



Red Hat Enterprise Linux 9

Configuring and using a CUPS printing server

Configure your system to operate as a CUPS server and manage printers, print queues and your printing environment.

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Abstract

This document describes activating the cups service, accessing and configuring the CUPS web UI, working with CUPS logs and introduces driverless printing.

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Submitting comments on specific passages

1. View the documentation in the **Multi-page HTML** format and ensure that you see the **Feedback** button in the upper right corner after the page fully loads.
2. Use your cursor to highlight the part of the text that you want to comment on.
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4. Add your feedback and click **Submit**.

Submitting feedback through Bugzilla (account required)

1. Log in to the [Bugzilla](#) website.
2. Select the correct version from the **Version** menu.
3. Enter a descriptive title in the **Summary** field.
4. Enter your suggestion for improvement in the **Description** field. Include links to the relevant parts of the documentation.
5. Click **Submit Bug**.

CHAPTER 1. CONFIGURING PRINTING

Printing on Red Hat Enterprise Linux 8 is based on the Common Unix Printing System (CUPS).

This documentation describes how to configure your system to be able to operate as a CUPS server.

1.1. ACTIVATING THE CUPS SERVICE

This section describes how to activate the **cups** service on your system.

Prerequisites

- The **cups** package, which is available in the Appstream repository, must be installed on your system:

```
# dnf install cups
```

Procedure

1. Start the **cups** service:

```
# systemctl start cups
```

2. Configure the **cups** service to be automatically started at boot time:

```
# systemctl enable cups
```

3. Optionally, check the status of the **cups** service:

```
$ systemctl status cups
```

1.2. PRINT SETTINGS TOOLS

To achieve various tasks related to printing, you can choose one of the following tools:

- CUPS web user interface (UI)
- GNOME Control center



WARNING

The **Print Settings** configuration tool, which was used in Red Hat Enterprise Linux 7, is no longer available.

Tasks that you can achieve by using tools mentioned above include:

- Adding and configuring a new printer

- Maintaining printer configuration
- Managing printer classes

Note that this documentation covers only printing in **CUPS web user interface (UI)** If you want to print using **GNOME Control center**, you need to have a GUI available. For more information about printing using **GNOME Control center**, see [Handling printing using GNOME](#).

1.3. ACCESSING AND CONFIGURING THE CUPS WEB UI

This section describes accessing the **CUPS web user interface**(web UI) and configuring it to be able to manage printing through this interface.

Procedure

1. Allow the CUPS server to listen to connections from the network by setting **Port 631** in the **/etc/cups/cupsd.conf** file:

```
#Listen localhost:631
Port 631
```



WARNING

Enabling the CUPS server to listen on port 631 opens this port for any address accessible by the server. Therefore, use this setting only in local networks that are unreachable from an external network. Red Hat doesn't recommend configuring CUPS server on a publicly accessible server.

2. Allow your system to access the CUPS server by including the following directive in the **/etc/cups/cupsd.conf** file:

```
<Location />
  Allow from <your_ip_address>
  Order allow,deny
</Location>
```

where *<your_ip_address>* is the real IP address of your system. You can also use regular expressions for subnets.

