation code in the **PIN Code** box.
4. Click **Activate**.

2.3 Managing the DCA service

The DCA runs as a Windows service by default. Alternatively, the DCA can be set up as scheduled task.

Installing and starting the DCA service

The DCA service can be installed, uninstalled, started, or stopped at any time. You may need to reinstall the DCA service if you have previously been running the DCA as a scheduled task, or if the DCA service was uninstalled for any other reason. If you have been running the DCA as a scheduled task, delete the scheduled task before reinstalling the DCA service.

To install, uninstall, start, or stop the DCA service:

- Under the **Status** tab of the DCA, in the **Service** area, beside **DCA Status**, click the **Options** button, and select the operation you want to perform.

Setting up the DCA as a scheduled task

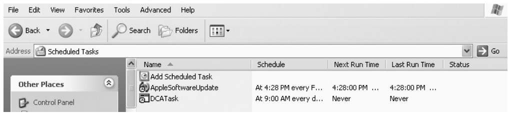
To set up the DCA as a scheduled task instead of a service, you must first uninstall the DCA service, and then create the DCA scheduled task.

To uninstall the DCA service:

1. For DCA 3.x, on the File menu of the DCA, click **Advanced Options**.
2. In the **Service Control (Main)** area, click **Uninstall**.
3. Click **Save and Close**.
4. For DCA 4.x, in the **Status** tab, click **Options** and select **Uninstall**.
5. Click **Save and Close**.

To create a scheduled task for the DCA:

1. Click **Start**, click **Control Panel**, and then double-click **Scheduled Tasks**.
2. On the **File** menu, point to **New**, and then click **Scheduled Task**.
3. Replace `New Task` with a recognizable name for the task, such as `DCATask`, and click anywhere away from the new task icon to save the name.



Address: Scheduled Tasks

Name	Schedule	Next Run Time	Last Run Time	Status
Add Scheduled Task				
AppleSoftwareUpdate	At 4:28 PM every F...	4:28:00 PM ...	4:28:00 PM ...	
DCATask	At 9:00 AM every d...	Never	Never	

4. Double-click your newly created task.

5. In the Task tab, type the following in the **Run** box, including the quotations:

   ```
   "C:\Program Files\Printer DCA\PrinterDCA.Service.exe"
   commandline
   ```
6. Click the **Schedule** tab.
7. In the **Schedule Task** list, select an interval that you want the task to run.
8. In the **Start Time** box, type or select the time of day that you want the task to run.
9. Click **Apply**.
10. Type in your network login name in the **Run as** box.
11. Type in your network password in the **Password** box, and repeat in the **Confirm Password** box.
12. Click **OK**.

2.4 Configuring communication settings

During the DCA installation, the DCA will attempt to establish basic communication with the central server using either HTTPS (default) or HTTP (secondary). Proxy settings can also be configured during installation, or at any time afterwards. If communication with the server is successful during installation, it is not necessary to change the communication method, port, or proxy settings.

Changing and testing the communication method and port

There are two methods the DCA can use to send information to the central server: HTTPS and HTTP. During installation, the DCA will attempt to establish communication with the central server, first, with HTTPS (port 443), and if that fails, HTTP (port 80). If you don't use the default port for your chosen method of communication, you will need to change this in the DCA. You can change the communication method and port at any time.

To change the DCA communication method and port:

1. Under the **Communication** tab of the DCA, in the **Communication Method** area, type in the protocol, followed by the hostname.

2. Optional--only if you use a non-standard port--enter the port number after a colon after a hostname. For example, printfleet.com:84.

3. Click the **Test** button to verify that communication can be established with the central server. You will receive either a success or failure message.

4. Click **Save** to retain changes.

If you are having problems obtaining successful communication between the DCA and the central server, see "Troubleshooting DCA communication problems" on page 16.

Using proxy settings

If a network being scanned with a DCA uses a proxy server, you can configure the DCA to use the proxy settings, which will allow the DCA to scan the network.

To use a manual proxy configuration:

1. Under the **Communication** tab of the DCA, in the **Proxy Configuration** area, click to select one of the following: **Use Windows proxy settings** (no other configuration required), **Use custom proxy settings**, or **None** (to disable proxy settings).
2. If you have selected **Use custom proxy settings**, enter the server and port information in the **Server** and **Port** boxes, respectively.
3. If the proxy server requires authentication, click to select the **Authentication** check box, and then do one of the following:
   - Click to select **Default** to use the authentication currently being used on the computer installed with the DCA.
   - Click to select **Custom**, and then enter username, password, and domain information in the **Username**, **Password**, and **Domain** boxes, respectively, or click **Load Current** to populate the fields with the current authentication being used by the computer installed with the DCA.
4. In the **Communication Method** area, click **Test** to verify the settings are working.
5. Click **Save**.

Changing the web service timeout

The web service timeout determines the maximum time that will be allowed for communication between the DCA and the central server. By default, the web service timeout is 30 seconds; if necessary, the timeout can be increased or decreased at any time.

To change the web service timeout:

1. Under the **Communication** tab, in the **Communication Settings** area, enter or select the desired timeout in the **Web Service Timeout** box.
2. Click **Save**.

The Web Service Discovery Timeout controls the initial connection to the server and the auto-selection of http/https.

Enabling Intelligent Update

When Intelligent Update is enabled, as an administrator, you can remotely update and perform other remote actions on the DCA. See “Remotely managing DCA installations using Semaphore” on page 98.

To enable Intelligent Update:

1. Under the **Communication** tab, in the **Communication Settings** area, click to select the **Enable Intelligent Update** check box.

2. Click **Save**.

Enabling a Service Bridge

A Service Bridge allows a service technician to create a private, secure connection between a service technician and a specific networked printing device, with the DCA acting as a proxy. Once the bridge is established, the service technician can use a special (private) IP address to directly access the device as if they were on site. The technician can view the embedded web page of the device, perform an SNMP scan, update firmware, etc.

For additional security, an access code must be generated from the central server. This code must then be entered into the applicable DCA.

On the service technician's computer:

1. The PrintFleet Optimizer (PFO) user selects a Device to connect to (the Target Device) and goes to its Details page.
2. The PFO user clicks Device's IP Address shown on the page and selects **Service Bridge** option. The **Service Bridge** option is available for network devices only.
3. If the browser does not support the Click Once feature, download the PrintFleet Service Bridge Client's zip file from http://PFE Server URL/Downloads/ServiceBridge Client x.x.x.xxxxx.zip. Extract the zip and run the application. For browsers that do support the Click Once feature, you are prompted to run the PrintFleet.PFE.ServiceBridge.Client application (if not installed).
4. When the PFE URL is displayed, the PFO user can make changes to values or accept default and select OK.
5. The PrintFleet DCA Service Bridge dialog is displayed. If prompted to Download Driver, download the TAP driver and install. When the VPN Connection states Success, a PIN will be generated.
6. Leave this VPN Connection dialog open for the duration. The service technician gives this PIN to the DCA user for their use.

To enable a Service Bridge from the DCA:

1. Do one of the following:
    - On the **Tools** menu, click **Start Service Bridge**.
    - Under the **Communication** tab, in the **Service Bridge** area, click **Start**.
2. In the **Enter Service Bridge PIN** box, enter the access code generated on the central server and click **OK**. The **Status** field in the **Service Bridge** area will indicate when the connection has been established.
3. Enter the Remote IP value into your browser; the device's embedded web page is displayed.

To end the connection:

1. The service technician can close the PrintFleet DCA Service Bridge VPN Connection Success dialog.

Troubleshooting DCA communication problems

If you are unable to obtain successful communication between the DCA and the central server after setting the proper communication method and port (see “Changing and testing the communication method and port” on page 13) and configuring proxy settings if necessary (see “Using proxy settings” on page 14), use the following table to troubleshooting potential communication problems.

Table 3: Troubleshooting DCA Communication Problems

Check if...	If not...
the selected send method (HTTP or HTTPS) corresponds with the port you have chosen to transmit data through.	change the send method to correspond with the port number chosen, or change the port number to correspond with the send method chosen.
the port you have selected is open on the network.	have the network administrator open the selected port.
you have a valid SSL security certificate, if you are attempting to send via HTTPS.	see “Requesting and installing an SSL 128-bit certificate” on page 4 for instructions on setting up a proper security certificate.
the DCA is successfully collecting data from the internal network by looking in the `data_queue` or `data_archive` folder located in the folder where the DCA was installed—if there is data in this folder, the DCA is successfully collecting data.	the problem is not with the send method, but with the collection of data on the internal network.
the destination URL is correct by looking in the Summary area of the **Status** tab in the DCA.	obtain a new PIN code and reactivate the DCA. See “Installing and activating the DCA” on page 9.
the network is free of firewalls.	there are not usually problems with firewalls, but ask the network administrator if there is a chance this may be the problem.

2.5 Configuring network scan settings

The DCA network scan settings determine how the DCA collects information from the internal network, and provides options for transmitting the information to the central server. Scan profiles can be used to configure multiple types of network scans that will run independently, for example, you might want different scan and transmission settings for networked and local devices.

Network scan settings are independent of communication settings, which specify how the DCA will communicate with the central server, and if and how the central server can communicate with the DCA and/or a specific device on the network (see "Configuring communication settings" on page 13).

Managing scan profiles

You can use profiles to configure multiple types of network scans. For example, you might want to scan networked devices every hour, and local devices once a day—these would be two different scan profiles. You might also want a different scan profile for one or two high priority devices that you want to scan more frequently.

Depending on your environment, you might have multiple uses for scan profiles, or you might not need more than one. When you first install the DCA, you will have one scan profile called `Default`.

To create a new scan profile:

1. Under the **Scan** tab, beside **Scan Profile**, click **Add**.
2. In the **New Profile** dialog box, enter a name to associate your new profile with, and click **OK**.
3. Configure all settings under the **General**, **Advanced**, and **Local** tabs that apply to the new profile, or copy the settings from another profile.
4. Click **Save**.

To edit an existing scan profile:

1. Under the **Scan** tab, select the profile you want to edit from the **Scan Profile** list.
2. Edit settings as applicable under the **General**, **Advanced**, and **Local** tabs.
3. Click **Save**.

To delete a scan profile:

1. Under the **Scan** tab, select the profile you want to delete from the **Scan Profile** list.
2. Beside **Scan Profile**, click **Delete**.
3. In the **Delete Profile?** dialog box, click **Yes**.

Warning	If you delete a scan profile, you will no longer be collecting information from the devices specified in the profile, unless they are included in a different profile.

Specifying which devices to scan

The DCA only scans the IP addresses and/or hostnames specified in each scan profile. When the DCA is first installed, it selects a default set of IP addresses to scan based on either Active Directory or, if that is not available, the primary network card on the system installed with the DCA. These IP addresses are automatically added to the `Default` scan profile.

If the default set of IP addresses captures all the devices on the network that you want to scan, and you do not want multiple scan profiles, you do not have to further specify the devices for the DCA to scan. If, however, you want to adjust the devices included in the default scan, or if you have more than one scan profile, you will need to further configure which IP addresses and/or hostnames to include.

Single IP addresses, ranges of IP addresses, and hostnames can all be used to specify devices to include or exclude from a network scan. There are two general purposes for excluding a device or range of IP addresses from a network scan: (1) to specifically not collect information from a device or set of devices; or (2) to remove IP addresses that you know do not have printing devices on them to create the most efficient scan range (shorter network scan time).

Important	It is recommended that the network administrator at the location with DCA installed help set up the DCA scan range.

To add devices to, or exclude devices from, a DCA network scan range:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Ranges** area, do one or more of the following:
   - To automatically obtain an additional default scan range (from the one specified during DCA installation), click to select **Default Range**, and then select either **Active Directory** or the applicable network card for the system installed with the DCA.
   - To specify a range of IP addresses, click to select **IP Range**, and enter the IP address of the beginning of the range in the left box, and the IP address of the end of the range in the right box.
   - To specify a single IP address, click to select **IP Address** and enter the IP address in the box.
   - To specify a hostname, click to select **Hostname** and enter the hostname in the box.
3. Click **Add** or **Exclude**.
4. Repeat steps 2-3 as necessary.
5. Click **Save**.

To remove devices, or device exclusions, from a DCA network scan range:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Ranges** area, under **Scan List**, do one of the following:
    - To remove one or more individual items from the scan range, click to select the item, and then click **Remove**.
    - To remove every item from the scan range, click **Clear**.
3. Click **Save**.

You can also export and import entire lists of scan ranges. To create a file with scan range settings, save a text file with each specification on a separate line. Use parentheses to indicate scan range exclusions. The following is an example of the contents of a text file ready for import; the example indicates, from top to bottom: an IP range to include, a single IP address to include, a hostname to include, and an IP range to exclude.

```
10.0.0.1-10.0.0.200
10.0.1.10
examplehostname
(10.0.0.10-10.0.0.50)
```

To export current scan range settings to a text file:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Ranges** area, under **Scan List**, click **Export**.
3. Save the file to the desired location.

To import scan range settings from a text file:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Ranges** area, under **Scan List**, click **Import**.
3. Select and open a properly formatted text file.
4. Click **Save**.

You can also use PrintFleet Suite Pro (purchased separately) to determine the appropriate scan ranges prior to configuring the DCA.

To determine the optimal IP range settings using PrintFleet Suite Pro:

1. In PrintFleet Auditor, click **Advance Scan**.
2. Do one of the following:

- If the location has less than 100 users, click **QuickScan**, and then click **Go**.
- If the location has 100 users or more, click **Custom IP Range** and specify IP ranges given by the network administrator or click **Fill Ranges** to detect IP ranges automatically, and then click **Go**.

3. If the scan takes less than 25 minutes, and all document output devices were found, you can use these settings for the DCA. If the scan takes longer than 25 minutes, analyze the results to determine exactly which ranges need to be scanned. Do not include ranges that have no document output devices on them, and only include the portions of ranges that do have document output devices on them. For instance, if you are scanning a subnet of 192.168.1.1–192.168.1.254, but there are only document output devices from 192.168.1.1–192.168.1.50 and 192.168.1.200–192.168.1.250, you should input these two ranges instead of the entire subnet to make the DCA scan more efficient.
4. Input your tightened scan ranges into the Advance Scan settings of Auditor, and perform another scan to verify that the scan now takes less than 25 minutes. If it still takes longer than 25 minutes, and you cannot tighten the scan ranges any further, you may want to install more than one DCA at the location.

Enabling scanning of network and/or local devices

You must enable at least one of network or local device scanning for the DCA to collect data. For local device scanning to work, you must also have Local Print Agent installed on computers connected to the local devices you want to scan. See “Managing local devices with Local Print Agent” on page 25.

If you have created separate profiles for networked and local devices, you will enable network device scanning in one, and local device scanning in the other. For more information on scan profiles, see “Managing scan profiles” on page 17.

To enable scanning of network and/or local devices:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Scanning Options** area, do one or both of the following:
   - Click **Network Devices** to enable scanning of networked printing devices.
   - Click **Local Devices** to enable scanning of locally connected printing devices.
3. Click **Save**.

Enabling broadcast scanning

Broadcast scanning targets each IP address specified at the same time, rather than in consecutive order. This makes the DCA network scan faster. Some networks may not allow this type of scanning for security purposes. Typically, this is not needed.

To enable broadcast scanning:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Scanning Options** area, click **Enable Broadcast**.
3. Click **Save**.

Enabling Rapid Scan

Rapid Scan allows the DCA to use multithreading, which significantly decreases the time it takes for the DCA to complete a network scan.

To enable Rapid Scan:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Scanning Options** area, click **Enable Rapid Scan**.
3. Click **Save**.

The number of threads can be controlled on the **Advanced** tab. The setting defaults to a reasonable value for the current system.

Setting the scan and transmission interval

The scan interval determines how often the DCA will scan the network and transmit the collected information to your PrintFleet server. The default scan interval is 30 minutes.

It is generally not useful to set a scan interval for more than every 30 or 60 minutes. For example, new information is posted to PrintFleet Optimizer every 10 minutes, but new alerts are generated approximately every 30 minutes.

Note	The scan interval is the time from the end of one scan to the start of the next scan.

To change the scan interval:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **General** tab, in the **Transmission Options** area, type or select the desired scan interval, in minutes, in the **Scan Interval** box.
3. Click **Save**.

Setting the network timeout

The network timeout is the amount of time that the DCA will wait for a networked device to respond back with its information. The default network timeout is 250 milliseconds.

The network timeout only needs to be adjusted if the DCA is not collecting complete information from networked devices. If, when you perform a DCA scan, certain data fields which should be populated are reporting no information, you may need to increase the network timeout to 500 or 1000 milliseconds. However, the higher the network timeout is set, the longer the DCA scan will take. There may be other reasons that the DCA is not collecting complete information, for example, the device may not store a specific data field (toner levels, etc.).

To change the network timeout:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see "Managing scan profiles" on page 17.
2. Under the **General** tab, in the **Transmission Options** area, type or select the desired network timeout, in milliseconds, in the **Network Timeout** box.
3. Click **Save**.

Setting the Local Print Agent timeout

The Local Print Agent timeout is the amount of time that the DCA will wait for the Local Print Agent application to respond back with information from a locally connected device. The default Local Print Agent timeout is 10,000 milliseconds per system. Local device collection takes substantially longer than networked device collection because of the extra step needed to go through the connected computer via the Local Print Agent application.

The Local Print Agent timeout only needs to be adjusted if the DCA is not collecting complete information from locally connected devices. There may be other reasons that the DCA is not collecting complete information, for example, the device does not store a specific data field (toner levels, etc.), or a Local Print Agent is not installed on the computer connected to the local device. See "Managing local devices with Local Print Agent" on page 25.

To change the Local Print Agent timeout:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see "Managing scan profiles" on page 17.
2. Under the **General** tab, in the **Transmission Options** area, type or select the desired Local Print Agent timeout, in milliseconds, in the **Local Print Agent Timeout** box.
3. Click **Save**.

Setting the number of SNMP retries

The number of SNMP retries entered in the DCA settings is the number of times the DCA will attempt to get information from a device that is responding with incomplete or no information. Increasing the number of SNMP retries may increase the completeness of a DCA scan, but will also increase the amount of time it takes to complete a network scan.

To change the number of SNMP retries used:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see "Managing scan profiles" on page 17.

2. Under the **General** tab, in the **Transmission Options** area, type or select the desired number of SNMP retries in the **SNMP Retries** box.
3. Click **Save**.

Using Focus Scans

Without using Focus Scan, the DCA will scan each IP address, IP range, and hostname specified in the scan range settings every time the DCA performs a full network scan. Using Focus Scan, you can specify a periodic interval for the DCA to perform a full network scan, and the scans performed between the intervals will scan only devices found during the previous full network scan.

Using Focus Scan can decrease the amount of total time and bandwidth that the DCA occupies, particularly on large networks, while ensuring that new or relocated document output devices are discovered on a periodic basis.

To enable Focus Scan:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **Advanced** tab, in the **Focus Scan Options** area, click to select the **Enable Focus Scan** check box.
3. Specify how often you want a full network scan to run by selecting either **Days**, **Hours**, or **Minutes** from the list, and entering a number for the interval beside **Full Discovery Every**. For example, if you enter `5` and select `Days`, a Focus Scan will run once every five days.
4. Click **Save**.

Storing SNMP community strings

Community strings act as passwords on networked devices that limit access via SNMP. Since the DCA uses SNMP to collect data from devices, any custom community strings on printing devices put in place by network administrators can be manually entered in the DCA to allow it SNMP access to the device. Most devices have a community string of `public`, and the DCA stores a community string of `public` by default.

To store community strings in the DCA:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Do one or more of the following under the **Advanced** tab, in the **SNMP Community Strings** area:
   - To add a community string, type an applicable community string in the text box, and click **Add**. Repeat as necessary.
   - To remove a community string, click to select a previously entered community string, and then click **Remove**.
   - To reorder the list of community strings, click to highlight a community string, and then click either the **Up** or **Down** button. Repeat as necessary. When the DCA encounters a device using a community string during the network scan, it

will attempt to use the first community string listed, then the next, etc., until it is successful or it runs out of community strings to attempt.

3. Click **Save**.

Masking private data

For privacy reasons, the following types of information that the DCA collects can be masked in the transmission file to the central server:

- IP addresses of devices included in the network scan
- Telephone numbers collected from devices (masked by default)
- DCA host system information (IP address, MAC address, subnet, etc.)

To mask private information in DCA transmission files:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **Advanced** tab, in the **Privacy Options** area, do one or more of the following:
    - Click to select the **Enable IP Masking** check box to mask device IP addresses.
    - Click to select the **Enable Phone-Number Masking** check box to mask telephone numbers collected from devices (masked by default).
    - Click to select the **Enable DCA Host Info Masking** check box to mask DCA host system information.
3. Click **Save**.

Enabling SNMP traps

SNMP traps are alerts generated by a device that allow information to be sent from a device immediately without having to continuously request information. For example, if a device experiences an error, by enabling SNMP traps, you can be notified of the error immediately instead of waiting until your regularly scheduled DCA scan.

Prior to enabling SNMP traps on the DCA, you need to specify in the internal configuration for each device that SNMP traps should be sent to the IP address of the system installed with the DCA. This only needs to be done for devices that you want to receive SNMP traps from.

After SNMP traps are enabled on the DCA, each SNMP trap received will trigger the DCA to perform a regular data scan on only the device that sent the SNMP trap. The results from this scan will immediately be sent to the central server.

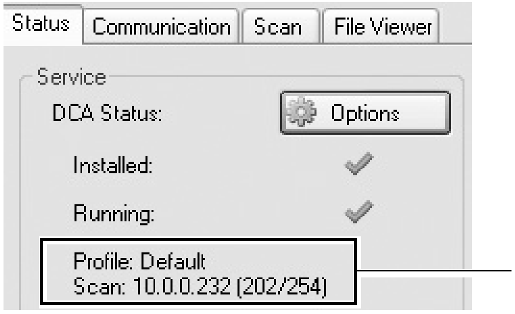
To enable SNMP traps:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **Advanced** tab, in the **Miscellaneous** area, click to select the **Enable SNMP Traps** check box.

3. Click **Save**.

Disabling real time DCA status

By default, during a DCA scan, the DCA will display the real time status of the scan under the **Status** tab. This includes the profile name of the current scan, the IP address currently being scanned, the total number of IP addresses in the scan profile, and the number of IP addresses in the current DCA scan that have already been scanned.



DCA Status:

Installed: ✓

Running: ✓

Profile: Default
Scan: 10.0.0.232 (202/254)

Real time DCA status

You can disable this feature, if necessary.

To disable real time DCA status:

1. Under the **Advanced** tab, in the **Miscellaneous** area, click to disable **Show Realtime DCA Status**.
2. Click **Save**.

2.6 Managing local devices with Local Print Agent

There are three steps that must be taken to collect local printer data using the DCA:

1. Add the IP addresses/ranges of computers connected to local printers to the DCA network scan. See "Specifying which devices to scan" on page 17.
2. Enable the local device scanning option. See "Enabling scanning of network and/or local devices" on page 20.
3. Install Local Print Agent on computers connected to local printers (instructions follow).

Local Print Agent allows the DCA to obtain information directly from locally connected printing devices. The Local Print Agent application must be installed on each computer connected to a local printer that you want to collect information from. Ideally, Local Print Agent will be installed on all computers at any location where you want to collect local printer information. This will allow you to collect information from new local printers as soon as they are connected.

There are three methods to install Local Print Agent:

- Manual installation from the local printer host computer
- DCA push tool installation (manual and automated)
- Third party push tool installation

In environments that do not allow push installation tools, you may be required to manually install the Local Print Agent application on each computer connected to a local printer.

To install Local Print Agent manually from the local printer host computer:

- Run the `Local Print Agent.msi` file on the computer you want to install Local Print Agent on. The installation file is found by default in: program files\Printer DCA\Support folder. The installation file can be copied to a USB drive, CD, etc. for portability.

The DCA has an embedded push install utility specifically for Local Print Agent. In addition, you can schedule periodic push installs to your entire DCA scan range to ensure that Local Print Agent gets installed to any new computers on the network.

To push install Local Print Agent from the DCA:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. On the **Tools** menu, select **Local Agent Management**.
3. Click **Scan All**. This will scan all IP addresses included in the selected scan profile.
4. Under the IP Address column, click to select the check boxes beside each IP address belonging to a computer you want to install Local Print Agent on. Optionally, click **All**, **None**, **Not installed**, or **Installed** to automatically select a set of IPs.
5. If you are not currently logged onto the computer as an administrator, in the **Credentials** area, click **Change**. Enter the local administrator credentials (for the target OS) in the **Username**, **Password**, and **Domain** boxes, and then click **OK**.
6. Click **Install**.

To schedule regular push installs using the DCA:

1. Under the **Scan** tab, make sure the correct scan profile is selected from the **Scan Profile** list. For more information on scan profiles, see “Managing scan profiles” on page 17.
2. Under the **Local** tab, select the **Enable Push Install** check box.

3. In the Change Push Install Credentials screen, enter the credentials of the user that belongs to the local administrator group on the target OS.

Warning	These credentials will be saved in an encrypted format in the DCA. If you do not want these credentials saved, do not enable scheduled push installs.

4. Beside **Start**, select a start date and time for the automated push install.
5. Beside **Repeat**, select the interval you want to perform the push install at.
6. Click **Save**.

If the environment already uses a third party push installation tool, you can use that to push install the `Local Print Agent.msi` file. The installation file can be found in the Printer DCA\support folder on the system installed with the DCA (its default location). Refer to the user guide for the third party push installation tool for further instructions.

2.7 Viewing queue, archive, and log files

For troubleshooting purposes, you might want to view DCA queue, archive, or log files.

Queue and archive files are copies of DCA scan result files; queue files have not yet been transmitted to the central server, while archive files have already been transmitted. The presence of queue files indicates that the DCA is not successfully transmitting information to the central server (unless the DCA is in the process of transmitting the most recent file). Queue and archive files are encrypted in the proprietary `.pfd` format and contain the complete results of a single DCA network scan.

Log files are in `.log` format and are not encrypted. Log files contain summary information for all DCA scans that occurred on a specific date, including scan times, transmission results, DCA application information, intelligent update actions, and the IP addresses and vendors of discovered devices. Log files do not include specific printing device data fields (meters, toner levels, etc.). By default, log files are not sent to the central server, but this can be enabled.

Queue and archive files can only be viewed using the File Viewer included in the DCA. Log files can also be viewed using this, but can also be viewed in any word processing or other application that supports .log files.

To locate the correct file, queue and archive file names have date and time stamps as part of the file name, and log files have a date stamp.

To view queue, archive, or log files in the DCA:

- Under the **File Viewer** tab, do one of the following:
  - To open and view a queue file, click the file folder icon (📁) beside **Total files in queue**, and select and open the desired file.
  - To open and view an archive file, click the file folder icon (📁) beside **Total files in archive**, and select and open the desired file.
  - To open and view a log file, click the file folder icon (📁) beside **Open Log file from**, and select and open the desired file, or select a date via the dropdown.

Alternatively, you can drag and drop any of the files into the File Viewer area.

Deleting old archive and log files

By default, the DCA automatically deletes archive and log files after 30 days. If necessary you can adjust the number of days before these files are deleted, or even stop the DCA from deleting the files at all.

To change the period after which the DCA automatically deletes old archive files:

- Under the **File Viewer** tab, use the **Keep archived files for** combo box to specify the maximum number of days you want to retain archived files. Set the value to 0 if you do not want older archive files to be automatically deleted.

To change the period after which the DCA automatically deletes old log files:

- Under the **File Viewer** tab, use the **Keep log files for** combo box to specify the maximum number of days you want to retain log files. Set the value to 0 if you do not want older log files to be automatically deleted.

2.8 Configuring language and read/write settings

The language for the DCA will be automatically selected during installation, based on the default language selected for your Windows operating system.

To change the DCA language settings:

- On the **Options** menu, point to **Language**, and then do one of the following:
  - Click **Windows Default** to toggle using the default language for your Windows operating system.
  - Select the appropriate language from the list.

The DCA has full write permissions enabled at installation, but read-only permissions can be set through use of a password. This will prevent anyone without the password from changing any of the DCA settings.

To make the DCA read-only:

1. On the **Options** menu, point to **Read-Only Mode**, and then click **Read-Only**.
2. In the **Set Password** dialog box, enter the password you want to use to disable read-only mode, and then click **OK**.

To disable read-only mode:

1. Click **Unlock** in the lower right corner of the DCA.
2. In the **Enter Password** dialog box, enter the password currently set for read-only mode, and then click **OK**.

The password for read-only mode can be changed during read-only mode, provided you have the current password.

To change the read-only mode password:

1. On the **Options** menu, point to **Read-Only Mode**, and then click **Change Password**.
2. In the **Enter Password** dialog box, enter the current password for read-only mode, and then click **OK**.
3. In the **Set Password** dialog box, enter the desired new password for read-only mode, and then click **OK**.

2.9 Updating the DCA software

To take advantage of the latest data collection capabilities, feature enhancements, and bug fixes, it is important to periodically update the DCA software.

You can update the DCA manually, or you can update remotely using Semaphore if Intelligent Update is enabled. See “Enabling Intelligent Update” on page 14 and “Remotely managing DCA installations using Semaphore” on page 98.

Updated DCA software is distributed by PrintFleet when relevant releases are available.

To update the DCA software manually:

- On the **Help** menu, click **Check for Updates**.
- The update type allows for installation of Beta and Alpha releases (if available), or restricts updates to only stable releases.

2.10 Understanding the network load associated with the DCA

The following table shows approximate network byte load for various DCA scans, compared to the network load associated with

loading a single standard web page.

Table 4: Network Byte Load Associated with the DCA

Event	Approximate Total Bytes
Loading a single standard web page	60 KB
DCA scan, blank IP	5.2 KB
DCA scan, 1 printer	7.2 KB
DCA scan, 1 printer, 1 254 local IP addresses	96 KB
DCA scan, network of 15 printers and 254 local IP addresses	125 KB

Chapter 3 Using PrintFleet Optimizer

PrintFleet Optimizer is the web console for your PrintFleet Enterprise system. It is the primary means by which users view collected imaging device data, configure reports, and manage the system.