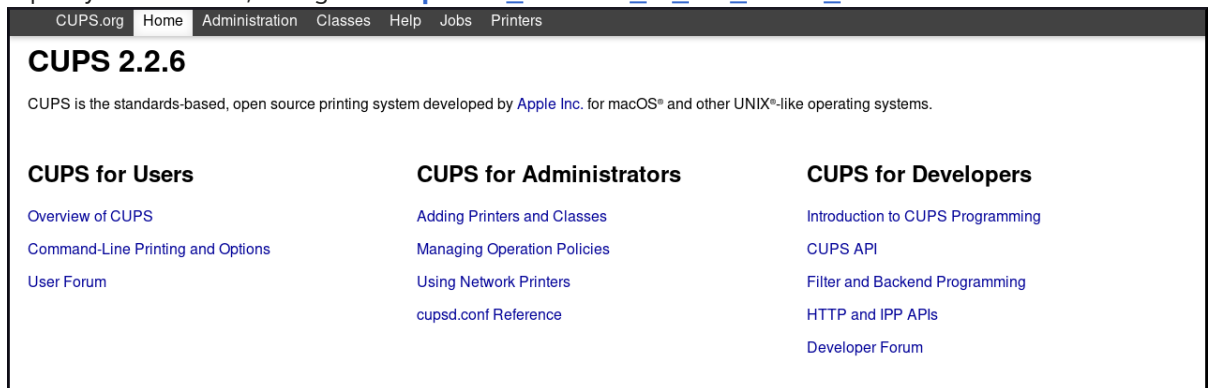
**WARNING**

The CUPS configuration offers the **Allow from all** directive in the `<Location>` tags, but Red Hat recommends using this directive only in trusted networks. The setup **Allow from all** enables access for all users who can connect to the server through port 631. If you set the **Port** directive to 631, and the server is accessible from an outside network, anyone on the Internet can access the CUPS service on your system.

- Restart the cups.service:

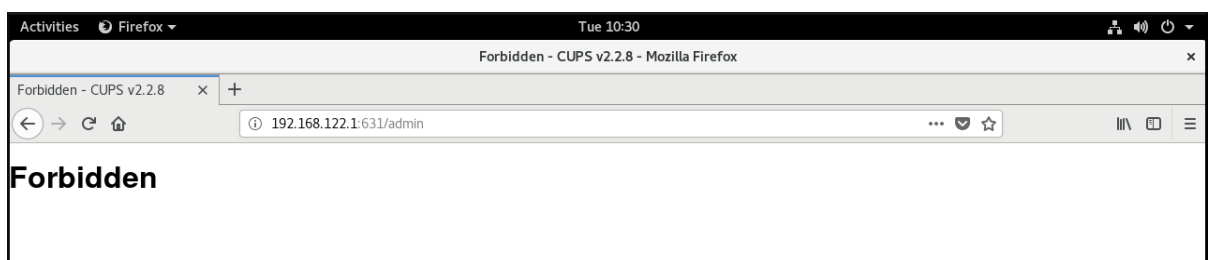
```
# systemctl restart cups
```

- Open your browser, and go to http://<IP_address_of_the_CUPS_server>:631/.



All menus except for the **Administration** menu are now available.

If you click on the **Administration** menu, you receive the **Forbidden** message:



To acquire the access to the **Administration** menu, follow the instructions in [Acquiring administration access to the CUPS web UI](#).

1.4. ACQUIRING ADMINISTRATION ACCESS TO THE CUPS WEB UI

This section describes how to acquire administration access to the **CUPS web UI**

Procedure

- To be able to access the **Administration** menu in the **CUPS web UI**, include the following lines in the `/etc/cups/cupsd.conf` file:

```
<Location /admin>
Allow from <your_ip_address>
Order allow,deny
</Location>
```

**NOTE**

Replace **<your_ip_address>** with the real IP address of your system.

2. To be able to access configuration files in the **CUPS web UI**, include the following in the **/etc/cups/cupsd.conf** file:

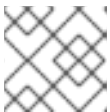
```
<Location /admin/conf>
AuthType Default
Require user @SYSTEM
Allow from <your_ip_address>
Order allow,deny
</Location>
```

**NOTE**

Replace **<your_ip_address>** with the real IP address of your system.

3. To be able to access log files in the **CUPS web UI**, include the following in the **/etc/cups/cupsd.conf** file:

```
<Location /admin/log>
AuthType Default
Require user @SYSTEM
Allow from <your_ip_address>
Order allow,deny
</Location>
```

**NOTE**

Replace **<your_ip_address>** with the real IP address of your system.

4. To specify the use of encryption for authenticated requests in the **CUPS web UI**, include **DefaultEncryption** in the **/etc/cups/cupsd.conf** file:

```
DefaultEncryption IfRequested
```

With this setting, you will receive an authentication window to enter the username of a user allowed to add printers when you attempt to access the **Administration** menu. However, there are also other options on how to set **DefaultEncryption**. For more details, see the **cupsd.conf** man page.

5. Restart the **cups** service:

```
# systemctl restart cups
```

**WARNING**

If you do not restart the **cups** service, the changes in `/etc/cups/cupsd.conf` will not be applied. Consequently, you will not be able to obtain administration access to the **CUPS web UI**

Additional resources

- The **cupsd.conf** man page

1.5. CONFIGURING DRIVERLESS PRINTING

As an administrator, you can configure driverless printing to use printers or remote CUPS queues without any special software.

RHEL 9 provides driverless printing support for following driverless standards:

- **IPP Everywhere model** in CUPS supports AirPrint, IPP Everywhere and Wi-Fi Direct standards.
- **Driverless model** in cups-filters supports the same standards as CUPS and in addition also PCLm document format.

These standards use the Internet Printing Protocol (IPP) 2.0 or higher to communicate the printer setup, and eliminate the need to install specific drivers for specific printers. To use the printer without a specific driver, you need to have a printer, which supports one of the driverless standards. To determine if your printer supports a driverless standard, choose one of the following options:

- Refer to the printer specification, and search for a [driverless standard support](#) or ask your vendor.
- Search for [certified printers](#).
- Determine the driverless support based on the attributes of a printer with the [ipptool command](#).

To install a print queue on the client with IPP Everywhere model, which points to a queue on the print server, you need to have both your remote print server and your client with RHEL 8.6 installation or newer.

**NOTE**

You can verify the driverless support based on the attributes of a print server with the [ipptool command](#).

1.5.1. Determining printer attributes using ipptool

To determine if your printer or print server supports a driverless standard, you can inspect your printer attributes using the **ipptool** command available in the **ipptool** package.

Procedure

- Display attributes of a printer or a print server:

```
$ ipptool -tv <URI> get-printer-attributes.test
```



NOTE

Replace <URI> with the URI of your printer, for example
ipp://<hostname_or_IP_address>:631/ipp/print for printers or
ipp://<hostname_or_IP_address>:631/printers/<remote_print_queue> for
 remote print queues from print servers.

Your printer or print server supports driverless printing if:

- the **ipp-version-supported** attribute contains **2.0** or higher for IPP protocol 2.0, and
- the **document-format-supported** attribute contains one of the supported document formats listed in the [driverless printing standards](#).

1.5.2. Adding a driverless printer in CUPS web UI

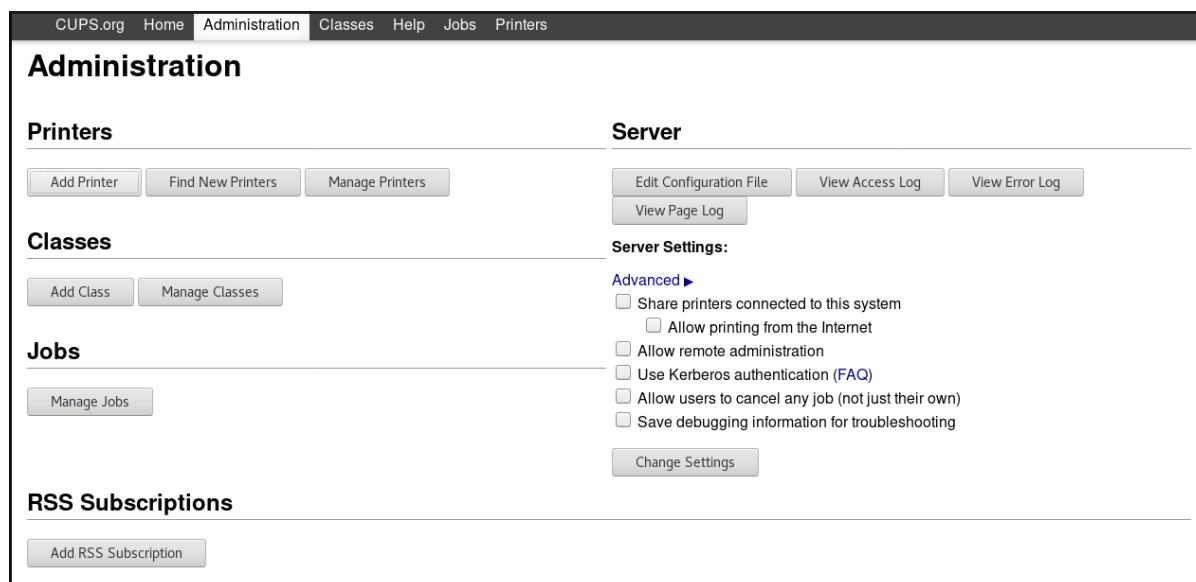
Since RHEL 8.6, you can add a driverless printer in the CUPS web UI and use it to print directly from an application to network printers or print servers using CUPS, without installing any specific drivers or software for specific printers.