This chapter discusses all aspects of using the PrintFleet Optimizer web console.

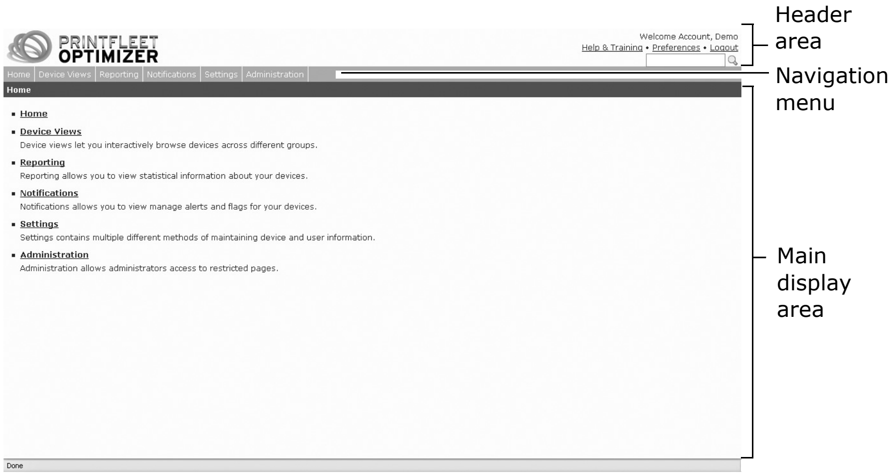
3.1 Working with the interface

The PrintFleet Optimizer web console makes it easy to access the information you need from anywhere with an Internet connection.

The PrintFleet Optimizer interface has three main components:

- The header area
- The navigation area
- The main display area

The specific items displayed in each area, as well as what is displayed on the home page, will depend on the specifications of the user account.



- Home
- Device Views
  Device views let you interactively browse devices across different groups.
- Reporting
  Reporting allows you to view statistical information about your devices.
- Notifications
  Notifications allows you to view manage alerts and flags for your devices.
- Settings
  Settings contains multiple different methods of maintaining device and user information.
- Administration
  Administration allows administrators access to restricted pages.

PrintFleet Optimizer Interface

For more information on user accounts, “Managing users” on page 73.

Logging in to the system

Each user is assigned a unique user name (typically an email address) and password to log in to the PrintFleet Optimizer web console. See “Managing users” on page 73.

To log in to PrintFleet Optimizer:

1. In your browser window, navigate to your designated PrintFleet Optimizer URL, for example, `https://secure.printfleet.com`.
2. Enter your user name and password in the designated boxes, and then click **Login**.

If you have forgotten your password, you can request a password reset if your user name is an email address.

To request a password reset if you forgot your password:

1. Enter your user name (must be an email address for this to work) in the designated box on the login screen.
2. Enter one or more characters in the password box.
3. Click **Login**.
4. Click **Forgot Password** (this will appear after a failed login attempt).
5. Click **OK** in the dialog box that states `Are you sure you wish to reset your password?`
6. Check the inbox of the email address used to login.

Note

While we strive to support all popular browsers, we recommend that you use the latest version.

If you are using Internet Explorer 6, upgrading to Internet Explorer 7 or 8, or another browser such as Firefox or Safari will result in a significantly improved user experience, due to improved speed and standards compliance.

The first time you log in to PrintFleet Optimizer, you will see the End User License Agreement. After this is accepted once, it will not be shown again.

Using the search function

The search function in Optimizer allows you to quickly find specific items in the system.

To search for a specific item in PrintFleet Optimizer:

1. Type your search string in the text box on the right side of the header area of the Optimizer interface.
2. Press **Enter**, or click 🔍 .

Results are displayed and separated into users, devices, and groups.

User results display the login name, first name, last name, last login date and time, the groups and roles assigned to the user, and links to edit, copy, or delete the user from the user edit screen (if applicable to the current user). See “Managing users” on page 73.

Device results display the device name, management status, group, serial number, IP address, MAC address, asset number, location, last active date and time, and a link to edit the device (if applicable to the current user). See “Managing devices” on page 76.

Group results display the group name, parent groups, and a link to the group edit screen (if applicable to the current user). See “Managing groups” on page 67.

Changing your preferences

Preferences, including your password and the way you want device names to display throughout the system, can be changed. It is recommended you change your password periodically for additional security. Passwords are encrypted, and cannot be recovered, so you must change your password if you lose it. If you do not have access to the area to change your password, you must request a reset from your distributor if you want to change it.

To change your preferences:

1. Do one of the following:
   - Click **Preferences** on the upper right side of the interface.
   - On the **Settings** menu, click **My Preferences**.

2. Do one or more of the following:
   - To change your password, type your current password in the **Old Password** box, type your new password in the **New Password** box, and retype your new password in the **Confirm Password** box.
   - To change the way device names display throughout the system, enter an acceptable string in the **Device Name Template** box, or select a method from the list underneath. The following properties are accepted: $description, $name, $id, $serial, $asset, $ip, $mac, $location, $hostname, $lcd, $systemname, $systemlocation, $systemdescription, $grouping, $groupbreadcrumb, $userlogin, $userid, and $username. The following are examples of strings that can be used:

     `$name (Serial: $serial, Asset: $asset)`
     sample output: `HP 1000 (Serial: 1234, Asset: ABC)`

     `$name-$ip-$mac`
     sample output: `HP 1000-192.168.1.1104-00:01:02:aa:bb:cc`
3. Click **Save**.

Your password must be of a certain strength, as set by the administrator. The Strength bar must turn green for it to be an acceptable password. To increase the strength of your password, use both upper and lower case, both letters and numbers, symbols, or increase the length of the password.

See “Managing users” on page 73 for instructions on how to force a user to change their password the next time they log into the system.

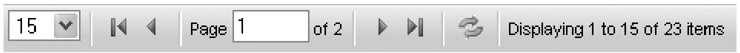
3.2 Working with device views

There are several default device views in PrintFleet Optimizer. You can also create unlimited custom device views that contain the precise information you want to see.

To view data using an available device view:

1. On the **Device Views** menu, click to select the device view you want to use from the following, or any custom view:
   - Technical View
   - Supplies Order View
   - Alerts
   - Maps
2. On the left side of the screen, select the group that contains the devices you want to view. Beside each group, it will indicate how many devices reside in that group; for example, *(5 of 15)* indicates that 5 devices are in the top level of that particular group, and 10 additional devices reside in subgroups of that group, for a total of 15 devices.

3. Use the lower toolbar to change the number of devices shown, scroll through pages, or refresh the data.



Filtering and sorting data

Data in a device view can be filtered and sorted. Filtering allows you to view a subset of the devices in the selected group. Sorting allows you to view information in ascending or descending order.

To sort data in a device view:

- Click the column title you want to sort the data by, and click again to toggle between ascending and descending order.

You can customize a default sort order for each view when creating or editing a view. See “Creating custom device views” on page 44.

To filter data in a device view:

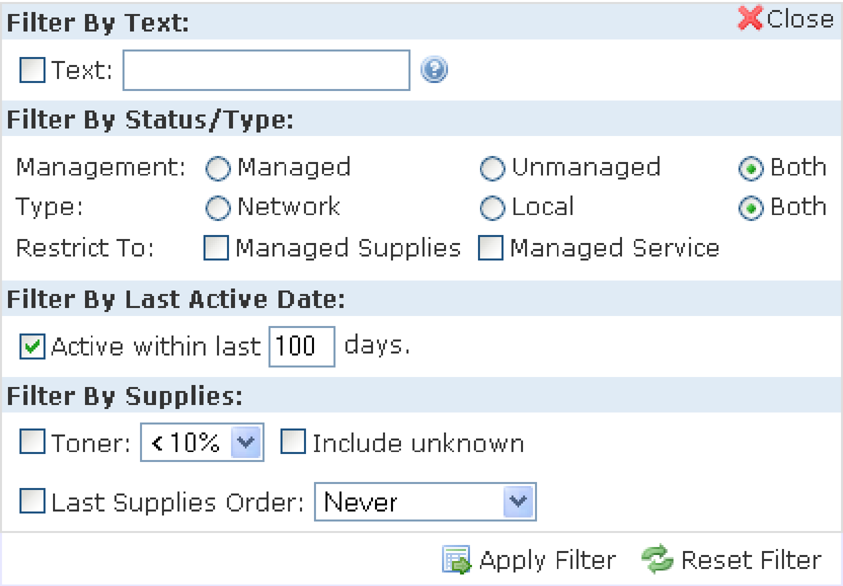
1. While on a device view, click **Change Filters**.
2. Do one or more of the following:
   - To filter devices by text string(s) that match all or a portion of a device name, serial number, asset number, IP address, or location, click to select the **Text** check box, and type the string in the text box. Multiple search strings are separated by a space, and each string will be searched individually (e.g. `10.0.0 HP` would search both `10.0.0` and `HP`).
   - To filter devices by managed or unmanaged status, click to select **Managed**, **Unmanaged**, or **Both** (default is Both). For more information on managed status, see “Marking devices as managed, unmanaged, or hidden” on page 81.
   - To filter devices by networked or local status, click to select **Network**, **Local**, or **Both** (default is Both).
   - To filter devices by managed supplies or service status, click to select the **Managed Supplies** and/or **Managed Service** check box.
   - To filter devices by last active date, click to select the **Active within last _ days** check box, and enter the number of days in the box.

Note	Device views are set to automatically filter based on last active date for a default number of days. The default number is 6 days, but this is can be configured by the administrator. See “Configuring device settings” on page 103.

   - To filter devices by percent toner remaining, click to select the **Toner** check box, and then select the highest percent toner remaining you want to view from the list. Optionally, click to select the **Include unknown** check box to list devices with an unknown amount of toner remaining.
   - To filter devices by the last time supplies were ordered, click to select the **Last Supplies Order**, and then select the time

interval for last supplies orders that you want to view: never, less than 1 week, less than 2 weeks, less than 3 weeks, or less than 30 days ago.

3. Click **Apply Filter**.



Filter By Text:

□ Text:

Filter By Status/Type:

Management: ○ Managed ○ Unmanaged ● Both

Type: ○ Network ○ Local ● Both

Restrict To: □ Managed Supplies □ Managed Service

Filter By Last Active Date:

☑ Active within last 100 days.

Filter By Supplies:

□ Toner: < 10% □ Include unknown

□ Last Supplies Order: Never

To clear a data filter in a device view:

1. While on a filtered device view, click **Change Filters**.
2. Click **Reset Filter**.

Viewing new devices

Devices that have recently appeared in the system will be marked with a **New** icon (NEW). The number of days that a device will be marked as new is configured by your system administrator. The default number of days is 30.

Administrators can customize the number of days that the icon will appear next to new devices. See “Configuring system wide settings” on page 100.

Working with the traffic light system

Some device views use a traffic light system to display supplies status and device status. A legend appears at the bottom of applicable device views. The following table describes what each traffic light icon means for supplies status and device status.

Table 5: Understanding the Traffic Light System

Icon	Status Interpretation
🟢	OK
⚠	Caution (for supplies, Low Toner)
🔴	Warning (for supplies, Out of Toner)
●	Stale (data has not been collected from the device for 24 hours)
🔵	Unknown (data is not available from the device or not supported by PrintFleet)

Working with the default views

The following table describes the data included in each of the default device views.

Table 6: Default Device Views

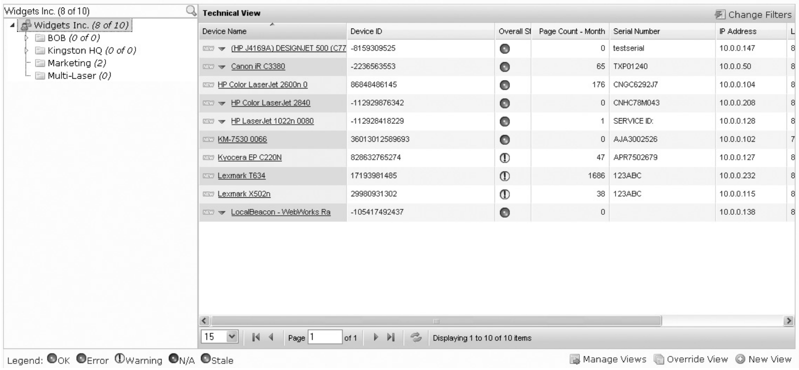
Device View	Data Included
Technical View	device name, supplies status, overall status, page count - month, serial number, IP address, location, last active date
Alerts	customer, devices, options for managing alerts
Maps	list of maps, links to each map, number of devices placed on each map, options for managing maps
Supplies Order View	device name, pages in last 30 days, supply type, current level/status, last order date, option to order supplies

Using the Technical View

The Technical View provides basic information about devices, including the name, supplies status, device status, yesterday meter count, serial number, IP address, location, and last active date. You can Edit and Override this information via Options in the Device View Manager.

To access the Technical View:

- On the **Device Views** menu, click **Technical View**.



Device Name	Device ID	Overall St	Page Count - Month	Serial Number	IP Address	L
NEW (HP J4169A) DESIGNJET 500 (C77	-8159309525	●	0	testserial	10.0.0.147	8
NEW Canon iR C3380	-2236563553	●	65	TXP01240	10.0.0.50	8
NEW HP Color LaserJet 2600n 0	86848486145	●	176	CNGC6292J7	10.0.0.104	8
NEW HP Color LaserJet 2840	-112929876342	●	0	CNHC78M043	10.0.0.208	8
NEW HP LaserJet 1022n 0080	-112928418229	●	1	SERVICE ID:	10.0.0.128	8
NEW KM-7530 0066	36013012589693	●	0	AJA3002526	10.0.0.102	7
NEW Kyocera EP C220N	828632765274	!	47	APR7502679	10.0.0.127	8
NEW Lexmark T634	17193981485	!	1686	123ABC	10.0.0.232	8
NEW Lexmark X502n	29980931302	!	38	123ABC	10.0.0.115	8
NEW LocalBeacon - WebWorks Ra	-105417492437	●	0		10.0.0.138	8

Displaying 1 to 10 of 10 items

Legend: ● OK ● Error ! Warning ● N/A ● Stale

The Technical View will display the traffic light icon for supplies status and overall status that corresponds to the most significant status. For example, if a device is out of black toner and low on yellow toner, the Technical View will display a warning icon under the Supplies column for the black toner, rather than a caution icon for the yellow toner.

If you want more information about the status of a device, click on the device name link and you will be taken to the Device Detail View for that device. See "Working with the Device Detail view" on page 45.

Using the Supplies Order View

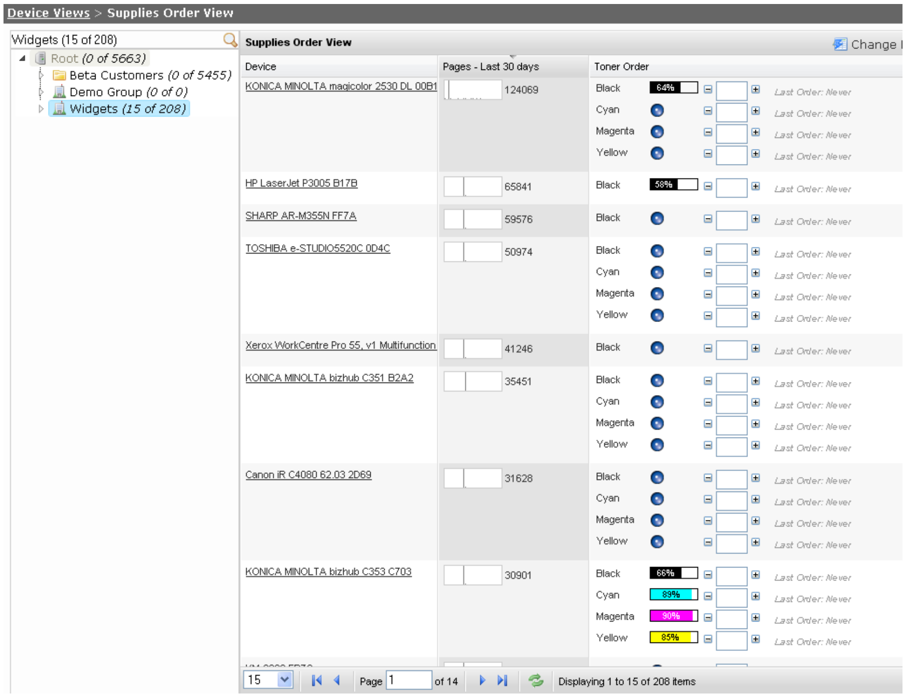
The Supplies Order View displays supplies related information about devices, including black toner level or status, cyan toner level or status, magenta toner level or status, yellow toner level or status, device name, and a link to the report on pages for the last 30 days. Supplies can also be ordered from the Supplies Order View. You can Edit, Override, or delete this information via Options in the Device View Manager.

The email address where supplies orders are sent is set at the group level for dealer and customer groups. See "Creating, editing, and deleting groups" on page 68. Multiple, separate orders will be generated and sent if an order is placed for multiple devices belonging to different groups with different supplies ordering email addresses.

Supplies orders are automatically added to the service history of each applicable device.

To access the Supplies Order View:

- On the **Device Views** menu, click **Supplies Order View**.



Device Views > Supplies Order View

Widgets (15 of 208)

- Root *(0 of 5663)*
  - Beta Customers *(0 of 5455)*
  - Demo Group *(0 of 0)*
  - Widgets *(15 of 208)*

Supplies Order View

Device	Pages - Last 30 days	Toner Order		
KONICA MINOLTA magicolor 2530 DL 00B1	124069	Black	64%	*Last Order: Never*
		Cyan	●	*Last Order: Never*
		Magenta	●	*Last Order: Never*
		Yellow	●	*Last Order: Never*
HP LaserJet P3005 B17B	65841	Black	58%	*Last Order: Never*
SHARP AR-M355N FF7A	59576	Black	●	*Last Order: Never*
TOSHIBA e-STUDIO5520C 0D4C	50974	Black	●	*Last Order: Never*
		Cyan	●	*Last Order: Never*
		Magenta	●	*Last Order: Never*
		Yellow	●	*Last Order: Never*
Xerox WorkCentre Pro 55, v1 Multifunction	41246	Black	●	*Last Order: Never*
KONICA MINOLTA bizhub C351 B2A2	35451	Black	●	*Last Order: Never*
		Cyan	●	*Last Order: Never*
		Magenta	●	*Last Order: Never*
		Yellow	●	*Last Order: Never*
Canon iR C4080 62.03 2D69	31628	Black	●	*Last Order: Never*
		Cyan	●	*Last Order: Never*
		Magenta	●	*Last Order: Never*
		Yellow	●	*Last Order: Never*
KONICA MINOLTA bizhub C353 C703	30901	Black	66%	*Last Order: Never*
		Cyan	89%	*Last Order: Never*
		Magenta	90%	*Last Order: Never*
		Yellow	85%	*Last Order: Never*

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For devices that are capable of reporting specific percentage supplies levels, toner level information will be displayed as a percentage. For devices that are not capable of reporting specific percentage supplies levels, toner level information will be displayed using the traffic light system. See "Understanding the Traffic Light System" on page 37.

Supplies can also be ordered via the Supplies Order View. Later, you can view previous supply orders.

To order supplies:

1. On the **Supplies Order View**, enter the quantity of each supply to be ordered in the **Toner Order** column.

Note	If you include the **Toner Order** column in a custom device view, you will be able to order supplies directly from that view using the same method as the Supplies Order View. See "Using the Supplies Order View" on page 38.

2. Click **Order Supplies**, and you will be taken to the order screen.
3. Verify the information in the **Order Summary** area is correct. If it is not, return to the Supplies Order View to modify the order, or click **Cancel Order**.
4. In the **Complete Order** area, complete the following fields:
   - **Email To:** the email address where the order should be sent

- **Email CC:** the email address to be copied on the order, by default, the email associated with your user account
- **Subject:** the subject line of the email
- **Note (optional):** note to include in the body of the email

5. Click **Send Order**.

To view previous supply orders:

1. On the **Reporting** menu, click **Previous Supply Orders**. Date, ordered by, and order information are displayed.
2. Under the **Options** column, click **View Order** to see exactly which devices and supplies were included in a specific order.

The Supplies Order View provides direct access to a page count report, that displays pages printed over the past 30 days.

To view the Page Counts report for a device:

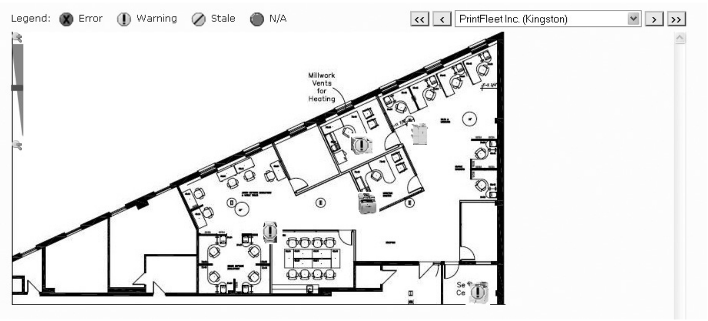
- Click the icon under the **Pages (last 30 days)** column, in the row of the device you want to run the report for. The icon will be a smaller version of the actual report, and can be used as a quick reference.

For more information about reports, see “Using reports” on page 51.

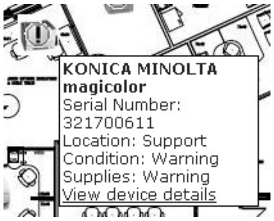
If you want more information about the status of a device, click on the device name link and you will be taken to the Device Detail View for that device. See “Working with the Device Detail view” on page 45.

Using the Maps View

The Maps View allows you to view, upload, and place images of document output devices, computing devices, people, and other miscellaneous items on one or more maps for each customer. Document output devices will display their status using the traffic light system. See “Understanding the Traffic Light System” on page 37.



Most browsers also support hovering your mouse pointer over the device to view basic device information, with a link to the device's detail view. See "Working with the Device Detail view" on page 45.



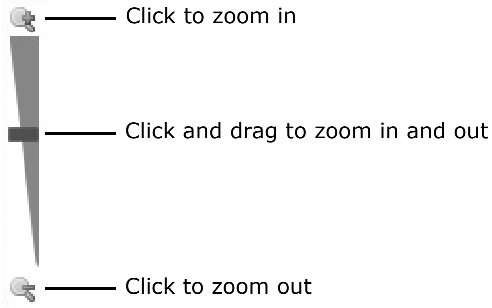
KONICA MINOLTA
magicolor
Serial Number:
321700611
Location: Support
Condition: Warning
Supplies: Warning
View device details

To access the Maps view:

- On the **Device Views** menu, click **Maps**.

To view a map:

1. In the **Maps** view, under the **Options** column, click **View**.
2. Optionally, use the zoom bar or your mouse scroller to zoom in and out on the map image.



To upload a new map:

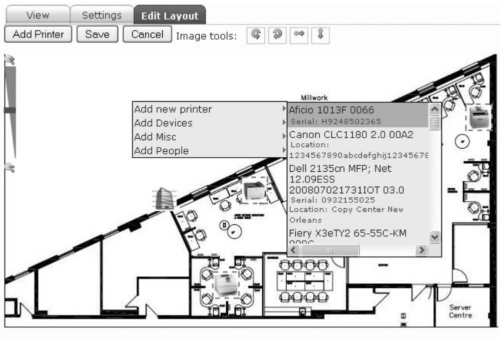
1. In the **Maps** view, click **Add Map**. Alternately, click **Option Edit** or **View** on the existing map and select **New** in the Settings tab.
2. Select a group.
3. Enter a recognizable title for the map in the **Map name** box.
4. Click Browse or type the location of the map image you want to upload in the **Map image** box.
5. Click **Add Map**.

Note	Map images must be in .jpg, .gif, .png, .bmp, .tiff, or .wmf format.

To place imaging devices on a map:

1. In the **Maps** view, under the **Options** column, click **Edit** for the map you want to edit.
2. Click the **Edit Layout** tab.
3. Do one of the following:

   - Click **Add Printer**, click to select the device you want to add from the list, and then click the location on the map that you want to place the device.
   - Right-click the place on the map image where you want to place a device, point to **Add new printer**, and then click to select a device from the list.
4. Drag the device until it is in the precise location you want it.
5. Click **Save**.



To place computing devices, people, or other miscellaneous icons on a map:

1. In the **Map** view, under the **Options** column, click **Edit** for the map you want to edit.
2. Click the **Edit Layout** tab.
3. Right-click the place on the map image where you want to place a computer, building, or person, and do one of the following:
   - To add a computer, point to **Add Devices**, and click to select the icon you want to add from the list.
   - To add a person or group of people, point to **Add People**, and click to select the icon you want to add from the list.
   - To add other miscellaneous icons, point to **Add Misc**, and click to select the icon you want to add from the list.
4. Drag the object until it is in the precise location you want it.
5. Click **Save**.

To move an imaging device image or other icon:

1. In the **Maps** view, under the **Options** column, click **Edit** for the map you want to edit.
2. Click the **Edit Layout** tab.
3. Click and drag the icon you want to move to the new location.
4. Click **Save**.

To remove an imaging device image or other icon:

1. In the **Maps** view, under the **Options** column, click **Edit** for the map you want to edit.
2. Click the **Edit Layout** tab.

3. Right-click on the icon you want to remove, and then click **Remove**.
4. Click **Save**.

To rotate or flip a map:

1. In the **Maps** view, under the **Options** column, click **Edit** for the map you want to edit.
2. Click the **Edit Layout** tab.
3. Do one or more of the following to rotate and/or flip the map to the correct position:
    - Click ↺ to rotate the map image counterclockwise.
    - Click ↻ to rotate the map image clockwise.
    - Click ↔ to flip the map image horizontally.
    - Click ↕ to flip the map image vertically.
4. Click **Save**.

To change a map image or title:

1. In the **Maps** view, under the **Options** column, click **Edit** for the map you want to edit.
2. In the **Settings** tab, do one or more of the following:
    - Enter a new title for the map in the **Map name** box, and click **Change**.
    - Click **Browse** or type in the location of a replacement image in the **Select file** box, and then click **Upload**.

To delete a map:

1. In the **Maps** view, under the **Options** column, click **Delete** for the map you want to delete.
2. Click **OK** to confirm deletion.

To download a map image:

1. In the **Maps** view, under the **Options** column, click **Edit** or **View**.
2. In the **Settings** tab, click **Download** and save the image file to your computer.

Using the Alerts View

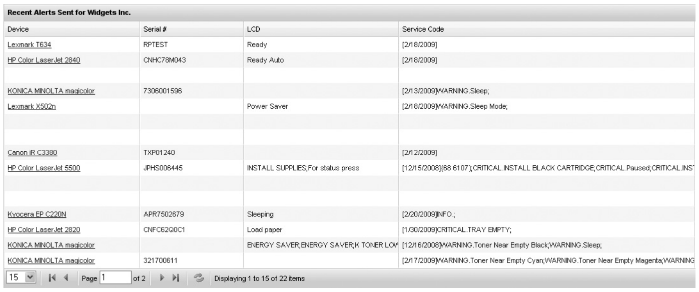
The Alerts view displays details on the recently sent alerts for all customer groups.

The Alerts view displays the customer name, number of devices that have recent alerts, and a link to view alert details for each device.

To view the Alerts view:

1. On the **Device Views** menu, click **Alerts**.

2. Under the **Options** column, click **Details** to view the device name, serial number, LCD, and service code status for each device with a recent alert for a particular customer.



Recent Alerts Sent for Widgets Inc.

Device	Serial #	LCD	Service Code
Lexmark T634	RPTEST	Ready	[2/18/2009]
HP Color LaserJet 2840	CNHC78M043	Ready Auto	[2/18/2009]
KONICA MINOLTA magicolor	7306001596		[2/13/2009]WARNING.Sleep;
Lexmark X502n		Power Saver	[2/18/2009]WARNING.Sleep Mode;
Canon iR C3380	TXP01240		[2/12/2009]
HP Color LaserJet 5500	JPHS006445	INSTALL SUPPLIES;For status press	[12/15/2008]{68 6107};CRITICAL.INSTALL BLACK CARTRIDGE;CRITICAL.Paused;CRITICAL.INS
Kyocera EP C220N	APR7502679	Sleeping	[2/20/2009]INFO.;
HP Color LaserJet 2820	CNFC62Q0C1	Load paper	[1/30/2009]CRITICAL.TRAY EMPTY;
KONICA MINOLTA magicolor		ENERGY SAVER;ENERGY SAVER;K TONER LOW	[12/16/2008]WARNING.Toner Near Empty Black;WARNING.Sleep;
KONICA MINOLTA magicolor	321700611		[2/17/2009]WARNING.Toner Near Empty Cyan;WARNING.Toner Near Empty Magenta;WARNING

15 Page 1 of 2 Displaying 1 to 15 of 22 items

3. Optionally, to view additional information about a specific device, click the device name to go to the Device Detail view. See "Working with the Device Detail view" on page 45.

Creating custom device views

An unlimited amount of custom device views can be created, so that you can view the exact information you want, in the way you want to view it. Custom device views will be added to the Device Views menu for groups selected to have access.

To create a custom device view:

1. On the **Settings** menu, click **Device View Manager**.
2. Click **New View**.
3. In the **Columns** area, click to select the data items you want included in the view. In general, you will want to include at least one data item that identifies a device, for example, device name or serial number. Custom Device Fields are denoted by yellow fill.
4. Enter a title for the custom device view in the **Name** box.
5. From the **Default Sorting** lists, choose a default column you want the data to be sorted by initially, and whether you want the sorting to be ascending or descending.
6. From the **Apply To** list, select whether you want the device view to be available to only yourself (**Me**) or to specific **Groups**. If you select Groups, you must select one or more groups that the view will be available to. Selecting Root will make the view available to everyone.
7. Click and drag the selected data items into the order you want them to appear on the view. The item at the top of the list will be displayed as the first item on the left side of the view.
8. Click **Save**.