Prerequisites

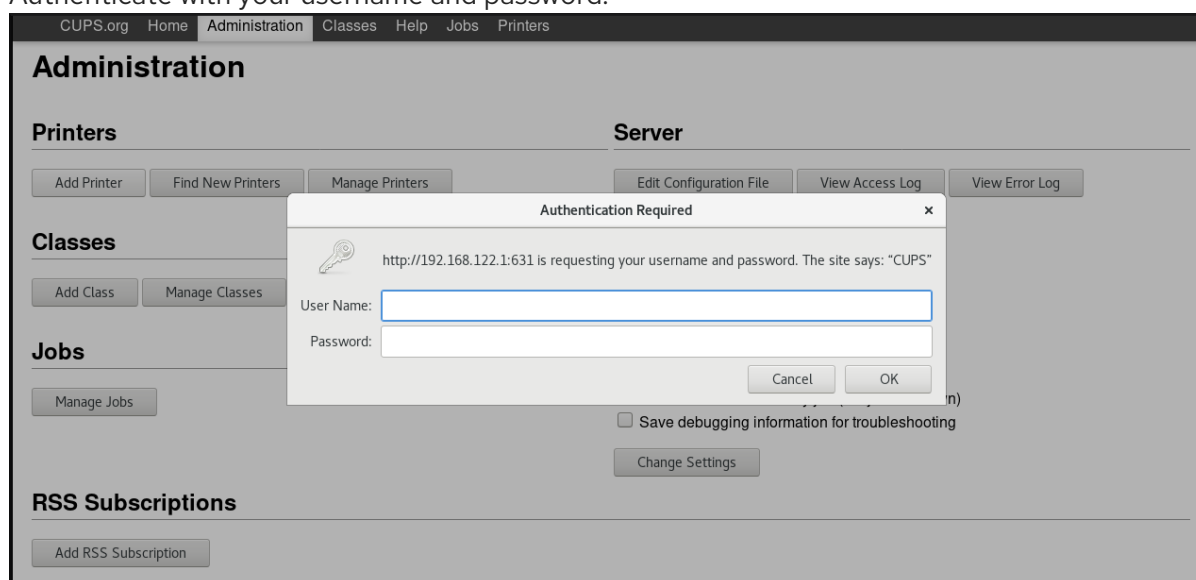
- You have administration access to the **CUPS web UI** as described in [Acquiring administration access to CUPS web UI](#).
- Your printer or print server has the IPP Everywhere standard implementation.
- Open IPP port: port **631** for IPP, or port **443** for secure printing with IPPS.
- Enable the **ipp** and **ipp-client** communication in the firewall of the print server.
- If your destination is another CUPS server, allow remote access on the remote server, or if you are using a network printer, open the web user interface, search for IPP related settings: IPP or AirPrint, and enable those settings.

Procedure

1. Start the **CUPS web UI** as described in [Accessing and configuring the CUPS](#).
2. In your browser, go to **localhost:631** and select the **Administration** tab.
3. Under **Printers** click **Add printer**.



4. Authenticate with your username and password:



IMPORTANT

To be able to add a new printer by using the **CUPS web UI**, you must authenticate as a user who belongs to a group defined by the **SystemGroup** directive in **/etc/cups/cups-files**. The default groups are:

- root
- sys
- wheel

5. In the **Administrator** tab, under **Add Printer**, select one of the options:

- **Internet Printing Protocol (ipp)** or
- **Internet Printing Protocol (ipps)** option, and click **Continue**.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Local Printers: ☐ Serial Port #1

Discovered Network Printers:

Other Network Printers:

- ☐ Internet Printing Protocol (http)
- ☐ Internet Printing Protocol (https)
- ☒ Internet Printing Protocol (ipp)
- ☐ Internet Printing Protocol (ipps)
- ☐ LPD/LPR Host or Printer
- ☐ AppSocket/HP JetDirect
- ☐ Backend Error Handler

Continue

6. In the **Connection** field, enter the URI of your device and click **Continue**.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Connection:

Examples:

```
http://hostname:631/ipp/
http://hostname:631/ipp/port1

ipp://hostname/ipp/
ipp://hostname/ipp/port1

lpd://hostname/queue

socket://hostname
socket://hostname:9100
```

See "[Network Printers](#)" for the correct URI to use with your printer.

Continue

**NOTE**

The URI consists of the following parts:

- protocol **ipp://** or **ipps://** if printer or print server supports encryption,
- hostname or IP address of the printer,
- port,
- resource part **/ipp/print** for printers, or **/printers/<remote_queue_name>** for remote CUPS queues.

For example: **ipp://myprinter.mydomain:631/ipp/print** or
ipp://myserver.mydomain:631/printers/myqueue.

7. Add details about the new printer: name, description and location. To set a printer to be shared over the network, check the **Share This Printer** checkbox.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Name:
(May contain any printable characters except "/", "#", and space)

Description:
(Human-readable description such as "HP LaserJet with Duplexer")

Location:
(Human-readable location such as "Lab 1")

Connection:

Sharing: ☒ Share This Printer

**NOTE**

'Name' is the only required field, other fields are optional.

8. From the **Make** dropdown menu, select the printer manufacturer, and click **Continue**.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Name: hp_laserjet
Description: HP LaserJet color
Location: Lab 1
Connection: ipp://<hostname_or_IP>:631/ipp/print
Sharing: Share This Printer

Make:

- (Fuji Xerox)
- Dymo
- Epson
- Generic
- HP**
- Index
- Intellitech
- Oki
- Raw
- Ricoh

Continue

Or Provide a PPD File: Browse... No file selected.

Add Printer

- To proceed with the installation of a driverless printer, from the dropdown menu, select **IPP Everywhere**, and click **Add Printer**.

CUPS.org
Home
Administration
Classes
Help
Jobs
Printers

Add Printer

Add Printer

Name: hp_laserjet
Description: HP LaserJet color
Location: Lab 1
Connection: ipp://<hostname_or_IP>:631/ipp/print
Sharing: Share This Printer
Make: HP
Model:

IPP Everywhere™
HP Color LaserJet CM3530 MFP PDF (en)
HP Color LaserJet Series PCL 6 CUPS (en)
HP DesignJet 600 pcl, 1.0 (en)
HP DesignJet 750c pcl, 1.0 (en)
HP DesignJet 1050c pcl, 1.0 (en)
HP DesignJet 4000 pcl, 1.0 (en)
HP DesignJet T790 pcl, 1.0 (en)
HP DesignJet T1100 pcl, 1.0 (en)
HP DeskJet Series (en)

Or Provide a PPD File: No file selected.

10. After adding the new printer, you can set the default print options of your choice.

CUPS.org
Home
Administration
Classes
Help
Jobs
Printers

Set Printer Options

Set Default Options for Office1

General
JCL
Banners
Policies

General

Media Size: US Letter

Cut Media: ☒ False ☐ True

Output Resolution: 300 DPI

Print Quality: Normal

Media Type: Plain Paper

Color Mode: Grayscale

The last window confirms that you set the driverless printer and it is ready to use.

CUPS.org Home Administration Classes Help Jobs **Printers**

hp_laserjet

hp_laserjet (Idle, Accepting Jobs, Not Shared)

Maintenance Administration

Description: HP LaserJet color
Location: Lab 1
Driver: LaserJet M1536dnf MFP - IPP Everywhere (grayscale, 2-sided printing)
Connection: ipp://192.168.0.112:631/ipp/print
Defaults: job-sheets=none, none media=iso_a4_210x297mm sides=one-sided

Jobs

Search in hp_laserjet:

Jobs listed in print order; held jobs appear first.

1.6. ADDING A PRINTER WITH A CLASSIC DRIVER IN THE CUPS WEB UI

This section describes how to add a new printer using the **CUPS web user interface**

Prerequisites

- You have administration access to the **CUPS web UI** as described in [Acquiring administration access to CUPS web UI](#).

Procedure

- Start the **CUPS web UI** as described in [Starting CUPS web UI](#)
- In your browser, go to **localhost:631** and select the **Administration** tab.
- Under **Printers** click **Add printer**.