Note	If you include the **Toner Order** column in a custom device view, you will be able to order supplies directly from that view using the same method as the Supplies Order View. See "Using the Supplies Order View" on page 38.

To edit a custom device view:

1. On the **Settings** menu, click **Device View Manager**.
2. In the row of the device view you want to change, click **Edit**.
3. Change any properties of the view, including name, default sorting, apply to properties (including which specific groups can access the view), and columns (data items).
4. Click **Save**.

To delete a custom device view:

1. On the **Settings** menu, click **Device View Manager**.
2. In the row of the device view you want to remove, click **Delete**.
3. When prompted, click **Confirm**.

You can use the override function to allow yourself or specified groups to see one view instead of another. This view could be a slight variation of the original view, or it could be something entirely different. When you delete an override, the properties of the original device view will be reinstated.

To create a device view override:

1. On the **Settings** menu, click **Device View Manager**.
2. In the row of the device view you want to create an override for, click **Override**.
3. Create your override view by entering a **Name**, choosing **Default Sorting** and **Apply To** properties, and selecting data items in the **Columns** area.
4. Click **Save**.

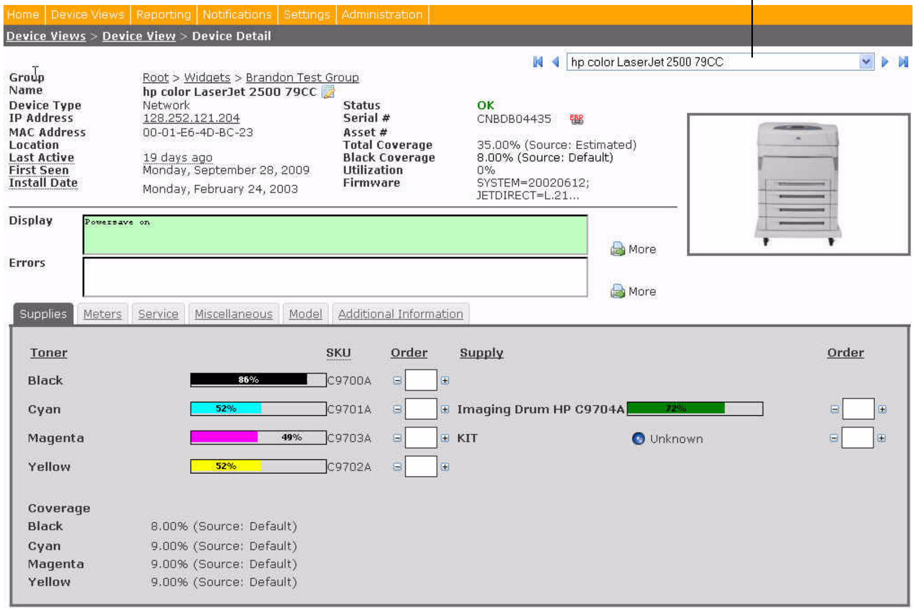
3.3 Working with the Device Detail view

The Device Detail view displays all information, and links to other areas in the system, relevant to a specific device. An image of the device model is also included if available.

The lower area of the Device Detail view has tabs for accessing complete meter breakdowns, supply levels, service information, miscellaneous device-specific information, and model information.

To access the Device Detail view:

- Click on a device name link anywhere in the system. Usually this is while using one of the device views. See “Working with device views” on page 34.



Navigate between devices in the same group

Group	Root > Widgets > Brandon Test Group		
Name	hp color LaserJet 2500 79CC		
Device Type	Network	Status	OK
IP Address	128.252.121.204	Serial #	CNBDB04435
MAC Address	00-01-E6-4D-BC-23	Asset #	
Location		Total Coverage	35.00% (Source: Estimated)
Last Active	19 days ago	Black Coverage	8.00% (Source: Default)
First Seen	Monday, September 28, 2009	Utilization	0%

Install Date	Monday, February 24, 2003	Firmware	SYSTEM=20020612;
			JETDIRECT=L.21...

Display: Powersave on

Errors:

Toner		SKU	Order	Supply		Order
Black	86%	C9700A	⊟ □ ⊞			
Cyan	52%	C9701A	⊟ □ ⊞	Imaging Drum HP C9704A	72%	⊟ □ ⊞
Magenta	49%	C9703A	⊟ □ ⊞	KIT	Unknown	⊟ □ ⊞
Yellow	52%	C9702A	⊟ □ ⊞			

Coverage	
Black	8.00% (Source: Default)
Cyan	9.00% (Source: Default)
Magenta	9.00% (Source: Default)
Yellow	9.00% (Source: Default)

Table 7: Information Displayed in the Device Detail View

Group	Name
IP address	Status
Location	Utilization
Serial number	Asset number
Total coverage (and source)	Individual color coverages (and source)
Last active (date/time)	MAC address
Firmware	First seen (date)
Install date	Display (with More link to view previous displays)
Errors (with More link to view previous errors)	Links to external web sites if configured for the device’s group
Supply levels (with ability to add and remove items from a supplies order)	Meter breakdowns (with links to page count reports)

Table 7: Information Displayed in the Device Detail View

Service information (including past 100 alerts and flags, and recent service history)	Miscellaneous device-specific information
Model information (from the model database)	Device Type

Page coverages are displayed for each application color, as well as total. Coverage values can come from a variety of sources—the source being used will be indicated in brackets beside the percentage value. The following table describes the various sources.

Table 8: Page Coverage Data Sources

Coverage Data Source	Description
Device Total	A value obtained directly from the device for the lifetime average page coverage of the device.
Device Cartridge	A value obtained directly from the device for the average page coverage over the life of the current cartridge.
Device Total / Device Cartridge	Both Device Total and Device Cartridge values may display if both are available.
Estimated[1]	If there is enough information to calculate page coverage, but no page coverage given directly from the device, a calculated estimate of page coverage will be displayed.
Default[1]	If no page coverage information is available, a default percentage of 5% will be displayed.
1. This value can be set in the Configuration page.	

The ERP icon (ERP) will appear beside the serial number of the device on the Device Detail view if the device is currently configured for meter exports. See "Configuring meter exports" on page 85.

Note	You can find additional information, including the version of the DCA being used, by hovering your mouse over the device image.

Clicking on the edit icon (📝) that appears beside the device name will take you to the **Device Information** screen, which allows you to add and edit information to the device record. For more information, see “Editing device information” on page 76.

Viewing embedded web pages

From the Device Detail view, you can view the embedded web page of the device, provided you are within the internal network that the device resides.

To view the embedded web page:

- Click the **IP address** of the device. Two options appear: Internal Webpage and Service Bridge. To access the Service Bridge for network devices, see “Enabling a Service Bridge” on page 15.

Viewing historical LCD and error information

From the Device Detail view, you can view historical LCD and error data, useful for determining whether or not there are recurring or serious problems with a device.

To view historical LCD data:

- Click **More** to the right of the **Display** area.

To view historical error data:

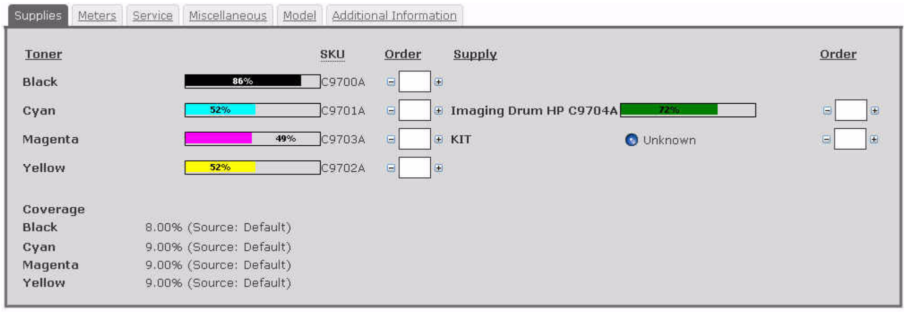
- Click **More** to the right of the **Errors** area.

Working with the Supplies tab

The Supplies area on the Device Detail view displays toner and non-toner supply levels, supply SKUs, and provides the ability to add items to a supplies order (if this feature is enabled).

To access supplies information:

- On the **Device Detail** view, click the **Supplies** tab.



Toner		SKU	Order	Supply		Order
Black	86%	C9700A	⊟ □ ⊞			
Cyan	52%	C9701A	⊟ □ ⊞	Imaging Drum HP C9704A	72%	⊟ □ ⊞
Magenta	49%	C9703A	⊟ □ ⊞	KIT	Unknown	⊟ □ ⊞
Yellow	52%	C9702A	⊟ □ ⊞			

Coverage
Black 8.00% (Source: Default)
Cyan 9.00% (Source: Default)
Magenta 9.00% (Source: Default)
Yellow 9.00% (Source: Default)

To add items to a supplies order:

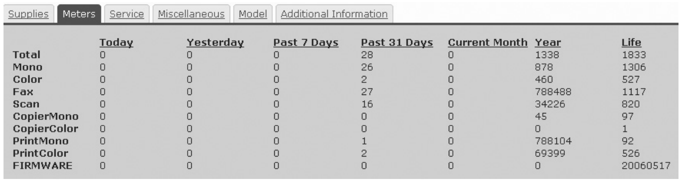
1. Under the **Order** column, click the + icon in the row of the supply you want to order. Click additional times to increase the order quantity.
2. If you are finished adding items to your order, click **Place Order** to proceed to the order screen. See “Using the Supplies Order View” on page 38.

Working with the Meters tab

The meters area displays complete meters information, including standard, virtual, and device-specific meters, for several different time periods: today, yesterday, past 7 days, past 31 days, current month, year, and life of the device. You can also access trend reports for each of these time periods.

To access meters information:

- On the **Device Detail** view, click the **Meters** tab.



	Today	Yesterday	Past 7 Days	Past 31 Days	Current Month	Year	Life
Total	0	0	0	28	0	1338	1833
Mono	0	0	0	26	0	878	1306
Color	0	0	0	2	0	460	527
Fax	0	0	0	27	0	788488	1117
Scan	0	0	0	16	0	34226	820
CopierMono	0	0	0	0	0	45	97
CopierColor	0	0	0	0	0	0	1
PrintMono	0	0	0	1	0	788104	92
PrintColor	0	0	0	2	0	69399	526
FIRMWARE	0	0	0	0	0	0	20060517

To access a meter trend report:

- On the **Meters** tab, click one of the following column titles for the time period you want to run the report for:
  - **Today.** Displays a report showing pages printed since 12:00am on the current day.
  - **Yesterday.** Displays a report showing pages printed on the previous day.
  - **Past 7 Days.** Displays a report showing pages printed during the previous seven days.
  - **Past 31 Days.** Displays a report showing pages printed during the previous 31 days.
  - **Current Month.** Displays a report showing pages printed from the start of the current month until the current day.
  - **Year.** Displays a report showing pages printed from the start of the current year until the current day.
  - **Life.** Displays a report showing pages printed from the start of when the DCA began collecting information from the device until the current day.

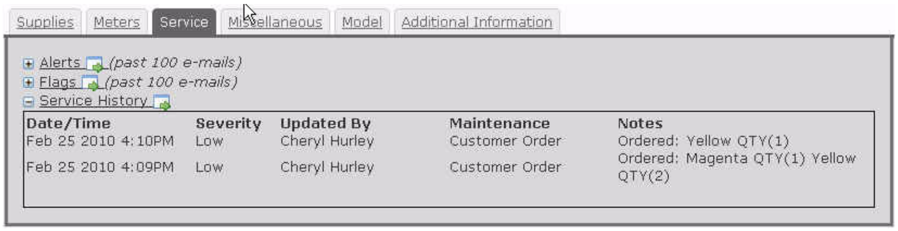
Working with the Service tab

The service area provides quick access to information about the past 100 alerts, past 100 flags, and service history for the device.

To access service information:

1. On the **Device Detail** view, click the **Service** tab.
2. Do one or more of the following:
   - To view past alerts, click the ⊞ icon beside Alerts and view the Send Date, To, From, and Subject for the past 100 alert emails directly in the Service tab, or click **Alerts** or ⇨ to go to the **Alert Settings** screen. See “Using alerts” on page 60.
   - To view past flags, click the ⊞ icon beside Flags to view the Send Date, To, From, and Subject for the past 100 flag emails directly in the Service tab, or click **Flags** or ⇨ to go to the **Flag Settings** screen. See “Using flags” on page 66.
   - To view the service history for the device, click the ⊞ icon beside Service History to view the Date/Time, Severity,

Updated By, Maintenance, and Notes for each service history item directly in the Service tab, or click **Service History** or to go to the **Service History** screen. See "Viewing, editing, and exporting service history" on page 80.



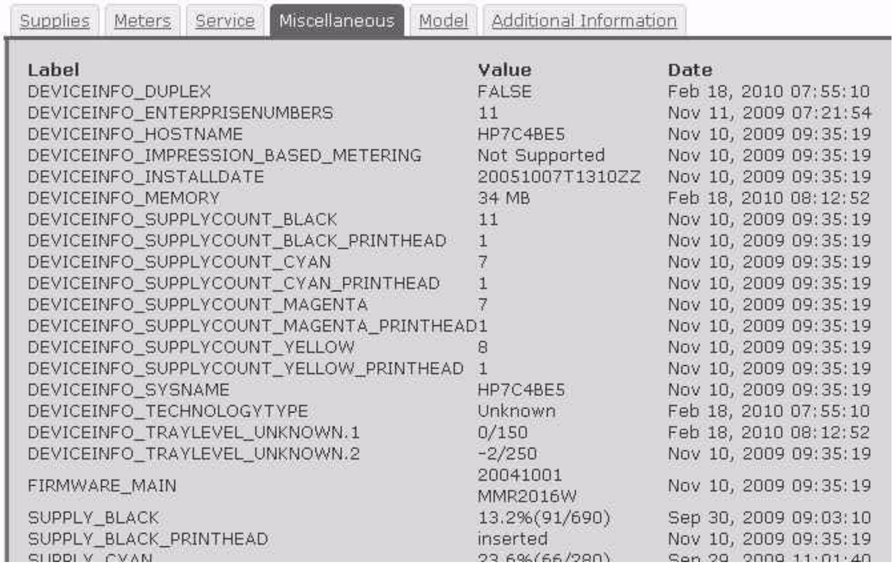
Date/Time	Severity	Updated By	Maintenance	Notes
Feb 25 2010 4:10PM	Low	Cheryl Hurley	Customer Order	Ordered: Yellow QTY(1)
Feb 25 2010 4:09PM	Low	Cheryl Hurley	Customer Order	Ordered: Magenta QTY(1) Yellow QTY(2)

Working with the Miscellaneous tab

The miscellaneous area provides additional device information that does not fit into any particular category. This information will vary by device, but may include such things as paper levels, amount of memory, duplex capability, etc.

To access miscellaneous device information:

- On the **Device Detail** view, click the **Miscellaneous** tab. This will display the Label, Value, and Date the information was obtained for each miscellaneous data item.



Label	Value	Date
DEVICEINFO_DUPLEX	FALSE	Feb 18, 2010 07:55:10
DEVICEINFO_ENTERPRISENUMBERS	11	Nov 11, 2009 07:21:54
DEVICEINFO_HOSTNAME	HP7C4BE5	Nov 10, 2009 09:35:19
DEVICEINFO_IMPRESSION_BASED_METERING	Not Supported	Nov 10, 2009 09:35:19
DEVICEINFO_INSTALLDATE	20051007T1310ZZ	Nov 10, 2009 09:35:19
DEVICEINFO_MEMORY	34 MB	Feb 18, 2010 08:12:52
DEVICEINFO_SUPPLYCOUNT_BLACK	11	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_BLACK_PRINTHEAD	1	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_CYAN	7	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_CYAN_PRINTHEAD	1	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_MAGENTA	7	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_MAGENTA_PRINTHEAD	1	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_YELLOW	8	Nov 10, 2009 09:35:19
DEVICEINFO_SUPPLYCOUNT_YELLOW_PRINTHEAD	1	Nov 10, 2009 09:35:19
DEVICEINFO_SYSNAME	HP7C4BE5	Nov 10, 2009 09:35:19
DEVICEINFO_TECHNOLOGYTYPE	Unknown	Feb 18, 2010 07:55:10
DEVICEINFO_TRAYLEVEL_UNKNOWN.1	0/150	Feb 18, 2010 08:12:52
DEVICEINFO_TRAYLEVEL_UNKNOWN.2	-2/250	Nov 10, 2009 09:35:19
FIRMWARE_MAIN	20041001 MMR2016W	Nov 10, 2009 09:35:19
SUPPLY_BLACK	13.2%(91/690)	Sep 30, 2009 09:03:10
SUPPLY_BLACK_PRINTHEAD	inserted	Nov 10, 2009 09:35:19
SUPPLY_CYAN	23.6%(66/280)	Sep 29, 2009 11:01:40

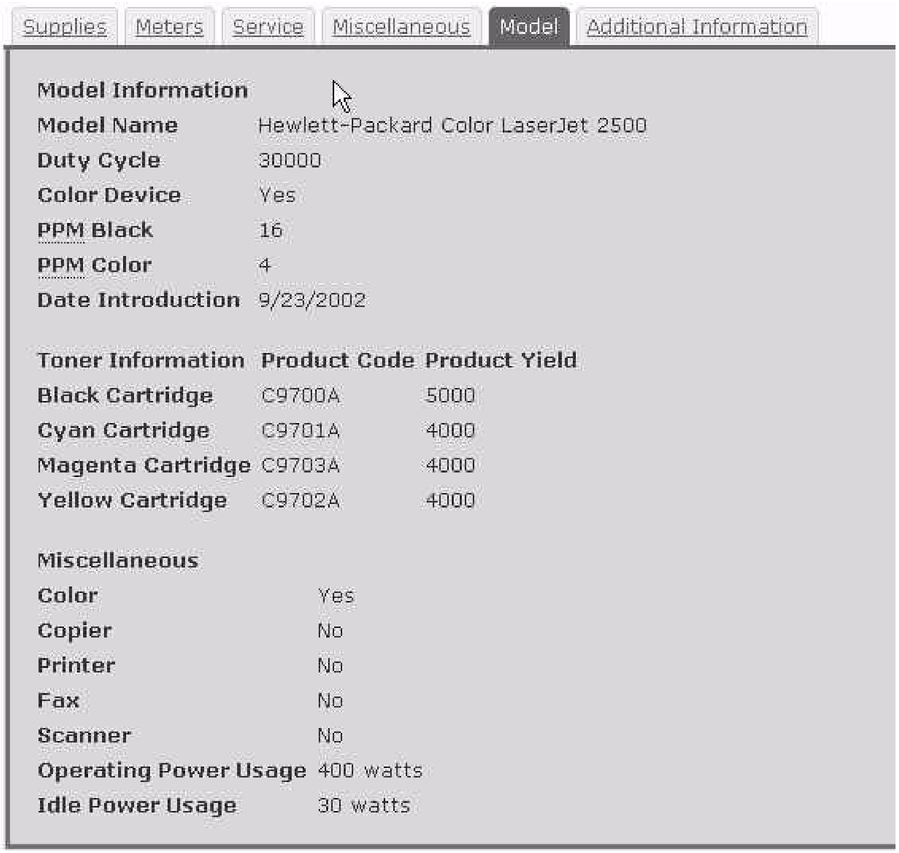
Working with the Model tab

The model area provides information about the device model, rather than the specific device. This information is stored in the model database, and is not collected by the DCA (although some of the information may also be available through the DCA).

You can edit the model that a device is associated with. See "Editing device information" on page 76.

To access model information:

- On the **Device Detail** view, click the **Model** tab. The information contained here is displayed below.



Model Information	
Model Name	Hewlett-Packard Color LaserJet 2500
Duty Cycle	30000
Color Device	Yes
PPM Black	16
PPM Color	4
Date Introduction	9/23/2002

Toner Information	Product Code	Product Yield
Black Cartridge	C9700A	5000
Cyan Cartridge	C9701A	4000
Magenta Cartridge	C9703A	4000
Yellow Cartridge	C9702A	4000

Miscellaneous	
Color	Yes
Copier	No
Printer	No
Fax	No
Scanner	No
Operating Power Usage	400 watts
Idle Power Usage	30 watts

3.4 Using reports

PrintFleet Optimizer reports let you view data when and how you want it. In addition to the default Primary Reports, you can generate Custom Reports and Executive Reports (multiple reports combined into one). You can also schedule reports to be sent via email.

Generating reports

PrintFleet Optimizer allows you to generate a variety of Primary, Custom, and Executive reports.

To generate a report:

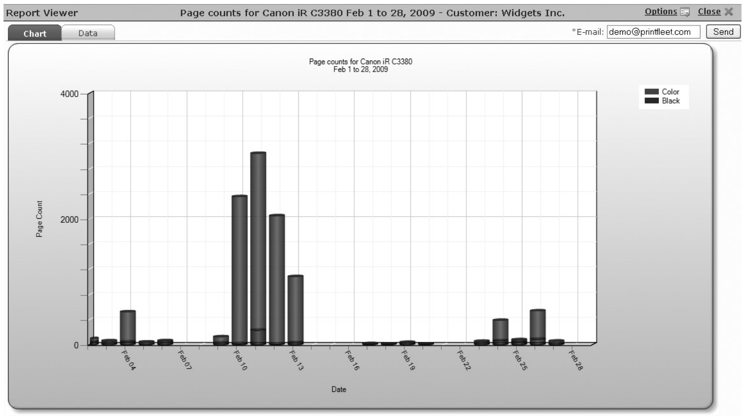
1. On the **Reporting** menu, point to **Report Console**, and then click **Create Report**.
2. In the **Report Information** area, do the following:
   - Select a report from the **Report Selection** list.
   - Select other options as necessary, depending on which report you have chosen. This may include selecting a group, customer, a specific device, etc.
3. In the **Run Now** area, do one of the following:
   - Select a **Start Date** and **End Date** for the report.

- Select a date range from the **Data Range** list (This Month, This Year, or Last Month). This will automatically populate the start and end dates for the report.

4. Click **View Report**.
5. For Executive Reports, navigate through each individual report by selecting a page to view from the list in the **Report Viewer** header.

The Report Viewer allows you to do various things with a generated report, including:

- View in chart form.
- View in data form.
- Email the report.
- Download the report in .pdf format.
- Download the report in .csv format.



Report Viewer Page counts for Canon iR C3380 Feb 1 to 28, 2009 - Customer: Widgets Inc.

*E-mail: demo@printfleet.com

To view a report in chart form (if applicable):

- After generating a report, in the **Report Viewer**, click the **Chart** tab.

To view a report in data (text) form:

- After generating a report, in the **Report Viewer**, click the **Data** tab.

To email a report:

1. After generating a report, in the **Report Viewer**, type in the email address you want to send the report to in the **E-mail** box.
2. Click **Send**.

To download a report in .pdf format:

- After generating a report, in the **Report Viewer**, click **Options**, and then click **Download PDF**.

To download a report in .csv format:

- After generating a report, in the **Report Viewer**, click **Options**, and then click **Download CSV**.

Primary reports are default reports you can generate to view information about document output devices.

Table 9: Description of Primary Reports

Report	Description
Advanced Volume Report	A text report that displays device name, serial number, start page count, end page count, page total, mono total, color total, copier mono, copier color, print mono, print color, fax count, IP address, asset number, and last active date. Additional machine-specific meters can be shown if selected. You can choose to run the report for either managed or unmanaged devices.
CPC Report	A text report that displays the device name, serial number, asset number, location, count mono, count color, CPC mono, CPC color, CPC total mono, CPC total color, and CPC total based on a specified date range. Individual CPC charges are based on inputs from the CPC Assignment screen. See “Assigning CPC charges” on page 84.
Current Meters	A text report that displays the device name, serial number, IP address, asset number, all available meters (standard and custom) based on a specified end date, and the last active date, for either managed or unmanaged devices for the selected group.
Individual Page Count Report	A graphical report that displays total page count, total monochrome count, and total color count for a single device over a specified time period.

Table 9: Description of Primary Reports

Report	Description
Individual Toner Level Report	A graphical report that displays black, cyan, magenta, and yellow toner levels (where applicable) for a single device over a specified time period.
Individual Page & Toner Report	A graphical report that displays black pages, color pages, and black, cyan, magenta, and yellow toner levels for a single device over a specified time period.
Individual Misc. Supplies Report	A graphical report that displays the level of a specified supply item (i.e. imaging drum), for a single device over a specified time period.
Power Usage Report	A text report that displays the device name, serial number, operating watts, idle watts, total pages (in the selected time period), estimated kWh usage, estimated cost (at selected kWh price), power cost per page, and total power cost of the selected group over the specified time period.
Toner Reorder Report	A text report that displays the device name, asset number, mono and color pages based on a specified start date, supply (toner) types, and current supply levels for the selected group.

Some default custom reports are included in PrintFleet Optimizer, and you can create an unlimited amount of your own custom reports. See "Building Custom Reports" on page 57. To update to the most recent report, see "Obtaining report updates" on page 58.

Editing and deleting reports

Report properties, including name/title, description, role permissions, code base, chart type, or individual reports for Executive reports can be changed at any time, with the exception of the code base and chart type for Primary reports, which cannot be changed.

To edit a report:

1. On the **Administration** menu, point to **Reports**, and then click **Report Manager**.
2. Click **Edit** in the row of the report you want to change.
3. Make desired changes to the report.
4. Click **Save**.

All reports can be deleted at any time.

To delete a report:

1. On the **Administration** menu, point to **Reports**, and then click **Report Manager**.
2. Click **Delete** in the row of the report you want to delete.
3. Click **Confirm** to verify that you want to delete the report.

Scheduling reports

Scheduled reports are configured to email to a specified recipient at predetermined intervals.

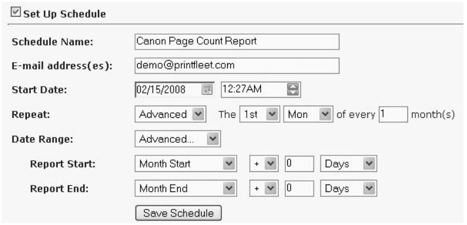
A scheduled report email contains the data and chart (if applicable) embedded in the body of the email, as well as the report in a .csv format attachment.

To create a scheduled report:

1. On the **Reporting** menu, point to **Report Console**, and then click **Create Report**.
2. In the **Report Information** area, do the following:
   - Select a report from the **Report Selection** list.
   - Select other options as necessary, depending on which report you have chosen. This may include selecting a group, customer, a specific device, date range, etc.
3. Click to select **Set Up Schedule**.
4. Type an email subject line for the report in the **Schedule Name** box.
5. Type in one or more email addresses for the report to be sent to in the **Email address(es)** box. Multiple email addresses can be separated by commas, semicolons, or spaces.
6. In the **Start Date** area, type or select a start date and time for the report to begin sending.
7. In the **Repeat** area, select one of the following intervals for the report to send:
   - **Daily.** Type in the interval, in days, that you want the report to run.
   - **Weekly.** Type in the interval, in weeks, that you want the report to run, and select the day of the week that you want the report to run.
   - **Monthly.** Type in which day of the month and interval in months that you want the report to run.

- **Advanced.** Select which occurrence of which day of the week in a month, and interval in months that you want the report to run.

8. In the **Date Range** area, select one of the following intervals for each report to analyze:
   - **Last 24 hours**
   - **Last 7 days**
   - **Last 30 days**
   - **Previous Month**
   - **Current Month**
   - **Last 90 days**
   - **Advanced.** Select a **Report Start**, typically **Month Start**, and optionally select +/- a specified amount of days or months. Select a **Report End**, typically **Month End**, and optionally select +/- a specified amount of days or months.
9. Click **Save Schedule**.



☑ Set Up Schedule

Schedule Name: Canon Page Count Report

E-mail address(es): demo@printfleet.com

Start Date: 02/15/2008 12:27AM

Repeat: Advanced The 1st Mon of every 1 month(s)

Date Range: Advanced...

Report Start: Month Start + 0 Days

Report End: Month End + 0 Days

To view existing scheduled reports:

- On the **Reporting** menu, point to **Report Console**, and then click **Scheduled Reports**. The email address, title, last sent date, and options to edit and delete each schedule are displayed.

To edit a scheduled report:

1. On the **Reporting** menu, point to **Report Console**, and then click **Scheduled Reports**.
2. Under the **Options** column, click **Edit** in the row of the scheduled report you want to edit. This will take you to the **Edit Report** tab.
3. Make the changes you want to the scheduled report. In addition to the standard items, you also have the option to change the **Next Send Date**. The last sent date will also be displayed.
4. Click **Save Schedule**.

To delete a scheduled report:

1. On the **Reporting** menu, point to **Report Console**, and then click **Scheduled Reports**.
2. Under the **Options** column, click **Delete** in the row of the scheduled report that you want to delete.
3. Click **Confirm** to verify deletion of the schedule.

Building Executive Reports

Executive Reports contain multiple individual reports in a single document. An unlimited amount of custom Executive Reports can be created.

To create a new Executive Report:

1. On the **Administration** menu, point to **Reports**, and then click **Report Manager**.
2. Click the **New Executive Report** button.
3. In the **Executive Report** box, type a title for the report.
4. In the **Description** box, type a description of the report.
5. Select a report from the **Report** list.
6. Under the **Hardcoded Parameters (Optional)** column, set any fixed report parameters, such as a title, applicable group, device, etc.
7. Click the 💾 icon to save your changes.
8. Click **Add New Report** to add additional reports.
9. Use the ⬆ and ⬇ icons to arrange the order of the reports. The report at the top of the list will be the first report displayed in the executive report.
10. Click the **Save** button to save the entire report.

See "Editing and deleting reports" on page 54 for information on editing and deleting executive reports.

Building Custom Reports

Administrators can create their own Custom Reports. Custom Reports can draw on any information available in your PrintFleet database.

To create a new Custom Report:

1. On the **Administration** menu, point to **Reports**, and then click **Report Manager**.
2. Click the **New Custom Report** button.
3. Type a name for the report in the **Name** box.
4. Type a title for the report in the **Title** box. This is the title that will appear at the top of a generated report, and can include variables listed under the **Substitutions** tab.
5. Optionally, enter a description in the **Description** box.
6. Select the roles that will be able to view the report from the **Restrict Access** area.
7. Under the **PFSQL** tab, type the code that will generate your custom report, and then click **Check Syntax** to verify the code. Click the **Substitutions** tab to view the variables that can be used in the code.
8. For graphical reports, click the **Chart** tab and complete the following fields:
   - Select the type of graph from the **Chart Type** list. Options are Bar, Line, Stacked Bar, or Pie.
   - Specify the field for the x-axis in the **X-Axis Field** box.

- Specify the field(s) for the y-axis in the **Y-Axis Field** box.

9. Click **Save**.

See "Editing and deleting reports" on page 54 for information on editing and deleting custom reports.

Obtaining report updates

Updates for standard reports can be obtained from PrintFleet whenever they are available using the Report Sync function in PrintFleet Optimizer.

Warning	Obtaining updates to reports that you have edited the code for will override the customizations you have made. These reports will display **Locally Modified** under the Status column of the Report Sync screen.

To obtain report updates from PrintFleet:

1. On the **Administration** menu, point to **Reports**, and then click **Report Sync**.
2. For reports with one of the following indicators under the **Status** column, click **Perform Action** to obtain updates to the report:

Note	You will have to check the individual checkboxes or check the Select 'New', Select 'Update Available' or Select 'Deleted' checkbox.

- **Update Available**. An update is available for this report.
- **New**. A new status is available for this report.
- **Locally Modified**. This report has been edited locally, and updates obtained will override any customization that has been done to the report.

Reports with a status of **No Changes** have no current updates available.

Using the Cost per Image (CPI) Calculator

The CPI Calculator is designed to help you calculate what you should be charging your clients on a per page basis. Using the page counts collected and stored in the PrintFleet database, you can combine every component in the cost of printing into a per page charge, including toner, parts, labor, and margin. If one or more components are not applicable to your program, you simply leave them out of the calculation.

Note	The CPI calculator uses the page counts from the previous month to calculate suggested charges.

To calculate per page charges using the CPI Calculator:

1. On the **Reporting** menu, click **CPI Calculator**.
2. Select a company from the **Customer** list.

3. Click to select the check box for each component you want included in your CPI calculation, and configure default settings for the components as necessary:

    - **Supplies**. Costs for this component are drawn from the default model records for each device, and can be adjusted after cost components are selected, or can be uploaded into the system using the import/export function. See "Exporting and importing device information" on page 82.

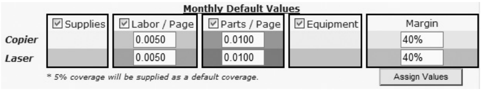
Note	Default toner prices and yields are drawn from the PrintFleet Model Database. Toner prices stored in this database are observed from major retail chains at the time the model was added to the database, or from periodic updates thereafter. Toner yields stored in the database are in most cases the stated OEM yields unless those were unavailable.

    - **Labor.** Enter a per page cost in one or both of the Copier and Laser rows. The text boxes will hold up to four decimal places. Do not type $ in front of your per page costs.

    - **Parts.** Enter a per page cost in one or both of the Copier and Laser rows. The text boxes will hold up to four decimal places. Do not type $ in front of your per page costs.

    - **Equipment.** Costs for this component are drawn from the default model records for each device, and can be adjusted after cost components are selected.

    - **Margin.** This component does not need to be selected, and is based entirely on the percentage entered in. Enter a margin percentage in one or both of the Copier and Laser rows. If you want a forty percent margin, you should type in 40% (not a decimal number).



Monthly Default Values

	☑ Supplies	☑ Labor / Page	☑ Parts / Page	☑ Equipment	Margin
Copier		0.0050	0.0100		40%
Laser		0.0050	0.0100		40%

** 5% coverage will be supplied as a default coverage.*

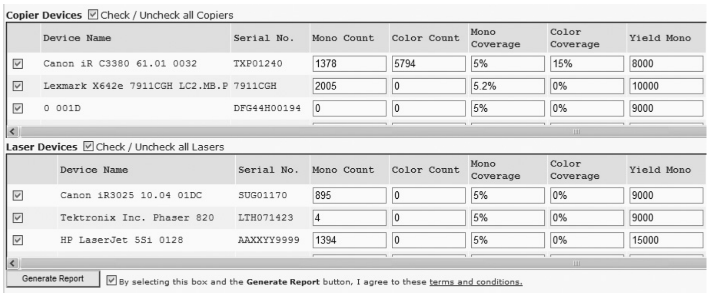
4. Click **Assign Values**.

5. Click to select the check box to the left of each device name that you want to include in the CPI calculation. Optionally, you can select the **Check / Uncheck all Copiers** check box, and the **Check / Uncheck all Lasers** check box to select all devices.

6. Edit any numbers in the **Copier Devices** and **Laser Devices** areas as desired.

7. Read and click to accept the Terms and Conditions of using the CPI Calculator.

8. Click **Generate Report**.



Copier Devices ☑ Check / Uncheck all Copiers

	Device Name	Serial No.	Mono Count	Color Count	Mono Coverage	Color Coverage	Yield Mono
☑	Canon iR C3380 61.01 0032	TXP01240	1378	5794	5%	15%	8000
☑	Lexmark X642e 7911CGH LC2.MB.P	7911CGH	2005	0	5.2%	0%	10000
☑	0 001D	DFG44H00194	0	0	5%	0%	9000

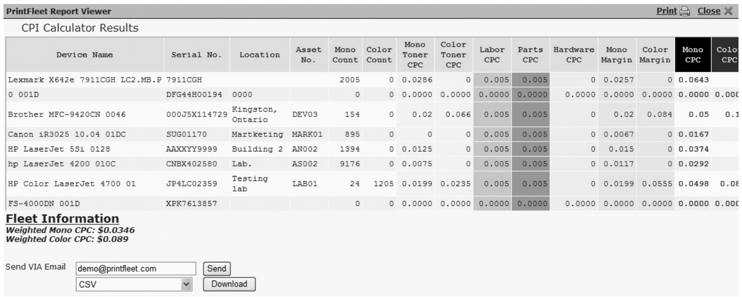
Laser Devices ☑ Check / Uncheck all Lasers

	Device Name	Serial No.	Mono Count	Color Count	Mono Coverage	Color Coverage	Yield Mono
☑	Canon iR3025 10.04 01DC	SUG01170	895	0	5%	0%	9000
☑	Tektronix Inc. Phaser 820	LTH071423	4	0	5%	0%	9000
☑	HP LaserJet 5Si 0128	AAXXYY9999	1394	0	5%	0%	15000

☑ By selecting this box and the **Generate Report** button, I agree to these terms and conditions.

The CPI report generated includes the following:

- Per page charge breakdowns for each component of the cost (supplies, parts, labor, equipment, margin).
- Suggested charge for monochrome pages printed for each device.
- Suggested charge for color pages printed for each device.
- Weighted average monochrome print charge for the fleet.
- Weighted average color print charge for the fleet.
- Options to email or download the report.



CPI Calculator Results

Device Name	Serial No.	Location	Asset No.	Mono Count	Color Count	Mono Toner CPC	Color Toner CPC	Labor CPC	Parts CPC	Hardware CPC	Mono Margin	Color Margin	Mono CPC	Colo CPC
Lexmark X642e 7911CGH LC2.MB.P	7911CGH			2005	0	0.0286	0	0.005	0.005	0	0.0257	0	0.0643	
0 001D	DFG44H00194	0000		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000
Brother MFC-9420CN 0046	000J5X114729	Kingston, Ontario	DEV03	154	0	0.02	0.066	0.005	0.005	0	0.02	0.084	0.05	0.1
Canon iR3025 10.04 01DC	SUG01170	Martketing	MARK01	895	0	0	0	0.005	0.005	0	0.0067	0	0.0167	
HP LaserJet 5Si 0128	AAXXYY9999	Building 2	AN002	1394	0	0.0125	0	0.005	0.005	0	0.015	0	0.0374	
hp LaserJet 4200 010C	CNBX402580	Lab.	AS002	9176	0	0.0075	0	0.005	0.005	0	0.0117	0	0.0292	
HP Color LaserJet 4700 01	JP4LC02359	Testing lab	LAB01	24	1205	0.0199	0.0235	0.005	0.005	0	0.0199	0.0555	0.0498	0.08
FS-4000DN 001D	XPK7613857			0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000

Fleet Information
Weighted Mono CPC: $0.0346
Weighted Color CPC: $0.089

Send VIA Email: demo@printfleet.com
CSV

To email a CPI report:

1. Generate a CPI report as described in “To calculate per page charges using the CPI Calculator:” on page 58.
2. On the report screen, in the **Send Via E-mail** box, type in the email address you want the report to be sent to.
3. Click **Send**.

To download a CPI report:

1. Generate a CPI report as described in “To calculate per page charges using the CPI Calculator:” on page 58.
2. On the report screen, click **Download**, and save the report to the desired location.

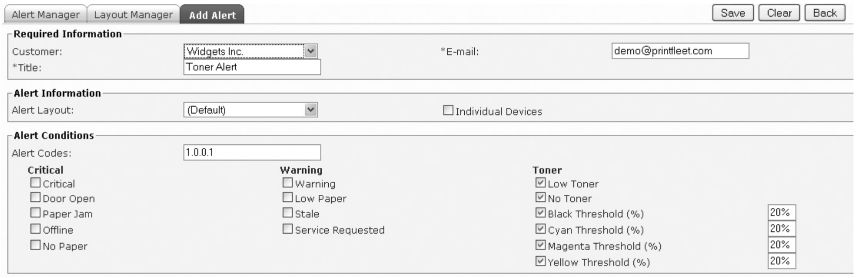
3.5 Using alerts

Alerts are configured to notify you via email when a document output device has a status that you have indicated you want to be notified of. This gives you the ability to respond to service issues quickly. Recently sent alerts are also summarized on the Alerts view; for more information, see "Using the Alerts View" on page 43.

Creating new alerts

To create a new alert:

1. On the **Notifications** menu, point to **Alert Settings**, and then click **Alert Manager**.
2. Click the **New Alert** button.
3. Complete the following required items:
   - Select a company from the **Customer** list.
   - Type in an email subject line for the alert in the **Title** box.
   - Type in the email address that you want the alert to be sent to in the **E-mail** box.
4. Optionally, select a layout from the **Alert Layout** list. See "Managing alert layouts" on page 63.
5. Optionally, to assign the alert to individual devices instead of all devices, do the following:
   - Click to select the **Individual Devices** check box.
   - Click the **Assign Devices** button.
   - Under the **Assigned** column, click to select the check box beside each device you want the alert assigned to.
   - Click **Assign Devices**.
6. Do one or more of the following to choose the device status items you want to be alerted on:
   - Type custom error codes you want to be alerted on in the **Alert Codes** box. Use semicolons to separate multiple items.
   - Click to select specific status items listed under the **Critical**, **Warning**, and **Toner** columns. For black, cyan, yellow, and magenta threshold (%) items, type in the percent level you want to be alerted on in the text box to the right of the item.
7. Click **Save**.



Required Information

Customer: Widgets Inc.

*Title: Toner Alert

*E-mail: demo@printfleet.com

Alert Information

Alert Layout: (Default)

□ Individual Devices

Alert Conditions

Alert Codes: 1.0.0.1

Critical	Warning	Toner	
□ Critical	□ Warning	☑ Low Toner	
□ Door Open	□ Low Paper	☑ No Toner	
□ Paper Jam	□ Stale	☑ Black Threshold (%)	20%
□ Offline	□ Service Requested	☑ Cyan Threshold (%)	20%
□ No Paper		☑ Magenta Threshold (%)	20%
		☑ Yellow Threshold (%)	20%

Table 10: Status items that can be part of an alert

Status	Category
Critical	Critical
Door open	Critical
Paper jam	Critical
Offline	Critical
No paper	Critical
Warning	Warning
Low paper	Warning
Stale	Warning
Service requested	Warning
Low toner	Toner
No toner	Toner
Black threshold (%) (input a custom percentage)	Toner
Cyan threshold (%) (input a custom percentage)	Toner
Magenta threshold (%) (input a custom percentage)	Toner
Yellow threshold (%) (input a custom percentage)	Toner
Alert codes (custom inputs)	N/A

Editing alerts

After an alert is created, it can be edited at any time.

To edit an alert:

1. On the **Notifications** menu, point to **Alert Settings**, and then click **Alert Manager**.
2. Select a company to view their existing alerts.
3. Click 📝 under the **Edit** column in the row of the alert you want to edit.
4. Make changes to the alert as desired, and then click **Update**.

Deleting alerts

After an alert is created, it can be deleted at any time.

To delete an alert:

1. On the **Notifications** menu, point to **Alert Settings**, and then click **Alert Manager**.

2. Select a company to view their existing alerts.
3. Click **Delete** in the **Options** column in the row of the alert you want to delete.
4. Click **Confirm** to verify deletion.

Managing alert layouts

Alert layouts determine what columns appear in alert emails, and in what order the columns will be displayed. Unlimited custom alert layouts can be created. A single layout can be assigned to multiple alerts.

By default, alerts will contain the following fields in this order: Device Name, Serial Number, IP Address, Supplies (status), Status, Service Codes, LCD, Alert Items, Last Active Date, Toner Black (level or status), Toner Cyan, Toner Magenta, Toner Yellow, Black SKU, Cyan SKU, Magenta SKU, Yellow SKU, Location, Last Action Date, Last Action Notes, and Asset Number.

To create a new alert layout:

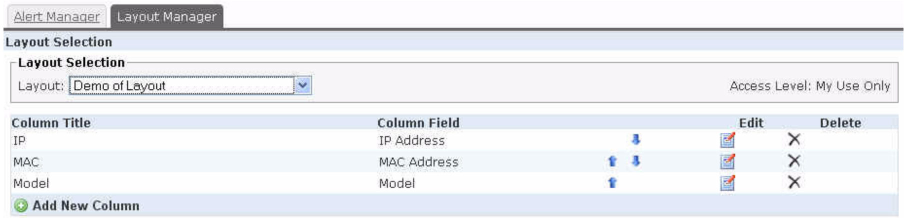
1. On the **Notifications** menu, point to **Alert Settings**, and then click **Layout Manager**.
2. Click the **New Layout** button.
3. Type a name for the layout in the **Layout Name** box.
4. Select either **Everyone** (available for every user in the database) or **My Use Only** (for your own use only) from the **Access Level** list.
5. Click the **Save** button.

You will then need to edit the alert layout in order to specify the columns and order or columns you want in your layout.

To edit an alert layout:

1. On the **Notifications** menu, point to **Alert Settings**, and then click **Layout Manager**.
2. Select the layout you want to edit from the **Layout** list.
3. Do one or more of the following:
   - To change the layout title and access level, click the **Edit** button, make the desired changes and then click **Save**.
   - To add a column, click **Add New Column**. Under the **Column Title** column, type in a name for the column in the text box. Under the **Column Field** column, select the type of data you want to appear in that column. Click 💾 to save the column.
   - To edit a column, click 📝 under the **Edit** column in the row of the data field you want to edit. Make the desired changes and then click 💾 to save the changes.
   - To delete a column from the layout, click ✕ under the **Delete** column in the row of the data field you want to delete.

- To change the order that a data field appears in your alert layout, click ⬆ in the row of a field that you want to move one column to the left in your alert layout, or click ⬇ in the row of a field that you want to move one column to the right in your alert layout. Repeat until you have the data in the order you want it to appear.



Layout Selection

Layout Selection

Layout: Demo of Layout

Access Level: My Use Only

Column Title	Column Field		Edit	Delete
IP	IP Address	⬇	✎	✕
MAC	MAC Address	⬆ ⬇	✎	✕
Model	Model	⬆	✎	✕

Add New Column

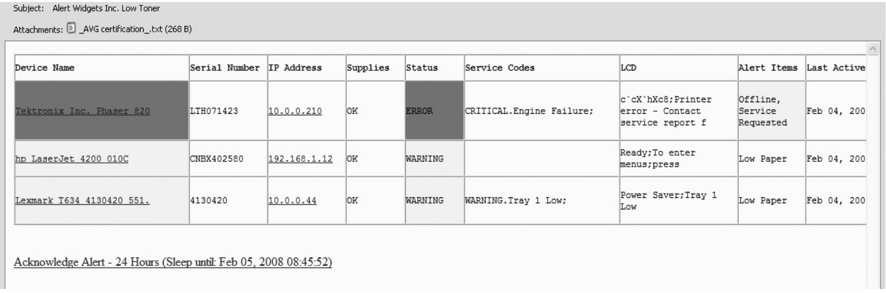
If an alert layout is no longer needed, it can be deleted at any time.

To delete an alert layout:

1. On the **Notifications** menu, point to **Alert Settings**, and then click **Layout Manager**.
2. Select the layout you want to delete from the **Layout** list.
3. Click the **Delete** button.
4. Click **Confirm** to verify deletion.

Working with alert emails

Alerts are sent via email to the email address specified when creating a new alert. See “Creating new alerts” on page 61.


Subject: Alert Widgets Inc. Low Toner

Attachments: _AVG certification_.txt (268 B)

Device Name	Serial Number	IP Address	Supplies	Status	Service Codes	LCD	Alert Items	Last Active
Tektronix Inc. Phaser 820	LTH071423	10.0.0.210	OK	ERROR	CRITICAL.Engine Failure;	c`cX`hXc8;Printer error - Contact service report f	Offline, Service Requested	Feb 04, 200
hp LaserJet 4200 010C	CNBX402580	192.168.1.12	OK	WARNING		Ready;To enter menus;press	Low Paper	Feb 04, 200
Lexmark T634 4130420 551.	4130420	10.0.0.44	OK	WARNING	WARNING.Tray 1 Low;	Power Saver;Tray 1 Low	Low Paper	Feb 04, 200

Acknowledge Alert - 24 Hours (Sleep until: Feb 05, 2008 08:45:52)

Sample alert email

New alerts are received only if a device triggers an alert status indicated in the alert settings, or if a device status condition escalates (for example, from warning to critical).

The interval that alerts are sent at will depend on the interval that individual DCAs are set to scan the network. See “Setting the scan and transmission interval” on page 21. The alert mechanism itself runs every 30 minutes.

To disable a specific alert for 24 hours, click the **Acknowledge Alert - 24 Hours** link in the alert email. This will not stop new alerts from being sent if the status of any device changes to an alert condition within the 24 hours.

Other links in the alert email will take you directly to the device detail page for the corresponding device (after logging into PrintFleet Optimizer).

Devices displayed in alert emails will display a specific background color in the Device Name and Status columns depending on the type of warning or error being reported. The meaning of each background color is outlined in the following table.

Table 11: Alert email background color definitions

Background Color	Definition
Yellow	New warning that has not been reported in a previous alert
Pale yellow	Warning that has been reported in a previous alert
Red	New error that has not been reported in a previous alert
Orange	Error that has been reported in a previous alert
Cyan	New stale/offline device that has not been reported in a previous alert
Gray	Stale/offline device that has been reported in a previous alert

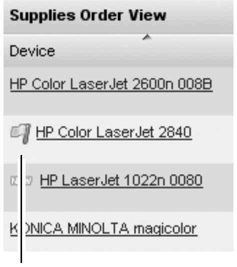
You can change the default background colors for alert items in the file located at `C:\!PFEProcess\PFEPasta\PFEPasta.ini` on your PrintFleet Enterprise server. You can also change the font color for status items (default is black).

Locate the following code in the PFEPasta.ini file, and change the hexadecimal color codes as desired. Items beginning with ALERT_COLOR are background colors, and items beginning with ALERT_FONTCOLOR are text colors for items displayed in the Status column of the alert emails. Default hexadecimal color codes are displayed in the list below.

```
ALERT_COLOR_ERROR_ESCALATE=#FF0000
ALERT_COLOR_ERROR_NOESCALATE=#FF9900
ALERT_COLOR_WARNING_ESCALATE=#FFFF00
ALERT_COLOR_WARNING_NOESCALATE=#FDFF8B
ALERT_COLOR_STALE_ESCALATE=#C9FFFD
ALERT_COLOR_STALE_NOESCALATE=#CCCCCC
ALERT_FONTCOLOR_ERROR_ESCALATE=#000000
ALERT_FONTCOLOR_ERROR_NOESCALATE=#000000
ALERT_FONTCOLOR_WARNING_ESCALATE=#000000
ALERT_FONTCOLOR_WARNING_NOESCALATE=#000000
ALERT_FONTCOLOR_STALE_ESCALATE=#000000
ALERT_FONTCOLOR_STALE_NOESCALATE=#000000
```

3.6 Using flags

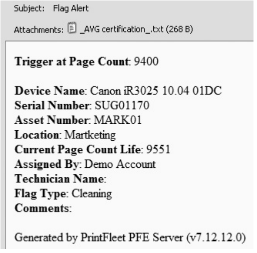
Flags are used to schedule preventative maintenance. Maintenance can be scheduled at a trigger life page count or a trigger date. When a flag is created and the trigger is hit, a flag icon will appear beside the appropriate device in any standard layout device view, which can be clicked to view the device's flag settings. An email will also be sent to the specified address.



Supplies Order View

Device
HP Color LaserJet 2600n 008B
HP Color LaserJet 2840
HP LaserJet 1022n 0080
K NICA MINOLTA magicolor

Flag notification



Subject: Flag Alert
Attachments: _AVG certification_.txt (268 B)

Trigger at Page Count: 9400

Device Name: Canon iR3025 10.04 01DC
Serial Number: SUG01170
Asset Number: MARK01
Location: Martketing
Current Page Count Life: 9551
Assigned By: Demo Account
Technician Name:
Flag Type: Cleaning
Comments:

Generated by PrintFleet PFE Server (v7.12.12.0)

Sample flag email

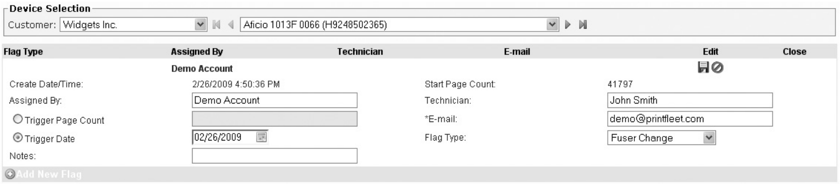
Creating flags

Multiple flags can be created to schedule different types of preventative maintenance for each device.

To create a new flag:

1. On the **Notifications** menu, click **Flag Settings**.
2. Select a company from the **Group** list.
3. Select a device from the list.
4. Click **Add New Flag**.
5. Type your name or title in the **Assigned By** box, if different from the default.
6. Type in the name of the technician who will perform the maintenance, if applicable, in the **Technician** box.

7. Type in an email address where a flag notification will be sent in the **E-mail** box.
8. Click to select either **Trigger Page Count** or **Trigger Date**. If Trigger Page Count is selected, type the life page count you want the flag to be triggered at in the **Trigger Page Count** box. If Trigger Date is selected, select or type the date you want the flag to be triggered at in the **Trigger Date** box.
9. Select the type of maintenance to be done from the **Flag Type** list. If the type of flag you want is not listed, select **Other**, and type in a description in the **Notes** box.
10. Click 💾 to save the flag.



Device Selection

Customer: Widgets Inc. Aficio 1013F 0066 (H9248502365)

Flag Type	Assigned By	Technician	E-mail	Edit	Close
	Demo Account			💾⊘	

Create Date/Time:	2/26/2009 4:50:36 PM	Start Page Count:	41797
Assigned By:	Demo Account	Technician:	John Smith
○ Trigger Page Count		*E-mail:	demo@printfleet.com
● Trigger Date	02/26/2009	Flag Type:	Fuser Change
Notes:			

Closing flags

Once a flag is created, the trigger has been met, and the maintenance has been performed, the flag should be closed to delete it from the system.

To close a flag:

1. On the **Notifications** menu, click **Flag Settings**.
2. Select a company from the **Customer** list.
3. Select a device from the **Device** list.
4. Click ✓ under the **Close** column in the row of the flag you want to close.
5. Click **Confirm** to verify you want to close the flag.

Editing flags

After a flag is created and before the trigger has been met, the flag can be edited at any time.

To edit a flag:

1. On the **Notifications** menu, click **Flag Settings**.
2. Select a company from the **Customer** list.
3. Select a device from the **Device** list.
4. Click ✎ under the **Edit** column in the row of the flag you want to edit.
5. Make changes to the flag settings as desired.
6. Click 💾 to save your changes.

3.7 Managing groups

Groups are used to segment devices into useful divisions, such as by dealer, customer, location, account rep, or any other grouping you see fit. Each group can have as many subgroups as you need, and all groups belong to the Root Group. Each device can be assigned to one group.

Note	For PrintFleet Optimizer systems that have been transitioned to PrintFleet Optimizer 2.1 from a previous version, the following will be automatically done with regards to groups: • Dealers will be transitioned to groups of type Dealer. • Customers will be transitioned to groups of type Customer, and will retain their hierarchy under parent Dealer groups. As of PrintFleet Optimizer 2.1, there is no longer a restriction that all top-level groups be dealers, that customers must have a dealer parent, or that other group types must reside under a customer.

Creating, editing, and deleting groups

You can create unlimited groups to properly segment devices. Each group can have an unlimited number of subgroups.

To create a new group:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Groups**.
2. Select the group that will be the parent for the new group. For example, to create a location group for a customer, select the group for the specific customer, or to create a top-level group, select Root Group.
3. Click **New Group**.
4. Select one of the following group types from the **Type** list, and then click **Select**:
   - **Dealer** for groups that represent a dealer.
   - **Customer** for groups that represent a customer.
   - **Group** for any other group type.
5. Enter a name for the group in the **Name** box.
6. Enter an alias for the group in the **Alias** box.
7. If you selected a group of type Dealer or Customer, complete the address and other fields under the **Dealer Information** or **Customer Information** areas; this includes the **Supplies Ordering Email** field, where supplies orders will be sent to if the supplies ordering function is active.
8. Click **Save**.

Group properties can be changed at any time, including the hierarchical placement. You can also view related items for existing groups, such as users and a breakdown of device counts, from the Manage Groups screen. For groups of type Customer, there is also a link to create a DCA Key. To change the devices contained in a group, see “Assigning devices to groups” on page 70.

To edit or view users and device counts for a group:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Groups**.
2. Select the group you want to edit.
3. Do one or both of the following:
    - To change the hierarchical placement of the group, drag and drop the group to be under the new parent group.
    - To change other group properties, click **Edit**, and change the name, alias, and other group properties as desired.
4. Click **Save**.

To view users and device counts for a group:

- On the **Manage Groups** screen, in the **Related Items** area, click to expand **Users** or **Device Counts** to display users or device counts for the group. Device counts will display devices directly in the group, and in a separate area, devices in subgroups, with a breakdown of their management status.

To create a DCA Key for the group:

- On the **Manage Groups** screen, select a group and then click **Create DCA**. You will be taken to the DCA Creation page with the group already selected. See “Managing DCA installations” on page 95.

Groups can be deleted at any time. Associated subgroups and devices will be either deleted or moved, depending on what option you choose.

To delete a group:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Groups**.
2. Click to select the group you want to delete.
3. Click **Remove**.
4. In the box that appears, do one of the following:
    - Click to select **Delete this group and all associated sub-object(s)**.
    - Click to select **Delete this group and re-assign all associated sub-object(s)**, and then select a group from the **Move To** list.
5. Click **Remove Group**.

6. In the dialog box that appears, click **OK**.

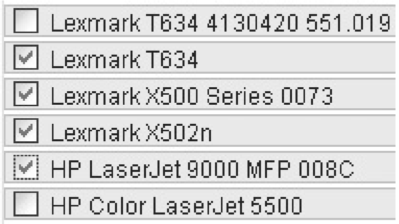
Note	Users cannot delete groups they have been given specific access to. For example, if a user is given access to the `Widgets` group, they cannot delete the `Widgets` group, but they can delete any child group of `Widgets` (provided they have full access to the Manage Groups screen).

Assigning devices to groups

Each device must be assigned to a group. By default, devices will be placed into the group that the DCA is targeted to. Devices can be moved to any existing group after they are first discovered.

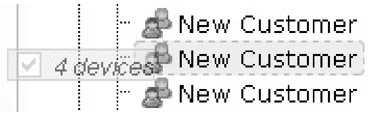
To assign devices to groups:

1. On the **Settings** menu, point to **Group Management**, and then click **Organize Devices**.
2. Select the group that contains the devices you want to move to a different group.
3. Click to select the check box beside each device you want to move to another group.



□ Lexmark T634 4130420 551.019
☑ Lexmark T634
☑ Lexmark X500 Series 0073
☑ Lexmark X502n
☑ HP LaserJet 9000 MFP 008C
□ HP Color LaserJet 5500

4. Click and drag one of the selected devices (it will automatically drag all selected devices) to the group you want them moved to.



5. Click **Save**.

Managing group types

You can create custom group types to assign to the groups that you create. By default, there are three group types: Dealer, Customer, and Group. You may want to create additional group types that define additional properties, such as location or account representative.

A group type is assigned to a group when it is created. See “Creating, editing, and deleting groups” on page 68.

To create a new group type:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Group Types**.
2. Click **New Group Type**.
3. Enter a name for the group type in the **Name** box.

4. Select the image to be displayed beside groups of this type when viewing a group list from the **Display Image** list. A preview of the image will display to the right of the list after it is selected.
5. Optionally, add one or more group attributes by repeating the following steps for however many attributes are needed:
   - Enter a name for the attribute in the **Attribute Name** box.
   - Select an attribute type from the **Attribute Type** list.
   - Optionally, enter a default value for the attribute in the **Attribute Default** box.
   - Click **Add**.
6. In the **Attribute Viewer** area, click and drag attributes to place them in their appropriate display order.
7. Click **Save**.