CUPS.org Home **Administration** Classes Help Jobs Printers

Administration

Printers

Classes

Jobs

RSS Subscriptions

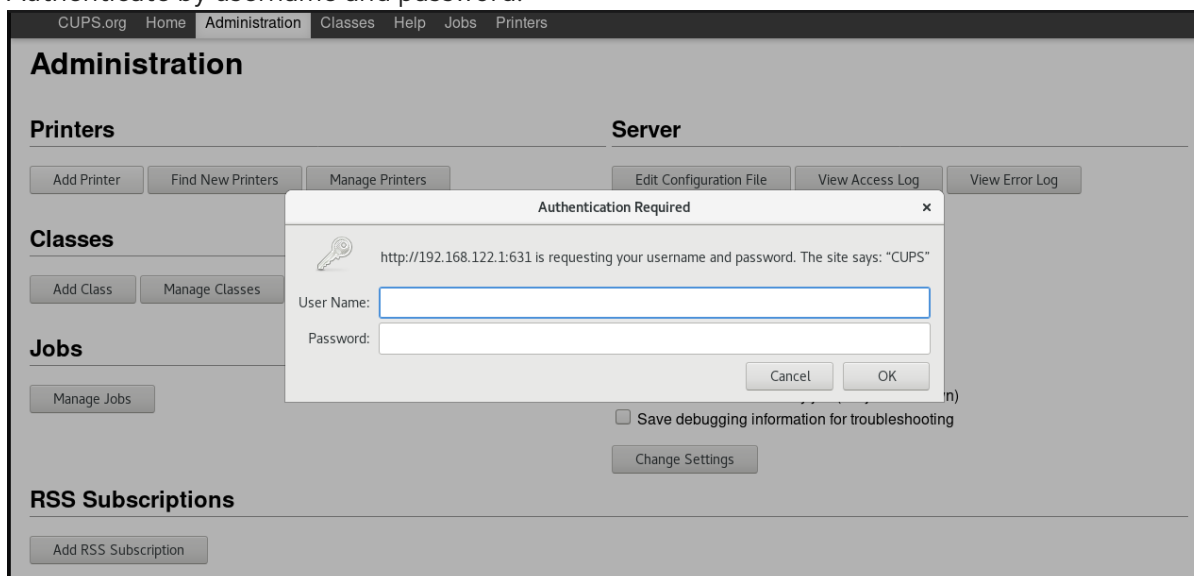
Server

Server Settings:

Advanced ▶

☐ Share printers connected to this system
☐ Allow printing from the Internet
☐ Allow remote administration
☐ Use Kerberos authentication ([FAQ](#))
☐ Allow users to cancel any job (not just their own)
☐ Save debugging information for troubleshooting

4. Authenticate by username and password:

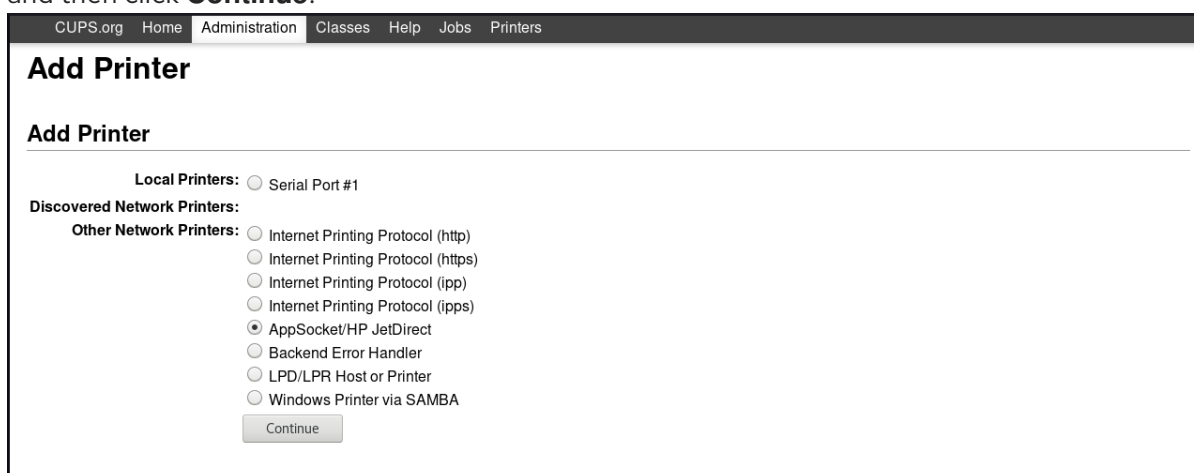
**IMPORTANT**

To be able to add a new printer by using the **CUPS web UI**, you must authenticate as a user who belongs to groups defined by **SystemGroup** directive in **/etc/cups/cups-files**.

Default groups:

- root
- sys
- wheel

5. If a local printer is connected, or CUPS finds a network printer available, select the printer. If neither local printer nor network printer is available, select one of the printer types from **Other Network Printers**, for example **APP Socket/HP Jet direct**, enter the IP address of the printer, and then click **Continue**.