Table 12: Attribute Types for Custom Group Types

Attribute	Description
True/False	A check box value that can be either selected or not selected
Date (yyyy-mm-dd)	Date value, in the format yyyy-mm-dd
Decimal	Numeric value that accepts decimal places
Unique Identifier (GUID)	16 character hexadecimal identifier value
Number	Numeric integral value (no decimal places)
Text	Plain text value
Supplies Ordering Email	Email address value that is used by the system when sending supplies order emails
Industry Code	Industry vertical code value used to classify businesses
External Service Link	A URL value that becomes a link shown on the device details page

A new group can also be created by copying the properties of an existing group, and then modifying it if necessary.

To create a new group by copying an existing group:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Group Types**.

2. Click **Copy** in the row of the group type you want to copy.
3. Enter a name for the new group type in the **Name** box.
4. Adjust any other properties of the group type as desired.
5. Click **Save**.

Group types can be edited at any type, except for the name of the type, which must remain the same. Images and attributes that are associated with the group type can be changed.

Warning	Any changes made to a group type will take immediate effect on existing groups of that type. A warning will be displayed showing you how many groups are currently associated with the group type you are about to edit.

To edit a group type:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Group Types**.
2. Click **Edit** in the row of the group type you want to edit.
3. If you receive a warning notification about existing groups associated with the group type, read through and then click **Close Notice**.
4. Do one or more of the following:
   - Select a new image to be associated with the group type from the **Display Image** list.
   - In the Group Information Designer area, add one or more new attributes to the group type by completing the listed fields.
   - In the Attribute Viewer area, change the display order of attributes by clicking and dragging attributes to the desired order.
   - Click the edit icon (✎) in the row of an attribute you want to change, in the **Attribute Viewer** area, and then change desired properties in the **Group Information Designer** area.
   - Click the delete icon (✖) in the row of an attribute you want to delete, in the **Attribute Viewer** area.
5. Click **Save**.

Custom group types without any associated groups can be deleted.

To delete a group type:

1. On the **Settings** menu, point to **Group Management**, and then click **Manage Group Types**.
2. Click **Remove** in the row of the group type you want to delete.

3.8 Managing users

An unlimited amount of users can be created for the PrintFleet Optimizer web interface. In addition to user name and password, the following settings can be configured for each user:

- Name of the user
- Groups the user has access to
- Roles the user will have for each group
- Starting page for the user
- Expiry date of the account (if applicable)
- Elements that will make up device names in the system for the user (may include, name, serial number, IP address, etc.)

For more information on groups, see “Managing groups” on page 67.

For more information on roles, see “Managing roles” on page 75.

You can view a list of existing users and their login name (typical email), first name, last name, last login date and time, and groups and role access.

To view existing users:

- On the **Administration** menu, click **Users**.

A separate user account should be created for each individual who is granted access to the PrintFleet Optimizer web console. The following describes how to create a new user account, and how to create a new user by copying the permissions of an existing account.

To create a new user account:

1. On the **Administration** menu, click **Users**.
2. Click **New User**.
3. In the **Information** area, enter the following:
    - **User Name** (often the user’s email address)
    - **First Name**
    - **Last Name**
    - **Password** (repeat in the **Confirm Password** box)
4. Optionally, in the **Settings** area, complete one or more of the following:
    - Select an initial screen to display after logging in, from the **Starting Page** list.
    - Type or select an expiry date for the account in the **Expiry Date** box.
    - Click to select the **Disabled** check box to deactivate the account. The user will appear in the user list, but will not be able to access the software.

- Click to select the **Force Password Change At Next Login** box, to require the user to change their password the next time they login.
- Enter a customized way to display device names throughout the system in the **Device Name Template** box, or select a method from the list underneath. The following properties are accepted: $name, $id, $serial, $asset, $ip, $mac, $location, $hostname, $lcd, $systemname, $systemlocation, $systemdescription, $groupname, $groupbreadcrumb, $userlogin, $userid, $username, and $description. The following are examples of strings that can be used:

  `$name (Serial: $serial, Asset: $asset)`
  sample output: `HP 1000 (Serial: 1234, Asset: ABC)`

  `$name-$ip-$mac`
  sample output: `HP 1000-192.168.1.104-00:01:02:aa:bb:cc`

5. In the **User Access** area, click **Add Entry**.
6. Select a group that the user will have access to, and click **Give Access**. If a group contains one or more subgroups, the user will have access to those groups as well. To give a user access to all groups, select Root Group.
7. Select one or more roles the user will have for the selected group, and click **Save**. Their final permissions the user has will be the combination of the permissions granted to all selected roles.
8. Repeat steps 6 and 7 to give the user access to additional groups.

To create a user account with the same permissions (group access and roles) as an existing account:

1. On the **Administration** menu, click **Users**.
2. Under the **Options** column, click **Copy** in the row of the user account with the permissions you want to duplicate (alternatively, click **Edit** and then click **Copy** on the user edit screen).
3. Complete fields in the **Information** and **Settings** areas.
4. Optionally, edit default permissions in the **User Access** area.
5. Click **Save**.

After a user account is created, it can be edited at any time.

To edit an existing user account:

1. On the **Administration** menu, click **Users**.
2. Under the **Options** column, click **Edit** in the row of the user account you want to edit.
3. Change the user account information as desired.
4. Click **Save**.

If a user account is no longer needed, it can be deleted or disabled at any time. Deleting a user will remove it from the system.

Disabling a user will retain the user record in the system, but will remove access to the software.

To delete a user account:

1. On the **Administration** menu, click **Users**.
2. Under the **Options** column, click **Delete** in the row of the user account you want to remove.
3. Click **Confirm** to verify deletion.

To disable a user account:

1. On the **Administration** menu, click **Users**.
2. Under the **Options** column, click **Edit** in the row of the user account you want to disable.
3. Under the **Settings** area, click to select the **Disabled** check box.
4. Click **Save**.

3.9 Managing roles

Roles are used to assign permissions to users. One role can be assigned to an unlimited number of users. Users can be assigned multiple roles and can be assigned different roles for different groups. The total set of permissions assigned to a user is the combination of all permissions for all assigned roles.

For instructions on assigning roles to users, see "Managing users" on page 73.

PrintFleet Optimizer comes with four standard roles already created:

- **Default.** Assigned to all users, and cannot be deleted.
- **Admin.** Provides access to the entire system, and cannot be edited or deleted.
- **Dealer.** Provides dealer level access to the system.
- **Customer.** Provides customer level access to the system.

Note	If your system was migrated from PrintFleet Optimizer 2.0, you may have some additional roles built into the system that are displayed as **Auto-created role**. These roles are based on permissions assigned to specific users in PrintFleet Optimizer 2.0 and are automatically assigned to the same users.

You can create as many additional roles as needed, and can edit the permissions for any role, with the exception of the Admin role, which always has access to the entire PrintFleet Optimizer system. When roles are edited, changes to permissions are made to every user with that role.

To create a new role:

1. On the **Administration** menu, click **Roles**.
2. Click **New Role**.
3. Under **Role Information**, do the following:
    - Enter a name for the role in the **Name** box.
    - Enter a description for the role in the **Description** box.
4. Under **Role Permissions**, click to select each permission you want the role to have.
5. Click **Save**.

To edit an existing role:

1. On the **Administration** menu, click **Roles**.
2. Click to expand the role you want to edit.
3. Change the name, description, and permissions as desired.
4. Click **Save**. Changes to permissions will automatically be applied to all users assigned to the role.

You can delete any existing role, with the exception of the Default and Admin roles.

To delete a role:

1. On the **Administration** menu, click **Roles**.
2. Click **Remove** in the row of the role you want to delete.
3. Click **Save**.

3.10 Managing devices

The core aspect of managing devices comes from collecting data stored in imaging devices using the DCA. Devices can be managed further by entering information into PrintFleet Optimizer that cannot or is not being collected directly from the device, keeping track of service history, and marking devices as managed, unmanaged, or hidden.

Editing device information

The Device Information screen allows you to add or update the following information for individual devices:

- Device name
- Serial number
- Asset number
- Location
- Management status (see “Marking devices as managed, unmanaged, or hidden” on page 81)
- Model (matched to the PrintFleet model database to pull information such as duty cycle, device image, release date, supply SKUs, etc.)

To add or edit device information for an individual device:

1. On the **Settings** menu, point to **Device Management**, and then click **Device Information**.
2. Select a group from the **Group Selection** list.
3. Select a device from the **Device Selection** list.
4. Add or edit information in the **Device Information** and/or **Device Custom Information** areas as desired. For information on creating custom device fields, see "Creating custom device fields" on page 77.
5. Click **Save Changes**.

Note	To go to the Device Detail screen from the Device Information screen, click **View**. See "Working with the Device Detail view" on page 45.

You can also access the Device Information screen through the Device Detail screen. See "Working with the Device Detail view" on page 45.

The Devices screen allows you to add or update the following information for devices on a group-wide basis:

- Device name
- Serial number
- Asset number
- Location

To add or edit device information on a group-wide basis:

1. On the **Settings** menu, point to **Device Management**, and then click **Devices**.
2. Select a group from the **Group** list.
3. Under the **Name**, **Serial Number**, **Asset Number**, and **Location** columns, enter new or updated information as desired.
4. Click **Save Changes**.

Alternatively, you can add serial numbers, locations, and asset numbers directly to the memory of a device using the Asset Tracker program in PrintFleet Suite Pro (purchased separately, contact PrintFleet or your distributor for details). Consult the *PrintFleet Suite Pro User Guide* for instructions.

You can also edit device information on a group-wide basis by importing updated device data. See "Exporting and importing device information" on page 82.

Creating custom device fields

If you want to add a specific type of device information that does not, by default, have a field in the software, you can add a custom device field, which will be added to the Device Information screen (see "Editing device information" on page 76). Custom device fields can also be added to the Device Views screen. You can use custom device fields to add new information such as departments and account representatives. Custom device fields are applied on a group-wide basis.

In some cases, you may want to use additional groups instead of, or in addition to, custom device fields. See “Managing groups” on page 67.

To create a custom device field:

1. On the **Settings** menu, point to **Device Management**, and then click **Custom Device Fields**.
2. Select the group that the custom field will apply to from the group list.
3. Type the name that will be displayed with the custom device field in the **Attribute Name** box.
4. If the field will be required for all devices in the group, click to select the **Attribute is required** check box.
5. By default, the **Attribute is enabled** check box is selected, which will make the custom field enabled as soon as it is saved. If you do not want the custom field immediately enabled, click to deselect the **Attribute is enabled** check box.
6. Select the type of data that will be entered in the field from the **Attribute Type** list.
7. Enter a default value for the custom field in the **Default Value** box—this is optional for fields that are not required, and mandatory for fields that are required.
8. Click **Add**.
9. Click **Save**.

Table 13: Attribute Types for Custom Device Fields

Attribute Type	Description
UniqueIdentifier	Globally Unique Identifier (32 character hex value)
Text	Plain text value
Date	Date value
Email	Email address value
Yes/No	A check box value that can either be selected or not
Number	Integer value (no decimals)
Decimal	Decimal value

You can specify whether or not a group will inherit the custom device fields created for its parent group (the closest group that contains the selected group). By default, this option is selected.

To specify whether a group inherits the custom device fields from its parent group:

1. On the **Settings** menu, point to **Device Management**, and then click **Custom Device Fields**.
2. Select a group from the group list.
3. Do one of the following:
   - To have the group inherit the custom device fields of its parent group, click to select **Inherit attributes from parent**.
   - To have the group not inherit the custom device fields of its parent group, click to unselect **Inherit attributes from parent**.
4. Click **Save**.

To view inherited attributes:

1. On the **Settings** menu, point to **Device Management**, and then click **Custom Device Fields**.
2. Select a group from the group list.
3. Click the **Inherited Attribute(s)** tab.

Custom device fields can be edited or removed at any time. However, attribute types for custom fields cannot be edited.

Warning	Removing a custom device field will remove information currently stored in the field for applicable devices.

To edit a custom device field:

1. On the **Settings** menu, point to **Device Management**, and then click **Custom Device Fields**.
2. Select the group that the custom field is assigned to from the group list.
3. In the **Custom Fields** area, locate the field you want to edit under the **Group Attribute(s)** tab.
4. Click the edit icon (✎) in the row of the custom field you want to edit.
5. Change field properties as desired (with the exception of Attribute Type which cannot be changed).
6. Click **Update**.
7. Click **Save**.

To remove a custom device field:

1. On the **Settings** menu, point to **Device Management**, and then click **Custom Device Fields**.
2. Select the group that the custom field is assigned to from the group list.
3. In the **Custom Fields** area, locate the field you want to remove under the **Group Attribute(s)** tab.

4. Click **OK** to confirm deletion.

Viewing, editing, and exporting service history

PrintFleet Optimizer can keep a record of maintenance performed on each device. This is useful for tracking costs, and keeps you informed of which devices are requiring the most amount of maintenance, which can indicate which devices are being overused or which should be retired, replaced, or reallocated.

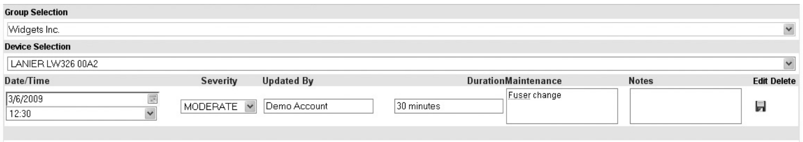
Toner orders are automatically entered as service history items. See “Using the Supplies Order View” on page 38.

To view and export the service history for a device:

1. On the **Settings** menu, point to **Device Management**, and then click **Service History**.
2. Select a group from the **Group Selection** list.
3. Select a device from the **Device Selection** list. Service history for that device will be displayed.
4. Optionally, to export the service history of that device, click **More Options**, click **Report**, type your email address in the **Email** box, and click **Send**.

To add a new service history item:

1. On the **Settings** menu, point to **Device Management**, and then click **Service History**.
2. Click **New Item**.
3. Input relevant information about the service item:
    - Under the **Date/Time** column, select or type in the date of the service in *mm/dd/yyyy* format, and select the time of day from the list. By default, it will display the current date at 12:00am.
    - Under the **Severity** column, select a severity level from the list. Available severities are Low (1), Moderate (2), and Urgent (3).
    - Under the **Updated By** column, type in your name, the name of the service technician, etc.
    - Under the **Duration** column, type in the amount of time the service event took. This can be in any units—you can specify the units to be clear, or use whatever is standard practice at your company.
    - Under the **Maintenance** column, type in a description of the maintenance or service that was performed.
    - Under the **Notes** column, type in any additional notes about the service performed.
4. Click 💾 to save the service item.



Group Selection

Widgets Inc.

Device Selection

LANIER LW326 00A2

Date/Time	Severity	Updated By	Duration	Maintenance	Notes	Edit Delete
3/6/2009 12:30	MODERATE	Demo Account	30 minutes	Fuser change		💾

To edit a service history item:

1. On the **Settings** menu, point to **Device Management**, and then click **Service History**.
2. Select a group from the **Group Selection** list.
3. Select a device from the **Device Selection** list.
4. Click 📝 under the **Edit** column in the row of the service item you want to edit.
5. Change information for the service entry as desired, and then click 💾 to save the entry.

To delete a service history item:

1. On the **Settings** menu, point to **Device Management**, and then click **Service History**.
2. Select a group from the **Group Selection** list.
3. Select a device from the **Device Selection** list.
4. Click ✕ under the **Delete** column in the row of the service item you want to delete.
5. Click **Confirm** to verify deletion.

Marking devices as managed, unmanaged, or hidden

By default, all devices that are captured with the DCA are marked as managed. This status can be changed to mark devices as either unmanaged or hidden. In additional, you can specify if you are managing specifically supplies and/or service for a device. You can filter devices by any management status (with the exception of hidden) when you are looking at any device view. See “Filtering and sorting data” on page 35.

Marking devices as unmanaged allows sales representatives to separate devices under their control from devices managed by the competition. This is useful in planning strategies for moving more of the page volume to internally managed devices.

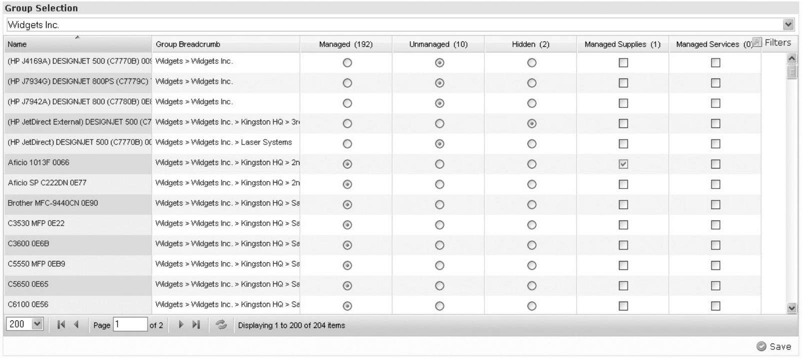
Marking devices as hidden will remove them from all PrintFleet Optimizer screens other than screens that are a component of Device Management, which allows you to change the device back to managed at any time.

To edit the management status for one or more devices:

1. On the **Settings** menu, point to **Device Management**, and then click **Management Status**.
2. Select a group from the **Group Selection** list.
3. Optionally, click **Filters** and make selections or enter a search string to narrow down the devices you want to view. See “Filtering and sorting data” on page 35.
4. Do one or both of the following:
   - Click to select one of **Managed**, **Unmanaged**, or **Hidden** in the row of each device that you want to change the status for.

- Click to select one or both of **Managed Supplies** and **Managed Service** in the row of each device that you are managing supplies and/or service.

5. Click the **Save** button.



Group Selection

Widgets Inc.

Name	Group Breadcrumb	Managed (192)	Unmanaged (10)	Hidden (2)	Managed Supplies (1)	Managed Services (0)
(HP J4169A) DESIGNJET 500 (C7770B) 00!	Widgets > Widgets Inc.	○	●	○	□	□
(HP J7934G) DESIGNJET 800PS (C7779C) 1	Widgets > Widgets Inc.	○	●	○	□	□
(HP J7942A) DESIGNJET 800 (C7780B) 0E!	Widgets > Widgets Inc.	○	●	○	□	□
(HP JetDirect External) DESIGNJET 500 (C7	Widgets > Widgets Inc. > Kingston HQ > 3r	○	○	●	□	□
(HP JetDirect) DESIGNJET 500 (C7770B) 00	Widgets > Widgets Inc. > Laser Systems	○	●	○	□	□
Aficio 1013F 0066	Widgets > Widgets Inc. > Kingston HQ > 2n	●	○	○	☑	□
Aficio SP C222DN 0E77	Widgets > Widgets Inc. > Kingston HQ > 2n	●	○	○	□	□
Brother MFC-9440CN 0E90	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□
C3530 MFP 0E22	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□
C3600 0E6B	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□
C5550 MFP 0EB9	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□
C5650 0E65	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□
C6100 0E56	Widgets > Widgets Inc. > Kingston HQ > Se	●	○	○	□	□

Management status for individual devices can also be changed from the Device Information screen. See “Editing device information” on page 76.

Exporting and importing device information

Device information can be exported and imported into the PrintFleet Optimizer system. Exports can be formatted for import into one of several proposal software packages. Imports are useful for adding information such as serial numbers, locations, and custom tags to devices by editing them in a single file. You can also edit device information directly in the Optimizer interface. See “Editing device information” on page 76.

For information on exporting device service history information, see “Viewing, editing, and exporting service history” on page 80.

To export device information for proposals or editing:

1. On the **Settings** menu, point to **Device Management**, and then click **Import/Export**.
2. Select a group from the **Group** list.
3. Select **Export** from the **Method** list.
4. In the **Devices** area, choose which devices you want included in the export by doing one or more of the following:
   - Click to select the **Check All** check box, to select all devices. This can be reversed by selecting the **Uncheck All** check box.
   - Click to select the check box beside individual devices.
   - Click **Change Filters**, and select appropriate settings to narrow down the amount of devices displayed. See “Filtering and sorting data” on page 35.
5. Type in a name for the exported file in the **File Name** box.
6. Select one of the file formats described in “Export formats for PrintFleet Optimizer” on page 83 from the **File Format** list. For some types, a date range will then have to be selected to determine the values that are exported.

7. Optionally, click to select the **Show Additional Information** check box to include custom device fields in the exported file.
8. Click **Export**.

Important	If you are exporting device information to be edited and then imported back into the system, you must keep the column headers the same as they are in the export file. Spreadsheet programs make it easy to edit data within columns.

Table 14: Export formats for PrintFleet Optimizer

Export Format	Description
CSV (comma separated value)	Used for editing device information and importing back into Optimizer. Contains all data fields, and is editable in most spreadsheet and word processing programs.
Compass	File format ready to import into Compass Sales Solutions proposal software. Fields include Date, IP Address, Manufacturer, Model, Serial Number, Description, Location, Total Pages, Mono Pages, and Color Pages.
Proposal	Default proposal format (not for any specific software). Fields include Date, IP Address, Manufacturer, Model, Serial Number, Description, Location, Total Pages, Mono Pages, and Color Pages.
DocuAudit	File format ready to import into DocuAudit’s Proposal Wizard software. Fields include Date, IP Address, Manufacturer, Model, Serial Number, Description, Location, Total Pages, Mono Pages, and Color Pages.
TCO Optimizer	File format ready to import into Kyocera’s TCO Optimizer. Fields include Source, Date, IP Address, Manufacturer, Model, Serial Number, MAC Address, Total Pages, Mono Page, and Color Page.

Table 14: Export formats for PrintFleet Optimizer

Export Format	Description
PF-CSV	Fields include Device ID, Device Name, Serial Number, asset number, Location, Printer model ID, and custom device fields.
XOPA	File format ready to import into Xerox's XOPA. Fields include IP Address, Manufacturer, Name, Life Count 1, Color Count 1, Life Count 2, Color Count 2, Is Color, Serial, status_condition, Location, Print Mono 1, Print Color 1, Copier Mono 1, Copier Color 1, Fax 1, Print Mono 2, Print Color 2, Copier Mono 2, Copier Color 2, Fax 2, Date Scanned 1, Date Scanned 2, and MAC Address.
Digital Gateway	File format ready to import into Digital Gateway's e-automate. Fields are specific for digital quote manager.

If you want to import updated information for devices, first you need to export the current device information (in CSV format), make the edits you want, and then import the data back into the Optimizer system.

To import device information:

1. On the **Settings** menu, point to **Device Management**, and then click **Import/Export**.
2. Select **Import** from the **Method** list.
3. Click **Browse** to locate the file you want to import into the system. The file must be in .csv format.
4. Click **Import**.

Assigning CPC charges

You can assign cost per copy or cost per page charges to individual devices. Separate charges can be assigned for monochrome and color pages. After charges are assigned, you can use the CPC Report to track the total charges over a specified time period. See "Generating reports" on page 51.

To assign CPC charges:

1. On the **Settings** menu, click **CPC Assignment**.
2. Select a company to assign CPC charges for, by selecting a company **Customer** list.

3. In the row for each device that you want to assign CPC charges to, do one or both of the following:
   - In the **CPC Mono** column, type a per page charge for monochrome pages for that device.
   - In the **CPC Color** column, type a per page charge for color pages for that device.
4. Click **Update**.

Note	Updates made to CPC charges may not be reflected in the CPC Report for up to 24 hours. Per page charges may have up to four decimal places.

You can also assign CPC changes by using the import/export function. See "Exporting and importing device information" on page 82.

3.11 Virtual Meters

Virtual Meters create meters that add up values for other meters, optionally including a multiplier, to create a new meter value. Virtual Meters can perform many tasks, such as, add up different page sizes, create impression counters, and convert units.

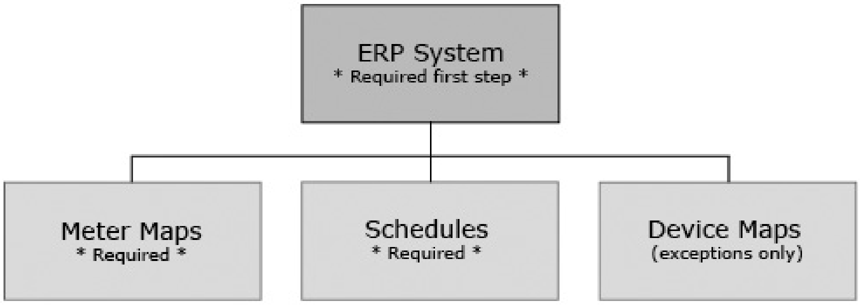
To create Virtual Meters:

1. On the **Settings** menu, click **Virtual Meter Manager**.
2. Click **New Virtual Meter**.
3. In the **Meter Configuration** tab, enter the Meter Name and select a group from the **Group** drop down. Optionally, in the **Group/Device Assignment (Optional)** tab, select the group or individual devices.
4. Check the required **Meter Labels** and optionally edit the Multiplier value.
5. Click **Save**.

3.12 Configuring meter exports

The meter export function allows you to automatically export a properly formatted file, containing meter reads, to a designated server.

Successful meter exports begin with proper configuration of an external ERP system. Meter maps, export schedules, and if necessary, device maps, are associated with a configured ERP system.



Transitioning from PrintFleet Optimizer 2.0

If you are transitioning to PrintFleet Optimizer 2.1 from 2.0, and had meter exports configured in 2.0, you will see one or more automatically generated external ERP systems. These systems will match all 2.0 settings as best as possible. There may be multiple instances of a single ERP system if, for example, multiple usernames and passwords were entered for a single system, or an entry contained a typo (making it appear different from others). If this occurs, it is suggested that you consolidate the systems into as few as possible to streamline maintenance of the system. In general, the easiest way to do this is to rebuild the configuration.

The PrintFleet Optimizer 2.1 meter export system is more flexible and requires less configuration and maintenance than the meter export system in 2.0. The advantages obtained in 2.1 are primarily a result of separating the configuration components (external ERP system configuration, meter mapping, schedules, device mapping). If, for example, you need a different set of meter maps for one set of devices, using 2.0 you would be required to make a completely new export and configure all components, whereas using 2.1 you can simply add a new meter map to the associated external ERP system without impacting and without having to reconfigure any other component.

Configuring an external ERP system

All other setup items for meter export are subordinate to the ERP system, which must be configured first.

PrintFleet meter export is compatible with the following commercial ERP systems:

- Digital Gateway's e-automate
- OMD NetVision or OMD iManager, with H2O component
- La Crosse NextGen or La Crosse NextGen Web
- Evatic
- PFI Export

There is an additional export type, PFI Export, that sends a standard XML file with meter information to a designated URL.

Each instance of an external ERP system only has to be set up once. For example, if you are using a single Digital Gateway e-automate system exclusively, your system only needs to be configured once. However, you have the option of creating multiple instances of an ERP system if there is a need, for example, if you have multiple locations that use a single ERP system, and each location should only be given access to the meter export configurations for their applicable groups/devices. If you are using more than one ERP system, each system must be configured separately.

To configure a new external ERP system:

1. On the **Settings** menu, click **Meter Export**.
2. Click **New System**.
3. Enter a name for the export system in the **Name** box.
4. Select the group that the export system applies to from the **Group** list (all other configuration items and permissions for the export will be based on the group selected here; if it applies to your entire system, select **Root**).
5. Select the type of export system you are using from the **Export Type** list.
6. If you have chosen **Digital Gateway - e-automate**, do the following:
   - Enter the URL of the e-automate system in the **Destination URL** box.
   - Enter the meter source name configured in the ERP system (e.g. PrintFleet) in the **Meter Source** box.
   - Enter your company ID for the e-automate system in the **Company ID** box.
   - Enter the version of e-automate you are using in the **Version** box.
   - Enter a username for the e-automate system in the **Username** box.
   - Enter the corresponding password for the e-automate system in the **Password** box.
7. If you have chosen **OMD Multimeter** or **OMD Non-Multimeter**:
   - Enter the URL of your H2O system in the **H2O Destination URL** box (required for all OMD meter exports).
   - Enter the URL of your iManager system in the **iManager Destination URL** box (required for automated device mapping).
   - Enter the username for iManager in the **Username** box.
   - Enter the corresponding password for iManager in the **Password** box.

Important	The username and password for iManager must be associated with the accounts in iManager that you want to set up meter exports for. To create a username and password that is associated with multiple accounts, obtain the REQL83 program from OMD.

8. If you have chosen **La Crosse NextGen**:
   - Enter the URL of the NextGen system in the **Destination URL** box.
9. If you have chosen **La Crosse NextGen Web**:
   - Enter the user name in the **User** box and the application in the **App** box.
10. If you have chosen **Evatic**:
    - Enter the email address that was designated for your company to export information into your Evatic system in the **Email To** box.
    - Enter any email address into the **Email From** box.
    - Enter any email subject line into the **Subject** box.
11. If you have chose PFI Export:
    - Enter the URL of the PFI Export system in the **Destination URL** box.
12. Choose the field that you want devices to be automatically mapped by from the **Sync By** list. Most commonly, serial number is used, and this is the default selection.
13. Optionally, enter the number of days a device must have reported in to be included in the meter export in the **Device Stale Days** box (value must be greater than 1).
14. Click **Save**.

Configuring meter maps

Meter labels used by PrintFleet software must be mapped to the meter labels used by the external ERP system. For example, if the meter called Total in the PrintFleet system is called Total_Count in the external ERP system, this association must be defined for the meters to export properly. A meter map in PrintFleet is a series of these associations applied to one or more groups and/or individual devices.

Multiple meter maps for one external ERP system can be created. Meter maps will be applied to devices based on the meter map applied to the group closest to it. For example, if the group Root that includes all groups and all devices has a meter map assigned to it, and the group Widgets has another meter map assigned to it, devices within the group Widgets will use the meter map assigned to Widgets in any cases where the Root and Widgets meter maps overlap (in areas where they do not overlap, it will use the meter map with the additional information). This allows you to assign a basic meter map to all groups and devices, and customize additional maps for specific groups and devices on an as needed basis.

To create a new meter map:

1. On the **Settings** menu, click **Meter Export**.
2. Click **Meters** in the row of the external ERP system you want to create a meter map for.
3. Click **New Meter(s)**.
4. Select whole groups of devices and/or individual devices to add to the meter map by doing one or both of the following:

- Click to select the check boxes beside groups, to add all devices associated with those groups.
- Click on the name of a group to view individual devices associated with the group. Click to select the check boxes beside individual devices you want to add. You can use the **Check All**, **Uncheck All**, or search function to simplify this process.

5. Click **Continue**.
6. Under the **Destination Meter** column, enter the meter labels from the external ERP system as they correspond to the meters listed under the **PrintFleet Meter** column. All available meters for the devices you selected will be displayed, however, you only have to enter corresponding field names for the ones you want included in the meter export.
7. Optionally, under the **Multiplier** column, enter a multiplier for one or more meter types that will be used to calculate the meter value during export. By default, the value is 1, which will not change the collected value during export. The following are some examples of how you could use a multiplier: export a duplex meter as two pages (multiplier=2), export a legal page as 1.3 letter pages (multiplier=1.3), or convert square feet to square inches (multiplier=144).
8. Click **Save**.

Setting up meter export schedules

Meter export schedules determine what specific meters are exported and how often they are exported. Multiple schedules can be configured for a single external ERP system, for example, if you have one client that is billed on the 15th of each month, and one client that is billed at the end of each month, these can be configured as two separate export schedules.

To create a new meter export schedule:

1. On the **Settings** menu, click **Meter Export**.
2. Click **Schedules** in the row of the external ERP system you want to create a new schedule for.
3. Click **New Schedule**.
4. Enter a name or description for the schedule in the **Description** box.
5. Choose one of the following time intervals for the schedule from the Cycle Pattern list. Time intervals are based on the iCalendar standard.
   - **Never.** Schedule will not run. This allows you to set up a schedule before you begin to export, or to cancel an export without deleting the schedule setup.
   - **Daily.** Requires you to enter how often, in days, you want the meters to export. For example, if you enter 1, meters will export everyday, if you enter 2, meters will export every other day, etc.
   - **Weekly.** Requires you to enter how often, in weeks, you want the meters to export. You are also required to select which day of the week you want the meter exported. For

example, if you enter 2 and select Monday, meters will be exported every other Monday.

- **Monthly.** Requires you to enter the day of the month you want meters exported, and how often, in months, you want the meters to export. For example, if you enter 15 and 3, meters will be exported on the fifteenth day of every third month.
- **Advanced.** Requires you to select the day of the week, which occurrence of that day during the month, and how often, in months, you want the meter export to occur. For example, if you select 2nd, Mon, and enter 2, the meter export will occur on the second Monday of every other month.

6. Enter a start date and time for the export in the **starting** box.
7. Assign whole groups and/or individual devices to the schedule by doing one or both of the following:
   - Click to select the check boxes beside groups to include all devices associated with those groups in the schedule.
   - Click on the name of a group to view individual devices associated with the group. Click to select the check boxes beside individual devices you want to include in the schedule. You can use the **Check All**, **Uncheck All**, or search function to simplify this process.

Note	If you select a whole group, new devices added to the group will automatically be added to the schedule. If you only select individual devices, new devices will have to be added to the schedule manually.

8. Click **Save**.

Configuring device maps (exceptions only)

Devices detected by PrintFleet software must be associated with devices residing in the external ERP system, however, for e-automate and OMD exports, this process will attempt to complete automatically.

You will need to manually configure device maps if:

- You are using an external ERP system other than e-automate or OMD
- You are using e-automate or OMD, but not all devices mapped automatically; this should usually be corrected by changing the sync field (serial number, asset number, or device ID) in the PrintFleet system to match the same field in the external ERP system

To map PrintFleet devices to external ERP system devices:

1. On the **Settings** menu, click **Meter Export**.
2. Click **Device Mapping** in the row of the external ERP system you want to configure device maps for.

3. Click the name of a group that contains devices you want to configure device maps for.
4. Do one of the following:
   - Enter the external ERP system device ID for each device you want to map under the **External ID** column. Depending on your system, this may be a unique ID, serial number, asset number, etc.
   - If you are using e-automate or OMD, click **Auto Map** to automatically populate the External ID column.

Note	This will occur automatically without having to click the Auto Map button, however, it can be used to force an additional sync with the external ERP system, for instance, if you have corrected a serial/ asset number in the PrintFleet system and want to immediately map the changed device.

5. Click **Save**.

Testing and troubleshooting

You can manually force a meter export to occur the next time the export process runs (every 10 minutes), without taking into account your permanent export schedules. This allows you to test and troubleshoot a meter export configuration.

You should follow these steps to test and troubleshoot:

1. Manually force a meter export to occur.
2. Verify with the external ERP system that all desired meters have been submitted.
3. If there are any meters in the external ERP system that you expected to populate but did not, check the PrintFleet meter export log to determine the reason that those specific meters did not export.

To manually force a meter export to occur:

1. On the **Settings** menu, click **Meter Export**.
2. Click **Schedules** in the row of the system you want to test.
3. Under the **Run Export** column, click **Run** in the row of the schedule you want to test. The meter export will occur within the next 10 minutes.

To view the meter export log:

1. On the **Settings** menu, click **Meter Export**.
2. Do one of the following:
   - Click **Logs** in the row of the system you want to view.
   - Click **Schedules** in the row of the system you want to view, and then click **Logs** in the row of the specific schedule you want to view logs for.

- Click **Meters** in the row of the system you want to view, and then click **Logs** in the row of the specific meter map you want to view logs for.

3. Click **View Results** in the row of the export you want to view logs for.

The meter export logs will tell you why a specific meter was not exported into the external ERP system. It is important to understand that the PrintFleet logs may display errors for meters that you would not expect to be successful, for example, a color meter export for a monochrome device.

The following two tables list all possible entries in the **Result Message** column of the meter export log. The first table lists error messages, with their causes and possible solutions. The second table lists informational messages and their causes.

Table 15: Meter Export Log Result Messages: Errors

Result Message	Cause	Possible Solutions
MeterPostFail	The ERP system did not accept our meter post (generic failure message not covered by the below cases).	Start by looking in the ERP system for the specific device to ensure it is configured correct and has the proper meters assigned to it. Double check PrintFleet has established a device mapping for the device and ensure the correct meters are assigned to it in PrintFleet.
MeterSourceDoesnt Exist	The meter source does not exist in the ERP system.	The meter source entered for the ERP system in PrintFleet must match exactly to a meter source configured in the ERP system (case sensitive).

Table 15: Meter Export Log Result Messages: Errors

Result Message	Cause	Possible Solutions
Communication Error	PrintFleet could not communicate with the ERP system (timeout, ERP system is offline, etc.).	Ensure the ERP system is online and accepting web requests. Double check the system configuration to ensure the correct credentials have been added for this system.
AuthenticationError	The credentials entered for the ERP system are incorrect.	Double check the system configuration to ensure the correct credentials have been added for this system.
OtherError	PrintFleet did not receive a specific error message from the ERP system (an unhandled exception) so we log a generic error message.	The error message returned will always be different. It should be very specific to what the problem is.
MeterDoesntExist	The meter label configured in PrintFleet for the meter mappings does not exist for this specific device in the ERP system.	Ensure this device in the ERP has this meter assigned to it. Double check the meters mapped for this device in the PrintFleet system.

Table 15: Meter Export Log Result Messages: Errors

Result Message	Cause	Possible Solutions
EquipmentDoesnt Exist	A device has been configured to export from PrintFleet that does not exist in the ERP system.	Check the ERP system to ensure the device has been setup and has an external id assigned to it. If it is setup in the ERP system, double check PrintFleets device mapping and if need be, apply the external id manually here.
NoModelAssigned	No model is associated to the device in the ERP system (OMD only).	Assign the device a model in OMD.

Table 16: Meter Export Log Result Messages: Informational

Result Message	Cause
MeterPostSuccess	The meter was posted successfully.
MissingRequiredMeters	A required meter for a device in an ERP system was not configured in PrintFleet. This is informational to let you know for the additional meter posts to be successful, PrintFleet had to post this required meter (e-automate only).

Table 16: Meter Export Log Result Messages: Informational

Result Message	Cause
MeterReadingLessThanPrevious	The current meter reading in the ERP system is greater than the current PrintFleet meter reading. This log should be followed by an additional message indicating that PrintFleet re-exported the current value in the ERP system so the other meter posts would not fail.
MeterReadingEmpty	PrintFleet obtained a meter reading of 0, or could not obtain a meter reading from our system to post into the ERP system.

3.13 Managing DCA installations

Each DCA installation requires a PIN Code to activate to run. These PIN Codes can be generated and managed using PrintFleet Optimizer. For more information about the DCA, see See “Using the Printer Data Collector Agent” on page 8.

Generating PIN Codes for DCA version 4.0 or greater

To generate a PIN Code for DCA version 4.0 or greater:

1. On the **Administration** menu, select **DCA Administration**, and then click **New DCA**.
2. Select **Version 4.0 or greater**.
3. Select the appropriate group from the dropdown list or click **Create New Group** button.
4. Define the DCA information: enter the **DCA Name**. Optionally, enter a custom message in the **Custom Message** field, or set an Expiry date by selecting the calendar button and selecting a date.
5. Click **Create DCA**. The Pending PIN Code is generated and displayed in the DCA Information page’s General Information tab. The PIN Code can be emailed to an appropriate person via **Send this PIN via email**. Alternately, the PIN Code can be copied and pasted into the DCA Activation screen. This PIN Code remains visible in the General Information tab while the DCA is in a Pending Activation status. Once this PIN Code is used to activate a DCA client, the DCA has an active status and the PIN Code will no longer be visible.

Generating Manual Keys for DCA version 3.x

Generating a manual key for DCA can only be done for DCA 3.x versions. Generating a manual DCA key requires the DCA to already be installed, but not yet activated, at the location. The person who installed the DCA needs to provide you with either the fingerprint code from the DCA activation screen, or the hardDisk serial number of Volume Drive C.

To generate a manual Key for DCA version 3.x:

1. On the **Administration** menu, select **DCA Administration**, and then click **New DCA**.
2. Select **Version 3.0**.
3. Select the appropriate group from the dropdown list or click **Create New Group** button.
4. Select **Manual** for the DCA 3.0 Key Generation Method.
5. Do one of the following:
   - Enter the fingerprint code as displayed on the DCA activation screen in the **Fingerprint Code** box.
   - Enter the hardDisk serial number of Volume Drive C of the computer installed with the DCA in the **HardDisk Serial #** box.
6. Define the DCA information: enter the **DCA Name**. Optionally, enter a custom message in the **Custom Message** field, or set an Expiry date by selecting the calendar button and selecting a date.
7. Click **Create DCA**. The Pending PIN Code is generated and displayed in the DCA Information page’s General Information tab. The PIN Code can be emailed to an appropriate person via **Send this PIN via email**. Alternately, the PIN Code can be copied and pasted into the DCA Activation screen. This PIN Code remains visible in the General Information tab while the DCA is in a Pending Activation status. Once this PIN Code is used to activate a DCA client, the DCA has an active status and the PIN Code will no longer be visible.

Generating Automatic Keys for DCA version 3.x (pregenerated)

Automatic DCA Keys can be generated in advance of a DCA installation. This allows the person installing the DCA to have the DCA PIN Code on hand during installation.

Note	Pregenerated DCA Automatic Keys may not work in environments using proxy servers. In these instances, you must use a Key from a manual DCA 3.0 generated using the DCA’s fingerprint code.

To generate an Automatic Key for DCA version 3.x:

1. On the **Administration** menu, select **DCA Administration**, and then click **New DCA**.
2. Select **Version 3.0**.
3. Select the appropriate customer group from the group list or click on **Create New Group**.
4. Set **Automatic** for the DCA 3.0 Key Generation Method.

5. Define the DCA information: enter the **DCA Name**. Optionally, enter a custom message in the **Custom Message** field, or set an Expiry date by selecting the calendar button and selecting a date.
6. Click **Create DCA**. The Pending PIN Code is generated and displayed in the DCA Information page's General Information tab. The PIN Code can be emailed to an appropriate person via **Send this PIN via email**. Alternately, the PIN Code can be copied and pasted into the DCA Activation screen. This PIN Code remains visible in the General Information tab while the DCA is in a Pending Activation status. Once this PIN Code is used to activate a DCA client, the DCA has an active status and the PIN Code will no longer be visible.

Managing DCAs

You can check the status of a DCA installation via DCA Listing page. DCA information can be viewed or edited at any time. A DCA can also be deleted or set to inactive or active. A new PIN Code can also be created for a DCA version 4.0 or greater.

To check the status of a DCA:

1. On the **Administration** menu, select **DCA Administration**.
2. In the DCA Listing page, the status of the DCA will be visible in the Status column:
   - Pending Activation – PIN Code has not been used to activate DCA client.
   - Active – DCA has been activated using PIN Code.
   - Inactive – the DCA has been set to Inactive or has expired.

To view DCA information:

1. On the **Administration** menu, select **DCA Administration**.
2. Click on the DCA name link for the DCA you want to view from the **Data Collection Agent (DCA) Listing**. The DCA Information page's General Information tab is displayed for the selected DCA.

To edit an existing DCA:

1. Click the **Edit** option beside the DCA in the **DCA Listing** page. Alternately, in the DCA Information page, click **Edit**.
2. Make changes to the **DCA Name**, **Group**, **Expiry Date** or **Custom Message** fields, and then click **Save**.

To delete an existing DCA:

1. Click the Delete option beside the DCA in the **DCA Listing** page, or in the DCA Information page, click **Delete**.
2. A dialog box prompts you to confirm your wish to delete this DCA.
3. Click **Confirm** to complete the DCA deletion, or **Cancel** to abort the DCA deletion. After deletion, files will not be processed for the DCA.

To set a DCA Inactive:

1. In the DCA Information page for an active DCA, click **Set Inactive**.
2. A dialog box prompts you to confirm your wish to set this DCA to Inactive.
3. Click **Confirm** to set to inactive or **Cancel** to abort. With an Inactive status, files will not be processed for the DCA.

To set a DCA Active:

1. In the DCA Information page for an inactive DCA, click **Set Active**. The DCA will have an active status and files will be processed.

To create a new PIN Code for a DCA (only available for DCA version 4.0 or greater):

1. In the DCA Information page, click **Create New PIN**.
2. A dialog box prompts you to confirm your wish to create new PIN for the DCA.
3. Click **Confirm** to create a new PIN Code or **Cancel** to abort. The new PIN Code will be generated and the DCA will be in a pending activation state. Until reactivated, files will not be processed for the DCA.

Remotely managing DCA installations using Semaphore

You can post commands for the DCA to check using PrintFleet Optimizer's Semaphore capability. Semaphore commands are only available for active DCAs that have processed files at least once. Posted commands will be followed by the DCA if it has **Intelligent Update** enabled. See "Managing the DCA service" on page 12 and "Enabling Intelligent Update" on page 14.

To use Semaphore to send a command to a DCA client:

1. On the **Administration** menu, select **DCA Administration.** In the **DCA Listing** page, click on the DCA name to display the DCA Information page and then click the **Semaphore** tab.
2. In the **Semaphore** tab, click **Add a new command**.
   - From the Command type dropdown, select one of the available options.
   - Input any required information (see Table 17).
   - Select a Run Schedule option: select **ASAP** or select a date from the calendar and enter a time.

- Click **Create**.

Table 17: Available Semaphore Commands for the DCA

Command	Function and Required Values
DEACTIVATE	Stops the DCA service. Does not require any input values.
UPDATE	Updates the DCA software to the most recent available on the PrintFleet Enterprise server. Does not require any input values.
MIBWALK	Performs a complete MIB walk (device scan) for one device. Device’s IP must be entered into the IP Address input box.

3.14 Managing licenses, system information and troubleshooting

The License Information area contains four subsections used for managing your licenses, viewing system information, and troubleshooting potential problems:

- Statistics
- Troubleshooting
- E-mail Log
- Raw query

Viewing license, usage, group, and orphan statistics

In the Statistics area, you can view your software license information, usage information, group counts, and orphan count statistics.

Check the Statistics area to know when you need to purchase additional device licenses.

To view your license, usage, and orphan statistics:

- On the **Administration** menu, point to **License Information**, and then click **Statistics**.

Viewing product, server, and path information

The Troubleshooting area includes product, server, and path information for your PrintFleet system.

To view product, server, and path information:

- On the **Administration** menu, point to **License Information**, and then click **Troubleshooting**.

Viewing email transmission logs

The email log is a list of emails (alerts and scheduled reports) that have been sent, or have attempted to been sent, by PrintFleet Optimizer. Transmission problems can be detected by viewing the email log.

Information includes sender email address, recipient email address, the email subject, the transmission or attempted transmission time, and the status of the transmission. You can also view the entire contents of the email.

To view the email log:

1. On the **Administration** menu, point to **License Information**, and then click **E-mail Log**.
2. To view the contents of a specific e-mail, click the name of the e-mail you want to view.

To search the e-mail log:

1. On the **E-mail Log** screen, do one or more of the following:
   - Type in a search string in the **Filter** box.
   - In the box with a default value of **All**, select either **Success** or **Failures** to show only successfully transmitted e-mails or only e-mails that failed to transmit, respectively.
   - Click to select the **Search message body** check box to include the e-mail message body in the search.
2. Click **Filter**.

Querying the database

You can directly query the database using SQL statements from the Optimizer interface. This is useful in troubleshooting situations where the information you need is not provided elsewhere.

To query the database:

1. On the **Administration** menu, point to **License Information**, and then click **Raw Query**.
2. In the **SQL** box, type your SQL query statement.
3. Click **Run**. The output will be displayed below.

3.15 Configuring system wide settings

There are a variety of system wide settings that can be configured by an administrator from the Configuration screen. They are broken down into the following categories:

- General settings
- Security settings
- Device settings
- Database settings
- Branding settings

You can also create a custom login screen, which replaces the default login screen.

Configuring general settings

The items in the following table are included in general settings.

To configure general system wide settings:

1. On the **Administration** menu, click **Configuration**.
2. In the **General Settings** area, enter configuration settings as desired.
3. Click **Save**.

Table 18: General system wide settings

Item	Description
Default Starting Page	The default page users will see immediately after they log in to the system. Can be overridden for specific users in their user settings.
Timeout Page	The page users will see after they log out of the system, or when their session times out.
Product Name	The product name that will display on the browser title bar.
Progress Panel	If **True** is selected, a loading message will display at the top of the screen when a background process is running. If **False** is selected, it will not display.
Progress Panel Overlay	If **True** is selected, the screen will be dimmed when a background process is running. If **False** is selected, the screen will not be dimmed.
Error Page Footer	The message displayed when an error message occurs.
DCA Version	The version of the DCA displayed for download.
Email From Address	The sender email address used when emails are sent from the system.
Email From Name	The sender name used when emails are sent from the system.
Include DLL Export Type	Select this to allow the DLL Variabill export type to be available in the Meter Export system configuration system.

Configuring security settings

The items in the following table are the system wide security settings that can be configured.

To configure system wide security settings:

1. On the **Administration** menu, click **Configuration**.
2. In the **Security Settings** area, enter configuration settings as desired.
3. Click **Save**.

Table 19: Security settings

Item	Description
Enforce Email as User Name	Forces user to have an email address as their user name.
Password Strength	The minimum required password strength, ranging from 0 to 100. A higher number requires a longer or more complex password (numbers, special characters, etc.)
SSL (HTTPS)	If set to **Required on all pages**, will force the use of SSL on all screens. If set to **Required on sensitive pages** only, will force the use of SSL on the login, user edit, and change password screens. If set to **Not required**, will not force the use of SSL on any screen.

Configuring device settings

The items in the following table are the system wide device settings that can be configured.

To configure system wide device settings:

1. On the **Administration** menu, click **Configuration**.
2. In the **Device Settings** area, enter configuration settings as desired.
3. Click **Save**.

Table 20: Device settings

Item	Description
Default last active days filter	The number of days since the last active date that device views will filter by default (devices past this number will not display unless filter is manually changed).
Device New Days	The number of days that a newly discovered device will display the new icon beside the device name.
Supplies Ordering Enabled	If **True** is selected, supplies ordering capabilities will be enabled in the system. If **False** is selected, supplies ordering capabilities will be disabled.
Estimated Coverage Minimum	The minimum value that an estimated coverage value is considered valid. If the estimated value falls below this setting, the default coverage value is used.
Estimated Coverage Maximum	The maximum value that an estimated coverage value is considered valid. If the estimated value rises above this setting, the default coverage value is used.
Default Black Coverage	The default coverage for black toner if no coverage can be calculated.
Default Color Coverage	The default coverage for color toner if no coverage can be calculated.

Configuring database settings

There is one database setting that can be configured: command timeout. You can set the maximum number of seconds that any database query or command can take before it times out.

To configure database settings:

1. On the **Administration** menu, click **Configuration**.
2. In the **Database Settings** area, enter the maximum number of seconds for a database query or command in the **Command Timeout** box.

3. Click **Save**.

3.16 Branding the user interface

The user interface for PrintFleet Optimizer can be branded to match your company's marketing initiatives. If necessary, branding settings can be customized for different groups. The following items can be branded in the user interface:

- Product logo
- Executive report cover (front and back)
- Area and font colors
- Product name
- Login screen

Customizing the product logo

The logo that appears in the upper left corner of the PrintFleet Optimizer interface can be customized. Any web format image is acceptable. PrintFleet will automatically scale the image to fit, but an original size of 70 pixels high by 280 pixels wide would be ideal.

To customize the logo:

1. On the **Administration** menu, click **Custom Branding**.
2. Select the group that the branding applies to.
3. In the **PFO Logo** area, do one of the following:
    - To use an image from a file, click the **Browse** button to locate an image file on your computer, and then click **Upload**.
    - To use an image from a URL, type the URL of an uploaded image in the **From URL** box, and then click **Load**.
4. Click **Test** to preview the changes.
5. Click **Save**.

Customizing the Executive Report cover

The front and back pages that appear on generated Executive Reports can be customized. If you choose a new custom image, PrintFleet will automatically scale the image to fit as necessary.

To customize the Executive Report cover:

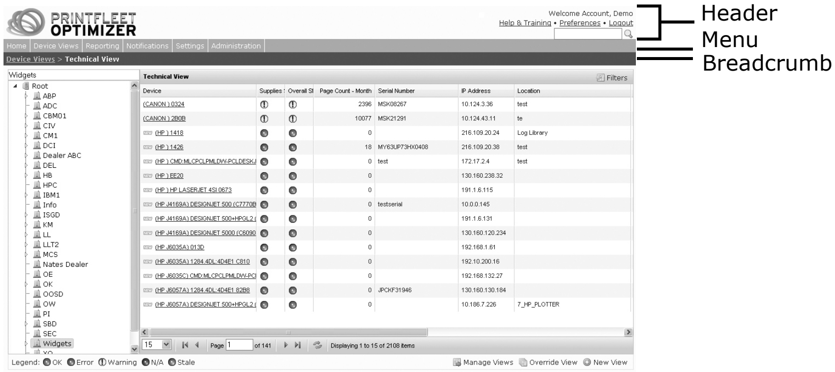
1. On the **Administration** menu, click **Custom Branding**.
2. Select the group that the branding applies to.
3. In the **Exec Report Start** area, do one of the following to customize the front cover:
    - To use an image from a file, click the **Browse** button to locate an image file on your computer, and then click **Upload**.
    - To use an image from a URL, type the URL of an uploaded image in the **From URL** box, and then click **Load**.
4. In the **Exec Report End** area, do one of the following to customize the back cover:

   - To use an image from a file, click the **Browse** button to locate an image file on your computer, and then click **Upload**.
   - To use an image from a URL, type the URL of an uploaded image in the **From URL** box, and then click **Load**.
5. Click **Save**.

Customizing interface colors and fonts

Interface components such as background colors, text color, and font type can be customized. Specifically, the following interface components can be given custom styles:

- Header background color
- Header text color
- Page background color
- Font
- Text color
- Link color
- Menu background color
- Menu text color
- Breadcrumb background color
- Breadcrumb text color



Device	Supplies :	Overall St	Page Count - Month	Serial Number	IP Address	Location
(CANON) 0324	!	!	2396	MSK08267	10.124.3.36	test
(CANON) 2B0B	!	!	10077	MSK21291	10.124.43.11	te
(HP) 1418	●	●	0		216.109.20.24	Log Library
(HP) 1426	●	●	18	MY63UP73HX0408	216.109.20.38	test
(HP) CMD:MLCPCLPMLDW-PCLDESKJ	●	●	0	test	172.17.2.4	test
(HP) EE20	●	●	0		130.160.238.32	
(HP) HP LASERJET 4SI 0673	●	●	0		191.1.6.115	
(HP J4169A) DESIGNJET 500 (C7770B	●	●	0	testserial	10.0.0.145	
(HP J4169A) DESIGNJET 500+HPGL2 (	●	●	0		191.1.6.131	
(HP J4169A) DESIGNJET 5000 (C6090	●	●	0		130.160.120.234	
(HP J6035A) 013D	●	●	0		192.168.1.61	
(HP J6035A) 1284.4DL:4D4E1 C810	●	●	0		192.10.200.16	
(HP J6035C) CMD:MLCPCLPMLDW-PCI	●	●	0		192.168.132.27	
(HP J6057A) 1284.4DL:4D4E1 82B8	●	●	0	JPCKF31946	130.160.130.184	
(HP J6057A) DESIGNJET 500+HPGL2 (	●	●	0		10.186.7.226	7_HP_PLOTTER

To customize interface component styles:

1. On the **Administration** menu, click **Custom Branding**.
2. Select the group that the branding applies to.
3. Click the **Styles** tab.
4. Do one or more of the following:
   - In any of the boxes to customize a color, click in the corresponding text box and select a color from the color selection panel, or type the hexidecimal code for the color you want.
   - Choose a different font style from the **Font** list.
5. Click **Test** to preview the changes.
6. Click **Save**.

Customizing the product name

The name of the product (software) that appears in the title bar of the web browser, and also some reports, can be customized. By default, the product name is PrintFleet Optimizer.

To customize the product name:

1. On the **Administration** menu, click **Custom Branding**.
2. Select the group that the branding applies to.
3. Click the **Miscellaneous** tab.
4. In the **Product Name** box, type your customized product name.
5. Click **Test** to view the new product name in the title bar of the web browser.
6. Click **Save**.

Customizing the login screen

The login screen for PrintFleet Optimizer can be customized. As part of the PrintFleet Integrated Marketing Package, you will receive a custom designed login screen for your PrintFleet Optimizer interface.

A custom login screen is an HTML page that sends the input username and password to the main PrintFleet Optimizer login page using a post command. For a custom login screen to function properly, you need to include the following form tags in the HTML of the custom login page:

```
<form action=”https://yourserverURL/login.aspx”
method=”post” name=”frmLogin” id=”frmLogin”>

</form>
```

Note	In this example, `https` is used because under most circumstances you will have associated your login page with an SSL certificate. See “Requesting and installing an SSL 128-bit certificate” on page 4. If, however, this has not been done, `http` can be used.

The custom login page is effectively automatic, using a cookie to store the URL of the login page. The custom login page can be hosted anywhere. When a user attempts to log in to PrintFleet Optimizer, the HTTP Referrer header sent by the client will be stored in a cookie, and any links that would normally go to login.aspx will instead go to this URL.

The following is an example of the minimum HTML required for your PrintFleet Optimizer login page:

```
<html>

<body>

<form action="http://printfleet.com/pfo/login.aspx"
method="POST">

User: <input name="txtUsername" type="text" /><br />

Password: <input name="txtPassword" type="password" /
><br />

<input type="submit" value="Login" />

</form>

</body>

</html>
```

Optionally, the custom login page can be coded to read an error from the URL (the parameter name is `error`). For example, the URL might be the following:

```
http://mysite.com/custom_login.html?error=
```

This can be done using a server-side language or on the client-side (in regular HTML) using Javascript. To implement error handling using Javascript, include the following script somewhere in the page (for example, in the `<head>` section):

```
<script type="text/javascript">
   function errorMessage(returnOutput) {

     var queryRegex = /error=(.*?)(\&|$)/;
     var urlRegex = /%([^%]{2})/;
     if (match =
     queryRegex.exec(window.location.href)) {
        var message = match[1].replace(/\+/g,' ');
        console.log(message.replace(/\+/g,' '));
        while (matchUrl = urlRegex.exec(message)) {
           var charVal = String.fromCharCode(
           parseInt(matchUrl[1],16) );
           message = message.replace(matchUrl[0],
           charVal);
        }

        if (message) {
           if (returnOutput) {
              return message;
           } else {
              document.write('<b>Error:</b> ' +
              message);
              return message;
           }
        }
     }
     return false;
   }
</script>
```

Include this fragment where you want to display the error:

```
<script type="text/javascript"> errorMessage();
</script>
```

It is also possible to specify a custom URL for the login page, if you always want to return to a specific URL. To do this, add a hidden element called `referrer` with the URL of the login page as the value. If this parameter is specified, the actual HTTP referrer will be ignored and this will be used instead. Normally you would not use this parameter.

Chapter 4 Administering PrintFleet Enterprise

As an administrator, it is your job to setup, maintain, and troubleshoot the various components of the PrintFleet system. You will receive technical training prior to your launch of the system. Technical support is also available from PrintFleet if you run into problems that are not covered in this guide.