6. If you have selected for example **APP Socket/HP Jet direct** as shown above, enter the IP address of the printer, and then click **Continue**.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Connection:

Examples:

```

http://hostname:631/ipp/
http://hostname:631/ipp/port1

ipp://hostname/ipp/
ipp://hostname/ipp/port1

lpd://hostname/queue

socket://hostname
socket://hostname:9100

```

See ["Network Printers"](#) for the correct URI to use with your printer.

7. You can add more details about the new printer, such as the name, description and location. To set a printer to be shared over the network, check the **Share This Printer** checkbox.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Name:
(May contain any printable characters except "/", "#", and space)

Description:
(Human-readable description such as "HP LaserJet with Duplexer")

Location:
(Human-readable location such as "Lab 1")

Connection:

Sharing: ☒ Share This Printer

8. Select the printer manufacturer, and then click **Continue**.

CUPS.org Home Administration Classes Help Jobs Printers

Add Printer

Add Printer

Name: Office1
Description: HP LaserJet
Location: South corridor
Connection: socket://10.43.2.198
Sharing: Share This Printer

Make: (Fuji Xerox)
Dymo
Epson
Generic
HP
Index
Intellitech
Oki
Raw
Ricoh

Or Provide a PPD File: No file selected.

Alternatively, you can provide a **postscript printer description** (PPD) file to be used as a driver for the printer, by clicking the **Browse...** button at the bottom.

9. Select the model of the printer, and then click **Add Printer**.

Add Printer

Name: Office1
Description: HP LaserJet
Location: South corridor
Connection: socket://10.43.2.198
Sharing: Share This Printer
Make: HP Select Another Make/Manufacturer
Model: HP Color LaserJet CM3530 MFP PDF (en)
 HP Color LaserJet Series PCL 6 CUPS (en)
 HP DesignJet 600 pcl, 1.0 (en)
 HP DesignJet 750c pcl, 1.0 (en)
 HP DesignJet 1050c pcl, 1.0 (en)
 HP DesignJet 4000 pcl, 1.0 (en)
 HP DesignJet T790 pcl, 1.0 (en)
 HP DesignJet T1100 pcl, 1.0 (en)
 HP DeskJet Series (en)
 HP LaserJet Series PCL 4/5 (en)
Or Provide a PPD File: Browse... No file selected.
Add Printer

10. After the printer has been added, the next window allows you to set the default print options.

Set Printer Options

Set Default Options for Office1

[General](#) [JCL](#) [Banners](#) [Policies](#)

General
Media Size: US Letter
Cut Media: ☒ False ☐ True
Output Resolution: 300 DPI
Print Quality: Normal
Media Type: Plain Paper
Color Mode: Grayscale
Set Default Options

After clicking **Set Default Options**, you will receive a confirmation that the new printer has been added successfully.

Set Printer Options

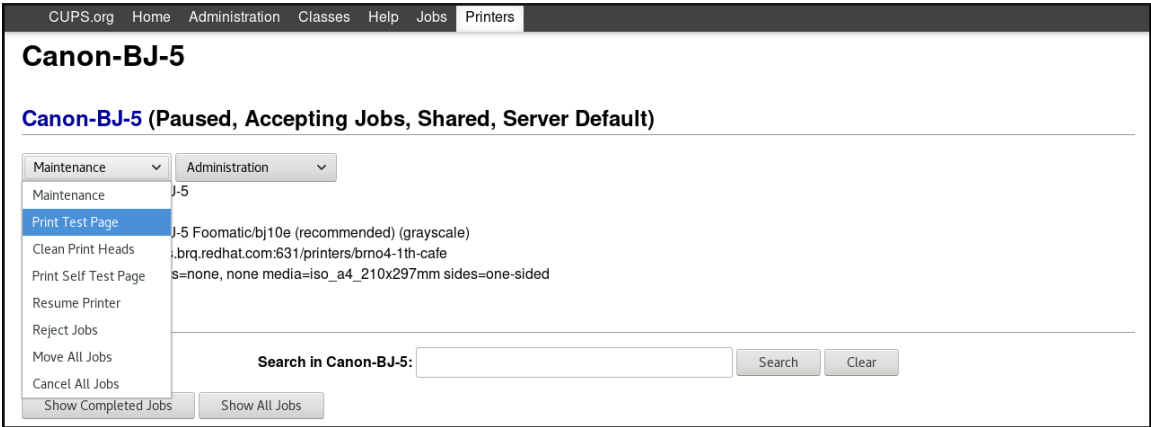
Set Default Options for Office1

Printer [Office1](#) default options have been set successfully.