This chapter discusses:

- Understanding the system architecture
- Troubleshooting stale data issues
- Troubleshooting database errors
- Compressing, backing up, and restoring the database
- Maintaining the server
- Providing technical support
- Distributing software updates

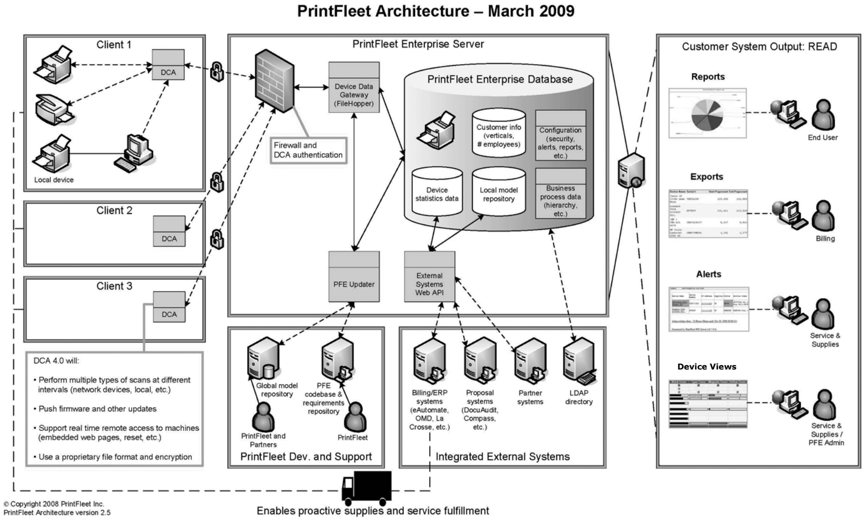
4.1 Understanding the system architecture

To administrate and fully take advantage of all that the PrintFleet Enterprise system has to offer, you need to understand the underlying architecture.

The PrintFleet server is the engine of the system, and relies on the following components to store, collect, parse, and refresh data:

- DCAs installed at customer locations send data on a scheduled basis to the PrintFleet server. See "Using the Printer Data Collector Agent" on page 8.
- The single database on the server, `pfo`, is made up of several tables where all of the collected data resides.
- Scheduled tasks running on the server parse the data several times per hour into the database tables, refresh the data, and send out detected alerts, flags, and scheduled reports.

Note	Data can also be uploaded from PrintFleet Suite Pro. See the *PrintFleet Suite Pro User Guide* for further details.


PrintFleet Architecture – March 2009
Client 1
DCA
Local device
Client 2
DCA
Client 3
DCA
DCA 4.0 will:
• Perform multiple types of scans at different intervals (network devices, local, etc.)
• Push firmware and other updates
• Support real time remote access to machines (embedded web pages, reset, etc.)
• Use a proprietary file format and encryption
PrintFleet Enterprise Server
Firewall and DCA authentication
Device Data Gateway (FileHopper)
PrintFleet Enterprise Database
Customer info (verticals, # employees)
Configuration (security, alerts, reports, etc.)
Device statistics data
Local model repository
Business process data (hierarchy, etc.)
PFE Updater
External Systems Web API
Global model repository
PFE codebase & requirements repository
PrintFleet and Partners
PrintFleet
PrintFleet Dev. and Support
Billing/ERP systems (eAutomate, OMD, La Crosse, etc.)
Proposal systems (DocuAudit, Compass, etc.)
Partner systems
LDAP directory
Integrated External Systems
Customer System Output: READ
Reports
End User
Exports
Billing
Alerts
Service & Supplies
Device Views
Service & Supplies / PFE Admin
© Copyright 2008 PrintFleet Inc.
PrintFleet Architecture version 2.5
Enables proactive supplies and service fulfillment

PrintFleet Enterprise Architecture

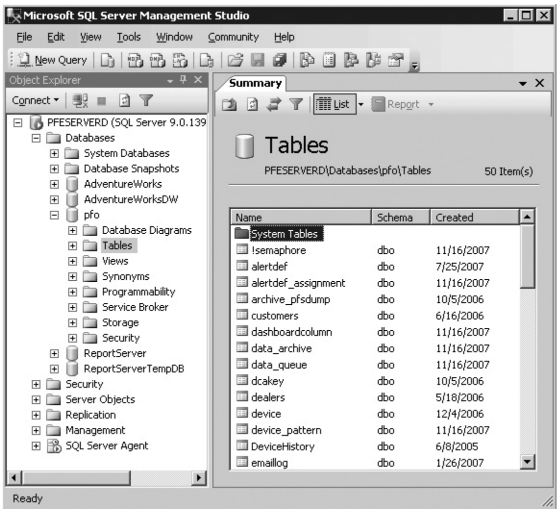
Viewing the database tables

All data for the PrintFleet Enterprise system is stored in tables within the `pfo` database.

To view the `pfo` database tables using SQL Server 2005:

1. Click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. Enter your login information for the server and click **Connect**.

3. In the **Object Explorer** window, expand **Databases**, **pfo**, and then **Tables**.



PFESERVERD\Databases\pfo\Tables 50 Item(s)

Name	Schema	Created
System Tables		
!semaphore	dbo	11/16/2007
alertdef	dbo	7/25/2007
alertdef_assignment	dbo	11/16/2007
archive_pfsdump	dbo	10/5/2006
customers	dbo	6/16/2006
dashboardcolumn	dbo	11/16/2007
data_archive	dbo	11/16/2007
data_queue	dbo	11/16/2007
dcakey	dbo	10/5/2006
dealers	dbo	5/18/2006
device	dbo	12/4/2006
device_pattern	dbo	11/16/2007
DeviceHistory	dbo	6/8/2005
emaillog	dbo	1/26/2007

Viewing the scheduled tasks

Each scheduled task performs a specific action with the data on the server.

To view the list of scheduled tasks on your PrintFleet server:

1. Click **Start**.
2. Point to **Control Panel**, and then point to **Scheduled Tasks**.

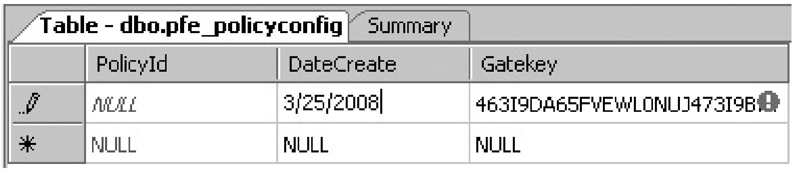
4.2 Updating your PrintFleet license

When you purchase additional device licenses for your PrintFleet system, you will be provided a new license key that must be entered into your PrintFleet system.

To update your PrintFleet license:

1. Log in to your PrintFleet Enterprise server.
2. Launch **SQL Server Client Tools**.
3. Connect to the database using the credentials outlined in your component `.ini` or `.exe.config` files.
4. Click to expand the database.
5. Click to expand **tables**.
6. Right click on the **pfe_policyconfig** table and click **Open Table**.
7. Enter the activation code sent by PrintFleet into the **gatekey** box.
8. Enter today's date in the **Date Create** box in MM/DD/YYYY format (for example, March 1, 2010 is 03/01/2010).

9. Press **Enter**.



	PolicyId	DateCreate	Gatekey
✎	*NULL*	3/25/2008	463I9DA65FVEWL0NUJ473I9B
✳	NULL	NULL	NULL

4.3 Troubleshooting stale data issues

Devices will appear as stale in PrintFleet Optimizer if the DCA has not been able to collect data from the device for a period of 24 hours.

If customers are showing stale devices without an obvious explanation, the customer should be contacted to determine the reason. A device may appear as stale for many reasons, including:

- The device has been removed from the network
- The device is turned off
- The transmission port on the network is closed (all devices display as stale)
- The computer installed with the DCA is turned off (all devices display as stale)

4.4 Troubleshooting database errors

As a PrintFleet administrator, you should review database errors on a periodic basis by analyzing the Event Viewer and SQL server logs. By viewing these items, you will know if there are any errors that need to be handled.

To review the Event Viewer:

1. Click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Event Viewer**.
2. Review and clear any error messages.

To review the SQL server logs in SQL Server 2005:

1. Click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. Adjust server and authentication information as necessary (usually the default information is correct), and click **Connect**.
3. In the **Object Explorer** area, expand **Management**, and then expand **SQL Server Logs**.
4. Double-click on the current, or any of the archived server log files to review the log for any errors.

4.5 Compressing, backing up, and restoring the database

If you are using PrintFleet hosting services, your database will be backed up regularly by PrintFleet Technical Support.

If you are independently hosting your system, you should compress and back up the PrintFleet database, ideally on a daily basis. Once backups are created, the database can be restored to any previous backup file at any time.

To compress the database in SQL Server 2005:

1. Click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. Adjust server and authentication information as necessary (usually the default information is correct), and click **Connect**.
3. In the **Object Explorer** area, expand **Databases**.
4. Right-click **pfo**, point to **Tasks**, point to **Shrink**, and then click **Database**.
5. In the **Shrink Database - pfo** dialog box, click **OK**.

To back up the database in SQL Server 2005:

1. Click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. Adjust server and authentication information if necessary, and click **Connect**.
3. In the **Object Explorer** area, expand **Databases**.
4. Right-click **pfo**, point to **Tasks**, and then click **Back Up**.
5. In the **Back Up Database - pfo** dialog box, make sure **pfo** is selected in the **Database** list.
6. Select **Full** in the **Backup type** list.
7. Enter a unique, recognizable string in the **Name** box. For example, `pfo_`*`year_month_date`*.
8. In the **Destination** area, click to select any previous backup file destinations, and then click **Remove**. Click **Add**, and in the **Select Backup Destination** dialog box, type or browse to the following backup destination in the **File Name** box: `C:\Inetpub\ftproot\dbbackups\`*filename*`.bak` (for simplicity purposes, the file name should be the same as the name entered in the previous bullet), and then click **OK**.
9. In the **Select a Page** area on the left side, click **Options.**
10. Click to select **Back up to the existing media set**.
11. Click to select **Append to the existing backup set**.
12. Click **OK**.

To restore a backup database file in SQL Server 2005:

1. Click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2005**, and then click **SQL Server Management Studio**.
2. Adjust server and authentication information if necessary, and click **Connect**.
3. In the **Object Explorer** area, expand **Databases**.
4. Right-click **pfo**, point to **Tasks**, point to **Restore**, and then click **Database**.
5. In the **Restore Database - pfo** dialog box, make sure **pfo** is selected in the **To database** list.
6. Click to select **From device**, and click to browse for the backup file you want to restore. Backup files should be stored in `C:\Inetpub\ftproot\dbbackups` or another folder you have saved them to.
7. Under the **Restore** column, click to select the backup file you want to restore.
8. In the **Select a Page** area on the left side, click **Options**.
9. Click to select the **Overwrite existing database** check box.
10. Click to select the first recovery state option that includes **(RESTORE WITH RECOVERY)**.
11. Click **OK**.

4.6 Maintaining the server

If you are using PrintFleet hosting services, your server will be maintained by PrintFleet Technical Support.

If you are independently hosting your system, it is recommended you do the following tasks at non-peak times, to keep the server in proper working order and to maximize uptime for users:

- Restart the IIS server software once every 24 hours.
- Restart the server once a week.
- Delete old database backup files that are no longer needed to maximize storage space on the server.

Note	The preconfigured maintenance procedure outlined below will delete all .bak versions of the database backup files. If you want to delete the .rar versions, this has to be done manually.

Your PrintFleet Enterprise system contains a preconfigured procedure that will help maintain your database.

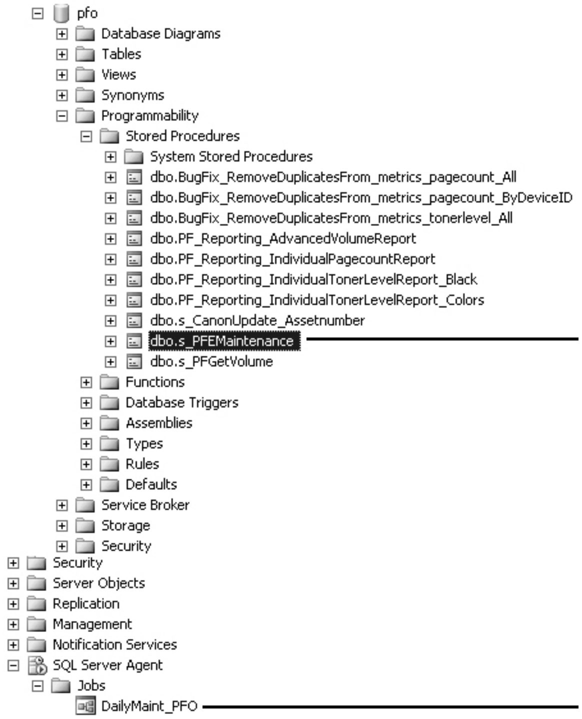
To access the PrintFleet Enterprise stored maintenance procedure:

1. From the **Object Explorer Area** in **Management Studio**, expand the **pfo** database folder.

2. Expand **Programmability** and **Stored Procedures**.
3. Double click **dbo.s_PFEMaintenance**.

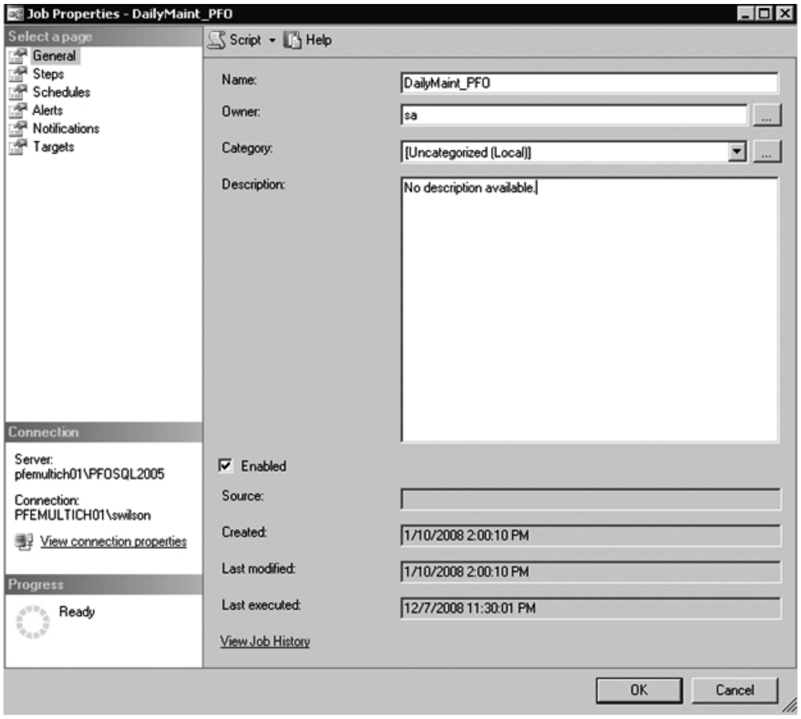
To access the SQL job that will trigger the PrintFleet Enterprise stored maintenance procedure to run:

1. From the **Object Explorer Area** in **Management Studio**, expand **SQL Server Agent**.
2. Expand **Jobs**.
3. Double click **DailyMaint_PFO**.


pfo
Database Diagrams
Tables
Views
Synonyms
Programmability
Stored Procedures
System Stored Procedures
dbo.BugFix_RemoveDuplicatesFrom_metrics_pagecount_All
dbo.BugFix_RemoveDuplicatesFrom_metrics_pagecount_ByDeviceID
dbo.BugFix_RemoveDuplicatesFrom_metrics_tonerlevel_All
dbo.PF_Reporting_AdvancedVolumeReport
dbo.PF_Reporting_IndividualPagecountReport
dbo.PF_Reporting_IndividualTonerLevelReport_Black
dbo.PF_Reporting_IndividualTonerLevelReport_Colors
dbo.s_CanonUpdate_Assetnumber
dbo.s_PFEMaintenance
dbo.s_PFGetVolume
Functions
Database Triggers
Assemblies
Types
Rules
Defaults
Service Broker
Storage
Security
Security
Server Objects
Replication
Management
Notification Services
SQL Server Agent
Jobs
DailyMaint_PFO

Stored PFE maintenance procedure

SQL job to run stored maintenance procedure



Server: pfemultich01\PFOSQL2005

Connection: PFEMULTICH01\swilson

Ready

Name: DailyMaint_PFO

Owner: sa

Category: [Uncategorized (Local)]

Description: No description available.

☑ Enabled

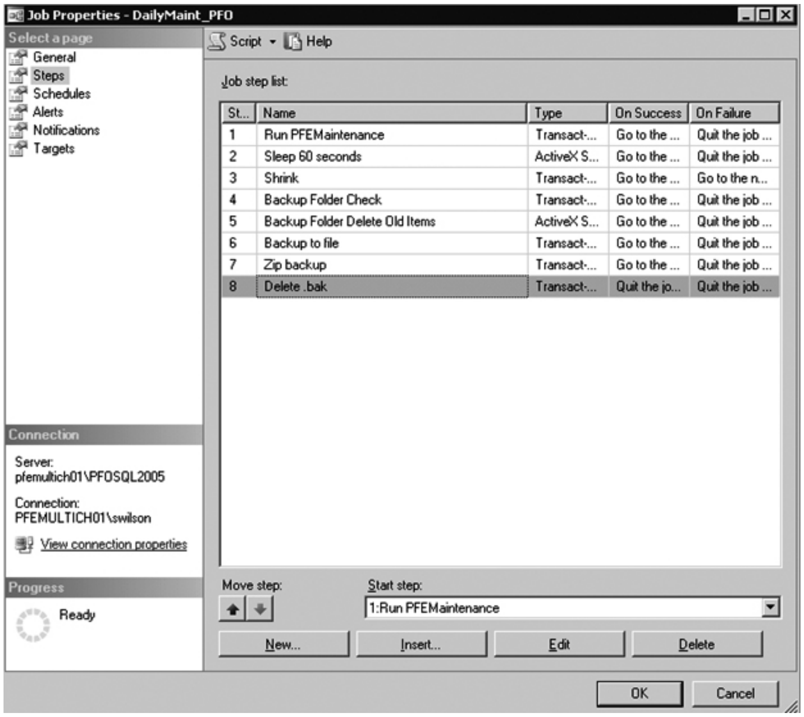
Source:

Created: 1/10/2008 2:00:10 PM

Last modified: 1/10/2008 2:00:10 PM

Last executed: 12/7/2008 11:30:01 PM

SQL Job Properties



Server: pfemultich01\PFOSQL2005

Connection: PFEMULTICH01\swilson

Ready

Job step list:

St...	Name	Type	On Success	On Failure
1	Run PFEMaintenance	Transact-...	Go to the ...	Quit the job ...
2	Sleep 60 seconds	ActiveX S...	Go to the ...	Quit the job ...
3	Shrink	Transact-...	Go to the ...	Go to the n...
4	Backup Folder Check	Transact-...	Go to the ...	Quit the job ...
5	Backup Folder Delete Old Items	ActiveX S...	Go to the ...	Quit the job ...
6	Backup to file	Transact-...	Go to the ...	Quit the job ...
7	Zip backup	Transact-...	Go to the ...	Quit the job ...
8	Delete .bak	Transact-...	Quit the jo...	Quit the job ...

Start step: 1:Run PFEMaintenance

Steps associated with SQL job

4.7 Providing technical support

The following best practices are recommended for providing technical support to your PrintFleet customers:

Note	All issues should be tracked with a custom or commercially available CRM (Customer Relationship Management) software solution.

- Track all incoming calls and emails. Specifically, record the caller’s name, phone number, company, the reason for the call, whether or not there was a resolution to their situation, and what the resolution was or what the next step is.
- Use email as a support tool, since it automatically records all of the details in writing.
- Ensure that callers phoning support, as much as possible, do not have to wait longer than five rings to get a technical person on the line.
- Try to deliver resolutions to routine problems within 30 minutes of the support call. There should be a plan in place that specifies levels of problems and their expected response times.
- Make self help materials available to your customers to minimize the need for telephone and email support.
- Review support call records on a weekly basis to flag any recurring issues that might be preventable by changing the installation or initial training process.
- Monitor new customers and installations closely for the first two weeks while they are getting started with the software.
- Consider providing 24-hour support using mobile devices.

4.8 Distributing software updates

It is the responsibility of the PrintFleet administrator to distribute software updates to their clients as they see fit. Updates at the client location would primarily be for the DCA. Updates for the DCA can be distributed to remote installations from your central server.

4.9 Integrating PrintFleet Optimizer logins with an existing system using one time passwords

One-time password (OTP) functionality is designed to allow you to implement single sign-on, where a user signs onto a separate software system and at the same time is signed onto PrintFleet Optimizer.

An OTP can be requested for a user account, by a user who is a Root Administrator. By default, OTPs have a lifetime of one minute. Once the OTP is used to login, it is deleted, so OTPs cannot be reused.

OTPs can be up to 50 characters in length, and although the current implementation uses 32-character hex strings, any process designed should allow up to 50 characters to remain consistent with the internal design.

Requesting a one time password

There are four ways to create a new OTP:

- Using the getUserOTP SQL stored procedure
- Using the userOTP table directly
- Using the simple web service
- Using the SOAP web service

To request an OTP using the getUserOTP SQL stored procedure

This procedure can be called with either a userid, or a user login, for example:

-- get an OTP using a userid

```
EXEC getUserOTP 'b7fadd07-3c82-43be-b0ed-e16216ee9955'
```

-- alternative syntax for getUserOTP with userid:

```
EXEC getUserOTP @userid='b7fadd07-3c82-43be-b0ed-
e16216ee9955'
```

-- get an OTP using a login

```
EXEC getUserOTP @login='demo@printfleet.com'
```

It returns a result set with the same structure as the userOTP table, which contains the columns userId, oneTimePassword, and expiry, as demonstrated in the following table.

Table 21: OTP Result

userId	oneTimePassword	expiry
B7FADD07-3C82-43BE-B0ED-E16216EE9955	16a9ef59ad5e47a1b92465493433a617	2010-07-30 10:38:25.033

To request an OTP using the userOTP table directly

You can manually insert a record into the userOTP table, which, at minimum, requires the userId field. The oneTimePassword and expiry fields can be manually set, but are otherwise automatically populated.

To request an OTP using the simple web service

There is a basic web page that will return an OTP. This page will not work unless it is accessed over SSL; this is a security precaution that prevents login credentials from being transmitted in plain text.

There are two ways to call this service:

- `/pfservices/Users.ashx?action=onetimepassword&authuser=`*`authuser`*`&authpass=`*`authpass`*`&login=`*`login`*
- `/pfservices/Users.ashx?action=onetimepassword&authuser=`*`authuser`*`&authpass=`*`authpass`*`&userid=`*`userid`*

The following is an explanation of the parameters used:

- **authuser** is the userid of a Root Administrator on the system. It is recommended you create an account explicitly for this purpose, and set Disabled to true. This will prevent the user from logging into the web interface, but not from using services.
- **authpass** is the password of the authuser user account.
- **login** is the login name of the user you want to generate the OTP for.
- **userid** is the userid (GUID) of the user you want to generate the OTP for.

Note	Only one of **login** or **userid** needs to be specified to call the service.

Either a POST or a GET can be used with this method. If using a GET, be sure to send all parameters using URL encoding. For example, an email address `demo@example.com` would be encoded as `demo%40example.com`.

The web service will either return the password as the only response, with a 200 OK HTTP response code, or it will return a 500 error HTTP response code, with the text `ERROR: message`.

To request an OTP using the SOAP web interface

There is a standard SOAP (1.1 or 1.2) web service for requesting oneTimePasswords, located at `/pfservices/Users.asmx`.

See `/pfservices/Users.asmx?WSDL` for the WSDL specifications.

This page will not work unless it is accessed over SSL; this is a security precaution that prevents login credentials from being transmitted in plain text. An error will be issued if the service is accessed by a method other than HTTPS.

There are two methods to request an OTP using the SOAP web interface:

- GetOneTimePasswordByLogin
- GetOneTimePasswordByUserId

SOAP 1.1 Example Request (GetOneTimePasswordByLogin):

```
POST /pfservices/Users.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "http://tempuri.org/GetOneTimePasswordByLogin"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/
envelope/">
  <soap:Body>
    <GetOneTimePasswordByLogin xmlns="http://tempuri.org/">
      <authinfo>
        <UserId>string</UserId>
        <Password>string</Password>
      </authinfo>
      <login>string</login>
    </GetOneTimePasswordByLogin>
  </soap:Body>
</soap:Envelope>
```

SOAP 1.1 Example Response (GetOneTimePasswordByLogin):

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/
envelope/">
  <soap:Body>
    <GetOneTimePasswordByLoginResponse xmlns="http://
tempuri.org/">
      <GetOneTimePasswordByLoginResult>string</
GetOneTimePasswordByLoginResult>
    </GetOneTimePasswordByLoginResponse>
  </soap:Body>
</soap:Envelope>
```

SOAP 1.1 Example Request (GetOneTimePasswordByUserId):

```
POST /pfservices/Users.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "http://tempuri.org/GetOneTimePasswordByUserId"
```

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/
envelope/">
  <soap:Body>
    <GetOneTimePasswordByUserId xmlns="http://tempuri.org/">
      <authinfo>
        <UserId>string</UserId>
        <Password>string</Password>
      </authinfo>
      <userId>string</userId>
    </GetOneTimePasswordByUserId>
  </soap:Body>
</soap:Envelope>
```

SOAP 1.1 Example Response (GetOneTimePasswordByUserId):

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/
XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/
envelope/">
  <soap:Body>
    <GetOneTimePasswordByUserIdResponse xmlns="http://
tempuri.org/">
      <GetOneTimePasswordByUserIdResult>string</
GetOneTimePasswordByUserIdResult>
    </GetOneTimePasswordByUserIdResponse>
  </soap:Body>
</soap:Envelope>
```

Using a one time password

To log a user in with an OTP, append the GET variables `?otp=`*`password`* to the URL of any page in PrintFleet Optimizer, and redirect the user to that page. The user will be logged in directly to the page in question. If `login.aspx` is used, they will go to their normal start page, for example:

```
/login.aspx?otp=16a9ef59ad5e47a1b92465493433a617
```

You can also use a POST to send this variable.

Since the passwords expire quickly (default one minute), it is recommended that you request and redirect the user in one operation. If you have a link on a site for the purpose of logging users into PrintFleet Optimizer, it is recommended that you have this link invoke the code on the site that requests the OTP, and then use a Location redirect header to send the user to PrintFleet Optimizer.

Appendix A PrintFleet Enterprise Installation Requirements Agreement

As a PrintFleet Enterprise client, you must meet the following requirements prior to your PrintFleet Enterprise software installation.

- Acquire and install a server according to the following specifications:
  - Minimum Hardware Specifications:
    - Dual Core Xeon 1.6 GHz processor
    - 2GB RAM
    - Raid 1 - 2 X 10K RPM 146GB
  - Minimum Software Specifications:
    - Microsoft Small Business Server 2003 R2 Premium Edition, Windows Server 2003 Standard 32 bit, or Windows Server 2003 Enterprise 32 bit operating system

  - SQL Server 2008 Standard Edition or MS SQL Server 2005 Standard Edition
- Port 443/tcp (HTTPS), Port 80/tcp (HTTP), or an alternate port (as an option, can use HTTP or HTTPS and selection is dependent on the PFE Server configuration) should be opened for inbound connections.
- Port 3389/tcp should be opened for inbound connections (needed for PrintFleet Support).
- Have a public IP address you can assign to your PrintFleet Enterprise server.
- Choose a URL name you want to dedicate for your PrintFleet Enterprise server, for example, secure.enterprise.com.
- Create a domain DNS "A" (address) record, using the above URL, to point to the public IP address of your PrintFleet Enterprise server.
- Request and install an SSL 128-bit security certificate for your PrintFleet Enterprise server.
- Your Enterprise server must operate on an external IP or in your DMZ, and must not be included within another server's domain.
- Store the server in a temperature controlled and physically secured NOC (Network Operations Center) within a server rack cabinet.
- Have redundant power supply and surge protection meeting or exceeding ANSI requirements.
- Have reliable and redundant high speed broadband connections to the Internet from the hosting NOC.
- Must allow PrintFleet Support personnel access into the Enterprise server via remote desktop for periodic maintenance, updates, and support. The port through which remote access is allowed is determined by the client.
- Have a dedicated full time IT resource for the PrintFleet Enterprise server with three or more years experience supporting Windows servers.
- Designated PrintFleet Enterprise Administrators must be given Administrator privileges to the Enterprise server including RDP to access the database and the PrintFleet Admin Console running on the server.

Timeline for Server Acquisition and Installation:

- 1 month prior to Technical Training: Conference call to discuss your Technical Training and review Installation Requirements
- 3 weeks prior to Technical Training: All required hardware and software must be ordered by the client
- 2 weeks prior to Technical Training: Server system must be up and running with all accompanying server software installed. PrintFleet must have the required information needed to RDP into the server and install the PrintFleet system.

I AGREE THAT OUR CORPORATION HAS MET AND COMPLIED WITH THE ABOVE REQUIREMENTS.

PRINT NAME: ____

SIGNATURE: ____

COMPANY: ____

DATE: ____

Appendix B PrintFleet Enterprise Hosted: Requirements Agreement

As a PrintFleet Enterprise client using hosting services, you must meet the following requirements:

- Allow PrintFleet to acquire appropriate hardware and software for your PrintFleet Enterprise system according to the following specifications:
  - Minimum Hardware Specifications:
    - Dual Core Xeon 1.6 GHz processor
    - 2GB RAM
    - Raid 1 - 2 X 10K RPM 146GB
  - Minimum Software Specifications:
    - Windows Server 2003 Standard 32 bit (recommended), Windows Server 2003 Enterprise 32 bit, or Microsoft Small Business Server 2003 R2 Premium Edition operating system
    - SQL Server 2008 Standard Edition or SQL Server 2005 Standard Edition
    - System may be hosted on a virtual server using Microsoft Virtual Server 2005 or Microsoft HyperV
- Port 443/tcp (HTTPS), Port 80/tcp (HTTP), or an alternate port (as an option, can use HTTP or HTTPS and selection is dependent on the PFE Server configuration) should be opened for inbound connections.
- Port 3389/tcp should be opened for inbound connections (needed for PrintFleet Support).
- Choose a URL name you want to dedicate for your PrintFleet Enterprise server prior to your technical training session.
- Create a domain DNS "A" (address) record, using the above URL, to point to the public IP address of your PrintFleet Enterprise server.
- Agree that PrintFleet Support personnel will have the right to access the PrintFleet Enterprise system for periodic maintenance, updates, and support.
- Agree to not back up the PrintFleet Enterprise database remotely.
- Agree to not use the PrintFleet Enterprise server for any purpose other than to host the PrintFleet Enterprise system.
- Agree to not change the structure of the PrintFleet Enterprise database in any way.
- Have a dedicated full time IT administrator for the PrintFleet Enterprise system who has RDP access to the server.

Timeline for Server Acquisition and Installation:

- 1 month prior to Technical Training: Conference call to discuss your Technical Training and review Requirements Agreement
- 2 weeks prior to Technical Training: PrintFleet must have server system up and running with all accompanying server software and PrintFleet software installed.

I AGREE THAT OUR CORPORATION HAS MET AND COMPLIED WITH THE ABOVE REQUIREMENTS.

PRINT NAME: ____

SIGNATURE: ____

COMPANY: ____

DATE: ____

Appendix C PrintFleet Enterprise License Agreement

PRINTFLEET ENTERPRISE LICENSE AGREEMENT

This license Agreement is a legal agreement between you (the **"LICENSEE"**) and PRINTFLEET INC. (**"PRINTFLEET"**) with its principal place of business at 275 Ontario Street, Suite 301, Kingston, Ontario, K7K 2X5. By installing or otherwise using the SOFTWARE, you, LICENSEE, agree to be bound by the terms of this AGREEMENT. If you do not agree with the terms of this AGREEMENT, promptly delete the SOFTWARE or return the unused SOFTWARE to PRINTFLEET.

NOW THEREFORE THIS AGREEMENT WITNESSES that in consideration of the premises and covenants and agreements herein contained the parties hereto agree as follows:

1. Definitions

(a) **"AGREEMENT"** means this License Agreement and all amendments made hereto by written agreement between the parties;

(b) **"COMMENCEMENT DATE"** means the date on which the SOFTWARE is installed at LICENSEE's location;

(c) **"MAINTENANCE"** means the provision of UPDATES and UPGRADES;

(d) **"SERVER"** means the hardware on which the PRINTFLEET Enterprise SOFTWARE is initially installed;

(e) **"SOFTWARE"** means PRINTFLEET Enterprise software in object code form, including UPDATES and UPGRADES that may be acquired by LICENSEE;

(f) **"SUPPORT"** means the support described in Schedule "A";

(g) **"THIRD-PARTY SOFTWARE"** means third party software programs forming part of or embedded in the SOFTWARE;

(h) **"THIRD-PARTY WARRANTIES"** means warranties provided by third parties for THIRD-PARTY SOFTWARE and hardware;

(i) **"UPDATE"** means a bug fix, patch, error correction and/or other minor enhancement to the SOFTWARE that does not substantially change the basic character or structure of the Software or its functional use or operation, from time to time made available by PRINTFLEET in its sole discretion at no charge on its web site or via on-line services and normally indicated by a higher digit to the right of the decimal in the version number of the SOFTWARE; and

(j) **"UPGRADE"** means a major enhancement to the SOFTWARE made available from time to time by PRINTFLEET in its sole discretion and normally indicated by a higher digit to the left of the decimal in the version number of the SOFTWARE.

2. Rights and Restrictions

(a) Subject to the terms and conditions of this AGREEMENT, LICENSEE is hereby granted a non-exclusive, non-transferable, perpetual license to use the SOFTWARE solely for LICENSEE's business. LICENSEE may not sublicense the SOFTWARE. LICENSEE covenants and agrees that the SOFTWARE will only be used in accordance with the provisions of this AGREEMENT. PRINTFLEET shall provide LICENSEE with SUPPORT for the twelve months following the COMMENCEMENT DATE without additional charge. Thereafter, LICENSEE may purchase SUPPORT from PRINTFLEET at its charges therefor from time to time.

(b) LICENSEE shall have no right to change, copy, alter, amend, reverse engineer, decompile, disassemble, publish, disclose, display or make available, in whole or in part, or otherwise use the SOFTWARE in any manner whatsoever, and shall take all reasonable steps to ensure LICENSEE's employees comply with these provisions.

(c) PRINTFLEET or its licensors shall retain all right, title, copyright, trade secrets, patents, trade-marks and other proprietary and intellectual property rights in the SOFTWARE. LICENSEE does not acquire any rights, express or implied, in the SOFTWARE, other than those specified in this AGREEMENT. LICENSEE shall not remove any proprietary, copyright, patent, trade-mark, design right, trade secret or any other proprietary rights legends from the SOFTWARE.

(d) THIRD PARTY SOFTWARE may be embedded in or delivered with the SOFTWARE licensed under this AGREEMENT. LICENSEE's right to use any THIRD PARTY SOFTWARE shall be limited to the use necessary to implement the SOFTWARE licensed. LICENSEE shall have no right to use such THIRD PARTY SOFTWARE other than as necessary for the licensed ordinary use of the SOFTWARE, and grants PRINTFLEET's licensors the right to protect their interests under this AGREEMENT and agrees that such licensors are benefited by the provisions of this AGREEMENT.

(e) LICENSEE will take appropriate steps, both before installation and at all times thereafter, to copy and protect LICENSEE's own data and programs that may be lost, harmed or destroyed and to protect LICENSEE's equipment from any damage, including during any period when LICENSEE opens ports on its computers or system to permit installation of the SOFTWARE. LICENSEE, and LICENSEE alone, will be responsible for reconstruction, replacement, repair or recreation of lost programs, data or equipment in the event of hardware or software failure. PRINTFLEET shall, under no circumstances, be responsible for any such losses or damages.

3. Warranty and Disclaimer

(a) PRINTFLEET warrants to LICENSEE for a period of thirty (30) days from the COMMENCEMENT DATE (i) that the diskettes, CD-ROMs or other media provided to LICENSEE will, under normal use, be free from defects in materials and workmanship and (ii) that the SOFTWARE shall perform substantially as set forth in the user manual therefor. The user manual is subject to change without notice.

(b) LICENSEE HEREBY EXPRESSLY AGREES AND ACKNOWLEDGES THAT, EXCEPT AS PROVIDED IN THIS AGREEMENT, THE SOFTWARE IS PROVIDED "AS IS" AND PRINTFLEET MAKES NO REPRESENTATIONS OR WARRANTIES OR COVENANTS, EXPRESS OR IMPLIED, IN RESPECT OF THE SOFTWARE OR ANY WORK OR SERVICES PERFORMED BY PRINTFLEET OR ITS EMPLOYEES, DEALERS OR AGENTS, INCLUDING WITHOUT LIMITATION, STATUTORY OR IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED AND EXCLUDED, PROVIDED THAT THIS DISCLAIMER AND EXCLUSION ARE LIMITED SO AS NOT TO APPLY IN ANY JURISDICTION IN RELATION TO A WARRANTY WHICH IS LEGALLY INCAPABLE OF EXCLUSION IN SAID JURISDICTION.

(c) PRINTFLEET does not warrant, guarantee or represent to LICENSEE that the SOFTWARE will meet LICENSEE's business requirements, that the installation and operation of the SOFTWARE will be uninterrupted or error-free, or that SOFTWARE defects will be corrected.

4. Third-Party Warranties

All THIRD-PARTY WARRANTIES are transferred to the LICENSEE once payment has been received from the LICENSEE for PRINTFLEET SOFTWARE. Immediately after the THIRD-PARTY WARRANTIES have been transferred to the LICENSEE, the THIRD-PARTY WARRANTIES, AND THIRD-PARTY SOFTWARE, and hardware become the sole responsibility of the LICENSEE.

5. Maintenance

(a) PRINTLEET provides LICENSEE with MAINTENANCE and SUPPORT for one year after the COMMENCMENT DATE.

(b) LICENSEE may purchase MAINTENANCE and SUPPORT after the initial one-year period commenicng on the anniversary date of the COMMENCMENT DATE. The annual charge for MAINTENANCE and SUPPORT will be a per device fee. The total charge for any year will be calculated using the total number of devices purchased from PrintFleet on the then current anniversary of the COMMNENCMENT DATE.

(c) LICENSEE agrees that PRINTFLEET may use any or all of the following methods to provide MAINTENANCE and SUPPORT:

(i) Remotely accessing the SERVER via Remote Desktop or Virtual Network Computing (VNC);

(ii) Email UPDATE packages to the LICENSEE;

(iii) Make UPDATE packages available for the LICENSEE to download.

6. Indemnification

PRINTFLEET will defend and indemnify LICENSEE against a claim that the SOFTWARE used within the scope of this AGREEMENT infringes upon any intellectual property right of a third party provided that: (a) LICENSEE notifies PRINTFLEET in writing within thirty (30) days of the claim; (b) PRINTFLEET has sole control of the defense and all related settlement negotiations; and (c) LICENSEE provides PRINTFLEET with the assistance, information and authority necessary to perform PRINTFLEET's obligations under this Section. PRINTFLEET shall have no liability for any claim of infringement based on the combination, operation or use of the SOFTWARE furnished under this AGREEMENT with software, hardware or other materials not furnished by PRINTFLEET if such infringement would have been avoided by the use of the SOFTWARE without such software, hardware or other materials. In the event the SOFTWARE is legally held or is believed by PRINTFLEET to infringe, PRINTFLEET shall have the option, at its expense, to: (a) modify the SOFTWARE to be non-infringing; (b) obtain for LICENSEE a license to continue using the SOFTWARE; or (c) terminate the license for the SOFTWARE and reimburse the license fee therefor on the basis of a five-year straight-line amortization. This Section 6 states PRINTFLEET's and PRINTFLEET's licensors' entire liability and LICENSEE's exclusive remedy for infringement of any intellectual property rights.

7. Limitation of Liability

EXCEPT AS PROVIDED IN SECTION 6, NOTWITHSTANDING ANY OTHER TERM OF THIS AGREEMENT TO THE CONTRARY, IN NO EVENT SHALL PRINTFLEET (OR ITS EMPLOYEES, AGENTS, SUPPLIERS AND LICENSORS) BE LIABLE TO LICENSEE OR ANY THIRD PARTY CLAIMING THROUGH LICENSEE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES HOWSOEVER CAUSED (INCLUDING DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, INCREASED COSTS OF OPERATION, LITIGATION COSTS AND THE LIKE) WHETHER BASED UPON A CLAIM OR ACTION IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR ANY OTHER LEGAL THEORY, IN CONNECTION WITH THE SUPPLY, USE OR PERFORMANCE OF THE SOFTWARE, REGARDLESS OF WHETHER PRINTFLEET HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR SUCH DAMAGES WERE REASONABLY FORESEEABLE.

8. Assignment

PRINTFLEET may assign its rights or delegate its obligations hereunder without the consent of or notice to LICENSEE. Except in the event of a merger or amalgamation of LICENSEE or the acquisition of all or substantially all of LICENSEE's assets by a third party, LICENSEE shall not transfer, assign, sub-license or pledge its rights or obligations hereunder without the written consent of PRINTFLEET.

9. Termination

Without prejudice to any other rights, PRINTFLEET may terminate this AGREEMENT, if LICENSEE fails to comply with the terms and conditions of this AGREEMENT.

10. General

(a) **Confidentiality.** By virtue of this AGREEMENT the parties may have access to information that is confidential to one another (**"CONFIDENTIAL INFORMATION"**). CONFIDENTIAL INFORMATION shall be limited to the SOFTWARE, the terms under this AGREEMENT and all information clearly identified as confidential. A party's CONFIDENTIAL INFORMATION shall not include information that: (a) is or becomes a part of the public domain through no act or omission of the other party; (b) was in the other party's lawful possession prior to the disclosure and had not been obtained by the other party, either directly or indirectly, from the disclosing party; (c) is lawfully disclosed to the other party by a third party without restriction on disclosure; or (d) is independently developed by the other party. The parties agree to hold each other's CONFIDENTIAL INFORMATION in strict confidence. The parties agree, unless required by law, not to make each other's CONFIDENTIAL INFORMATION available in any form to any third party or to use each other's CONFIDENTIAL INFORMATION for any purpose other than the implementation of this AGREEMENT. Each party agrees to take all reasonable steps to ensure that CONFIDENTIAL INFORMATION is not disclosed or distributed by its employees in violation of the terms of this AGREEMENT.

(b) **Governing Law.** This AGREEMENT shall be governed by, interpreted and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, other than rules governing conflicts of laws. The parties irrevocably attorn to the jurisdiction of the courts of the Province of Ontario. The parties expressly disclaim applicability of the terms of the United Nations Convention of Contracts for the International Sale of Goods and any legislation implementing such Convention shall not apply to this AGREEMENT nor to any dispute arising therefrom.

(c) **Entire Agreement.** This AGREEMENT constitutes the complete agreement between the parties and supersedes all prior or contemporaneous agreements or representations or warranties, written or oral, concerning the subject matter of this AGREEMENT. This AGREEMENT may not be modified or amended except in writing signed by a duly authorised representative of each party; no other act, document, usage or custom shall be deemed to modify this AGREEMENT.

(d) **Severability.** If one or more provisions of this AGREEMENT are held to be unenforceable under applicable laws, such provisions shall be modified to the minimum extent necessary to comply with applicable law and the intent of the parties.

(e) **Enurement.** The rights and obligations under the AGREEMENT shall enure to the benefit of and shall be binding upon the successors and assigns of the parties.

(f) **Notice.** All notices required to be sent hereunder to PRINTFLEET shall be in writing and shall be given by first-class mail or personal delivery (including overnight mail by private carrier) to the address first above written (which address may be altered upon written notice to LICENSEE).

(g) **Waiver.** The waiver by either party of any default or breach of this AGREEMENT shall not constitute a waiver of any other or subsequent default or breach.

Schedule A: PrintFleet Maintenance and Support

This PrintFleet Maintenance and Support document applies to PrintFleet Enterprise and PrintFleet Enterprise customers. Per device maintenance must be purchased annually to continue to receive maintenance and support. The policies and support availability outlined in this document are subject to change with notification to affected customers.

Support for PrintFleet Suite Pro is limited to email support only, with the exception of a one-time telephone support call, if required, for initial activation and setup. The initial response time for PrintFleet Suite Pro email inquiries is 24 hours. Resolution times will be determined on a case by case basis.

Obtaining Assistance

PrintFleet provides support for PrintFleet Enterprise and PrintFleet Enterprise customers according to the following charts.

Support - North America

Hours	Telephone	Email
08:00-18:00 Eastern Time Monday-Friday*	Toll Free: 1-866-382-8320 Option 1 Tel: 1 (613) 549-3221 Option 1	support@printfleet.com

* Excludes holidays in the province of Ontario, Canada.

Support - Europe, Middle East, Africa

Hours	Telephone	Email
8.30-12.00 CET and 13.00-17.00 CET (Central European Time) Monday-Friday**	Tel: +41 62 777 41 58	support-emea@printfleet.com

** Excludes holidays within Europe, in which case all inquiries will be directed to PrintFleet Inc. corporate headquarters in Ontario, Canada.

Components of PrintFleet Maintenance and Support

PrintFleet Maintenance and Support includes:

- Software Updates, Upgrades and maintenance releases, as determined by PrintFleet.
- Unlimited telephone and email support inquiries.
- Two support contacts (two assigned employees of the customer may contact PrintFleet support).

In order to provide software Updates and Upgrades and maintenance releases, PrintFleet Support requires remote access to the customer's PrintFleet Enterprise or PrintFleet Enterprise server. PrintFleet Support will contact the customer's server administrator prior to accessing the server.

PrintFleet Support Priority Levels

Every telephone and email inquiry to PrintFleet Support will be classified into one of the priority levels outlined below. The classification of a support inquiry will determine expected response and resolution times during business hours.

Table 1: PrintFleet Support Priority Levels

Priority Level	Urgency	Response Time (in Business hours)	Resolution Time (in Business hours)
1	HIGH	4 hours	24 hours
2	MEDIUM	24 hours	3 business days
3	LOW	24 hours	24 hours
4	FEATURE REQUEST	2 business days	Determined on a case by case basis

The following gives specific descriptions and examples of each priority level.

Priority Level 1 (HIGH)

Description:

A support case is classified as Priority Level 1 when the user has identified an issue in the system that prevents remote monitoring of devices, prevents access to the system, and/or prevents obtaining information necessary for their everyday business operations. The issue is typically in one of the core processes of the system, and there is no workaround available.

Examples:

- Cannot access the PrintFleet Optimizer web interface
- No data is populating in the system and all devices are displaying a stale status despite properly deployed DCAs
- Cannot generate new DCA license codes
- Software update performed by PrintFleet caused significantly decreased functionality requiring the system to be rebuilt from a previous backup

Priority Level 2 (MEDIUM)

Description:

A support case is classified as Priority Level 2 when the user has identified an issue in the system that does not prevent remote monitoring of devices, does not prevent access to the system, and does not prevent obtaining information necessary for their everyday business operations. The issue is typically in a feature accessed through the user interface, and there may or may not be a workaround available.

Examples:

- Stale DCA (issue not widespread)
- Device is reporting incorrect information
- Report is not working (information still accessible in another area)
- Meter exports are not being triggered or are otherwise not working (page counts accessible in the web interface)
- Alerts are not working (status information accessible in the web interface)

Priority Level 3 (LOW)

Description:

A support case is classified as Priority Level 3 when the user requires knowledge about how to properly use an existing software feature. The support inquiry does not relate to a new or existing issue in the software.

Examples:

- How to properly configure a DCA in a given environment
- How to generate manual and auto DCA license keys
- How to properly set up alerts and preexisting reports for specific purposes
- How to set up meter export with a currently supported billing system
- How to create new user accounts with specific permissions
- Request for general information about custom report building (custom report creation is not included in support)
- Request for information about special considerations for Canon devices in reporting and the Device Detail screen

Priority Level 4 (FEATURE REQUEST)

Description:

A support case is classified as Priority Level 4 when the user requests a new feature or software enhancement. The support inquiry does not involve a problem with existing features or functionality.

Examples:

- Request to support additional data fields for a specific device model (meter breakdowns, toner levels, error codes)
- Request to support an additional operating system
- Request to support a unique firewall setup
- Request to integrate with an additional third party product (billing system, proposal generation, etc.)
- Request to add an entirely new feature to the system

Appendix D PrintFleet Enterprise Server Collocation and Hosting Services Service Level Agreement

PrintFleet Enterprise Server Collocation and Hosting Services
Service Level Agreement

This agreement represents the Service Level Agreement ("SLA") for PrintFleet Enterprise Server Collocation and Hosting Services between PrintFleet Inc. ("PrintFleet") and you, the customer. This SLA is in addition to the PrintFleet Enterprise Service Level Agreement for customers who have purchased PrintFleet Enterprise Server Collocation and Hosting Services.

PrintFleet may modify these terms and conditions effective immediately after notification to the customer.

SERVICES COVERED UNDER THIS AGREEMENT

PrintFleet Enterprise Server Collocation

PrintFleet acquires server-grade hardware and all required software licenses on behalf of the customer. PrintFleet installs the required software and sets up the server in a class "A" data center. PrintFleet will set up automated backups of the system.

PrintFleet Enterprise Hosting Services

Your PrintFleet Enterprise system is hosted in a class "A" data center that provides high availability hosting services using the following:

- Redundant fiber-based backbone connections to multiple Tier 1 Internet backbone providers
- Full UPS battery and diesel generator power backup that supports in-use refueling
- Redundant, computer grade air conditioning and humidity control systems
- Gas fire suppression system and pre-action sprinkler systems
- Biometric access control systems and video camera surveillance with 24/7 on-site security personnel

AVAILABILITY GUARANTEES

PrintFleet Enterprise Server Collocation and Hosting Services provide you with a 99.9% availability guarantee over a 3 month service period. Availability is calculated as follows, with Service Period equal to 3 months:

AVAILABILITY = (Service Period - Down Hours) / Service Period x 100%

If your service sustains a percentage uptime for any 3 month period that is lower than the percent noted above, PrintFleet will credit your account in an amount equal to 30% of the monthly PrintFleet Hosting Services fee. All requests for credit must be submitted to PrintFleet by email and must be sent to support@printfleet.com within 15 days of the end of the 3 month period in which the downtime occurred.

REPORTING, MEASUREMENT, AND DEFINITION OF DOWNTIMES

All downtime incidents must be reported to PrintFleet technical support at (613) 549-3221 within 24 hours of the incident occurring. A ticket must be opened at PrintFleet for an outage to be considered for credits.

A service is considered to be "down" if you are not able to access your PrintFleet remote monitoring system from the Internet due to problems with your PrintFleet Enterprise Collocated Server or the PrintFleet Enterprise Hosting Networks at the class "A" data center. It is not considered to be "down" if the service is simply degraded or slow.

The start time for the outage begins upon notification of the outage by the customer to PrintFleet's technical support centre, (613) 549-3221, and ends when the affected service is restored. Any time required for testing of the service by the customer after restoration will not be considered in the outage time calculation.

All compensation for downtime will be applied as a credit to your PrintFleet account. Compensation cannot be converted to a monetary payment.

EXCLUSIONS FROM THE SLA

Maintenance Windows

PrintFleet Inc. has scheduled Maintenance Windows between 3am and 6am EST, Tuesdays, Thursdays, and Sundays, except in EMEA countries where scheduled Maintenance Windows occur between 11pm and 1am CET on Thursdays. Notice for work to be completed during these windows will be provided with at least 24 hours notice. Notice of scheduled maintenance will be provided to the customer's designated point of contact by email. The customer is responsible for notifying PrintFleet of any changes in the contact information by sending an email to support@printfleet.com. The downtime during these scheduled Maintenance Windows is excluded from the SLA.

Uncontrollable Events

Service outages caused by natural disasters (including, but not limited to, fires, floods, and ice storms) war, insurrection, riot, or any other event beyond the reasonable control of PrintFleet are excluded from the SLA.

Customer Caused Outages

Any outage caused by a customer error which includes but is not limited to, software misconfiguration and customer hardware failures are not covered under the SLA.

The Global Internet

Any outage on the Internet outside of the PrintFleet Enterprise Hosting Networks at the class "A" data center is not covered under the SLA.

Incomplete provisioning

The SLA starts at the time when the provisioning of the service is complete.

Appendix E PrintFleet End User License Agreement

END USER LICENSE AGREEMENT

PLEASE READ CAREFULLY BEFORE USING THIS SOFTWARE PRODUCT: This End-User License Agreement ("EULA") is a contract between (a) End User (either an individual or the entity End User represents) and (b) PrintFleet Inc. ("PFI") that governs End User use of the software product ("Software"). The term "Software" may include (i) associated media, (ii) a user guide and other printed materials, and (iii) "online" or electronic documentation (collectively "User Documentation"). If you do not agree with the terms of this AGREEMENT, promptly delete the SOFTWARE or return the unused SOFTWARE to PRINTFLEET or your service provider.

1. LICENSE RIGHTS. End User will have the following rights provided End User complies with all terms and conditions of this EULA:

a. Use. PFI grants End User a license to Use one copy of the PFI Software. "Use" means installing, copying, storing, loading, executing, displaying, or otherwise using the PFI Software. End User may not modify the PFI Software or disable any licensing or control feature of the PFI Software. End User may not separate component parts of the PFI Software for Use. End User does not have the right to distribute the PFI Software.

b. Copying. End User right to copy means End User may make archival or back-up copies of the PFI Software, provided each copy contains all the original PFI Software's proprietary notices and is used only for back-up purposes.

2. UPGRADES. To Use PFI Software provided by PFI as an upgrade, update, or supplement (collectively "Upgrade"), End User must first be licensed for the original PFI Software identified by PFI as eligible for the Upgrade. To the extent the Upgrade supersedes the original PFI Software, End User may no longer use such PFI Software. This EULA applies to each Upgrade.

3. TRANSFER RESTRICTIONS. End User may not rent, lease or lend the PFI Software or Use the PFI Software for commercial timesharing or bureau use. End User may not sublicense, assign or otherwise transfer the PFI Software except with the consent of PFI, not to be unreasonably withheld.

4. PROPRIETARY RIGHTS. All intellectual property rights in the Software and User Documentation are owned by PFI or its suppliers and are protected by law, including applicable copyright, trade secret, patent, and trademark laws. End User will not remove any product identification, copyright notice, or proprietary restriction from the Software.

5. LIMITATION ON REVERSE ENGINEERING. End User may not reverse engineer, decompile, or disassemble the PFI Software, except and only to the extent that the right to do so is allowed under applicable law.

6. CONSENT TO USE OF DATA. In providing service to END USER through the PRINTFLEET Web site, PRINTFLEET and its PARTNER may collect and use data and statistical information generated thereby. Unless otherwise provided in a separate agreement, such information shall be aggregated with data from other licensees of PRINTFLEET and its PARTNER and use and disclosure of such information shall only be done in the aggregate for statistical purposes and the information of any single licensee shall not be disclosed. Information such as END USER's name, address, telephone number, email address, IP address and other personal information such as credit card numbers related to particular transactions with the PRINTFLEET site will be considered customer identifiable information and will not form part of such collected information and will be kept confidential.

7. LIMITATION OF LIABILITY. Notwithstanding any damages that End User might incur, the entire liability of PFI and its suppliers under this EULA to the End User and End User exclusive remedy under this EULA will be limited to the greater of the amount actually paid by End User for the Product or U.S. $5.00. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL PFI OR ITS SUPPLIERS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOST PROFITS, LOST DATA, BUSINESS INTERRUPTION, PERSONAL INJURY, OR LOSS OF PRIVACY) RELATED IN ANY WAY TO THE USE OF OR INABILITY TO USE THE SOFTWARE, EVEN IF PFI OR ANY SUPPLIER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND EVEN IF THE ABOVE REMEDY FAILS OF ITS ESSENTIAL PURPOSE. Some states or other jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to End User.

8. U.S. GOVERNMENT CUSTOMERS. If End User is a U.S. Government entity, then consistent with FAR 12.211 and FAR 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed under the applicable PFI commercial license agreement.

9. COMPLIANCE WITH EXPORT LAWS. End User will comply with all laws, rules, and regulations (i) applicable to the export or import of the Software, or (ii) restricting the Use of the Software, including any restrictions on nuclear, chemical, or biological weapons proliferation.

10. RESERVATION OF RIGHTS. PFI and its suppliers reserve all rights not expressly granted to End User in this EULA.

11. NO IMPLIED RIGHTS. This software is being loaded into applicable devices solely to enable remote monitoring of covered printers by End User service provider and its licensors. This software may not be copied, transferred, disclosed, or used by anyone other than the service provider and its designees. No rights or licenses to the software will be implied. The software is provided "AS-IS", except for any express warranties in the service provider services agreement.

Appendix F Data Collector Agent Checklist and Installation Requirements

Please use the following guide to ensure you are meeting all installation requirements prior to installing the PrintFleet Data Collector Agent (DCA).

Network requirements:

- TCP/IP configured
- Requirements for DCA 3.x:
  - Network: Port 443/tcp (HTTPS), Port 80/tcp (HTTP), or Port 21/tcp (FTP) must be open for outbound communication
    - Support for FTP is deprecated; it is recommended to use HTTP/HTTPS
- Requirements for DCA 4.0:
  - Network: Port 443/tcp (HTTPS), Port 80/tcp (HTTP), or an alternate port (as an option, can use HTTP or HTTPS and is dependent on the PFE Server configuration)
- For both DCA 3.x and DCA 4.0, Port 161/udp should be opened on the machine hosting the DCA.
- TCP Port 35 should be opened on computers where DCA 4.0 and Local Print Agent are installed.

System requirements:

- Hardware: Non-dedicated server powered on 24 hours a day, 7 days a week. If a server is not available, the Data Collector Agent can be installed on a desktop computer system powered on 24 hours a day, 7 days a week, but this method carries a risk of transmission difficulties.

- Network card: 100mbit or higher
- RAM: 512MB or higher
- Internet connected browser
- Requirements for Local Print Agent
  - Operating System: Windows XP, Server 2003, Server 2008, Vista, Windows 7
  - Microsoft .NET Framework 2.0 or higher
- Requirements for DCA 3.x:
  - Operating System: Windows XP, Server 2003; Server 2008[1], Vista[1], Windows 7[1].
  - Microsoft .NET Framework 2.0
- Requirements for DCA 4.0:
  - Operating System: Windows XP, Server 2003, Server 2008, Vista, Windows 7 (no special instructions are required)
  - Microsoft .NET Framework 2.0 SP2 or .NET Framework 3.5 SP1 or higher

Virtualization software support:

If you want to install the DCA on a virtual machine, the following virtualization software will support the installation:

- Microsoft Virtual Server 2005
- VMWare GSX

Important:

- Do not install the DCA on a laptop.
- If you plan to use the DCA to collect data via VPN, please be aware that due to the extended transmission, there is a **risk of data loss**. Extended transmissions can result in timeouts during a Read access from a remote device.

Instructions for installing a DCA 3.x on Windows Vista, Windows 7, or Windows Server 2008

Windows Server 2008, Vista, and Windows 7 implement a new feature called User Account Control (UAC), which can cause installation problems with the DCA and/or the DCA Health Check service. These issues can be avoided by using the following procedures.

Note: If UAC is turned off, you do not need to use these special instructions.

After downloading the DCA installation file (DCA_Install.msi):

1. Right click on the DCA_Install.msi file and select Properties.
2. Under the Compatibility tab, click to enable the Run as Administrator check box.
3. Proceed to installing the DCA.

[1] Require special instructions for installation with UAC. See “Instructions for installing a DCA 3.x on Windows Vista, Windows 7, or Windows Server 2008” on page 141

After the DCA is installed, repeat steps 1 and 2 above for the following two files:

- C:\Program Files\Data Collector Agent\DCAService.exe
- C:\Program Files\Data Collector Agent\Support\DCAServiceHC.exe

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