Verification steps

- Print a test page especially if you have set up a printer:

- Go to **Printers** menu, and click **Maintenance → Print Test Page**.



1.7. CONFIGURING A PRINTER IN THE CUPS WEB UI

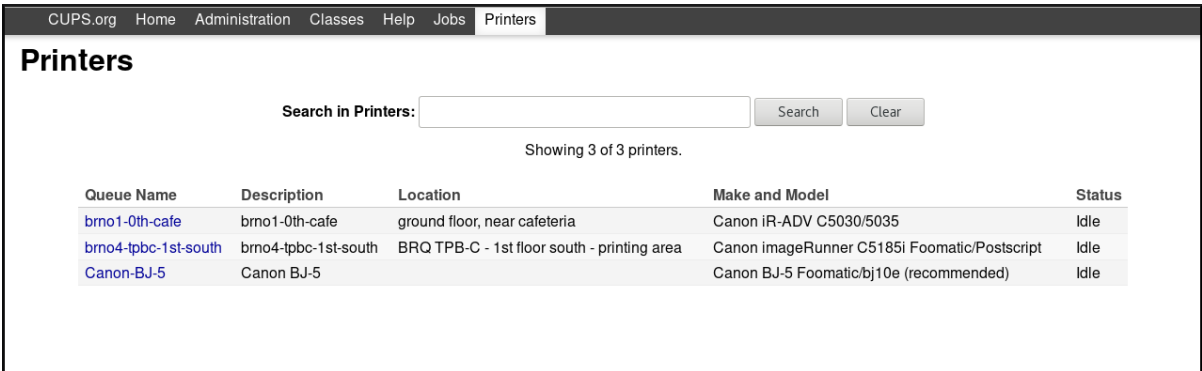
This section describes how to configure a new printer, and how to maintain a configuration of a printer using the **CUPS web UI**

Prerequisites

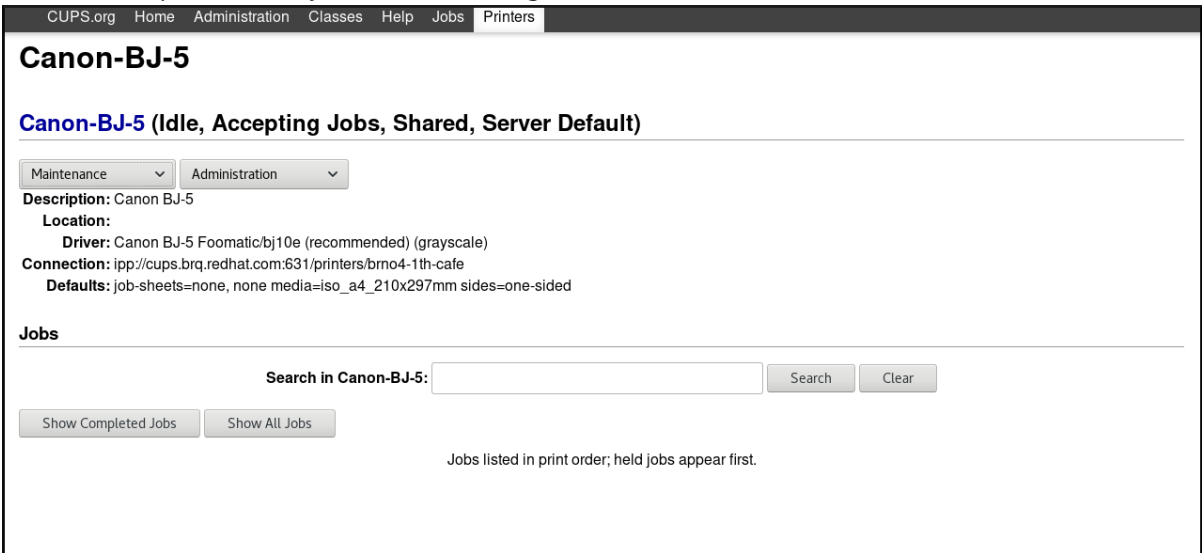
- You have administration access to the **CUPS web UI** as described in [Acquiring administration access to CUPS web UI](#).

Procedure

- Click the **Printers** menu to see available printers that you can configure.

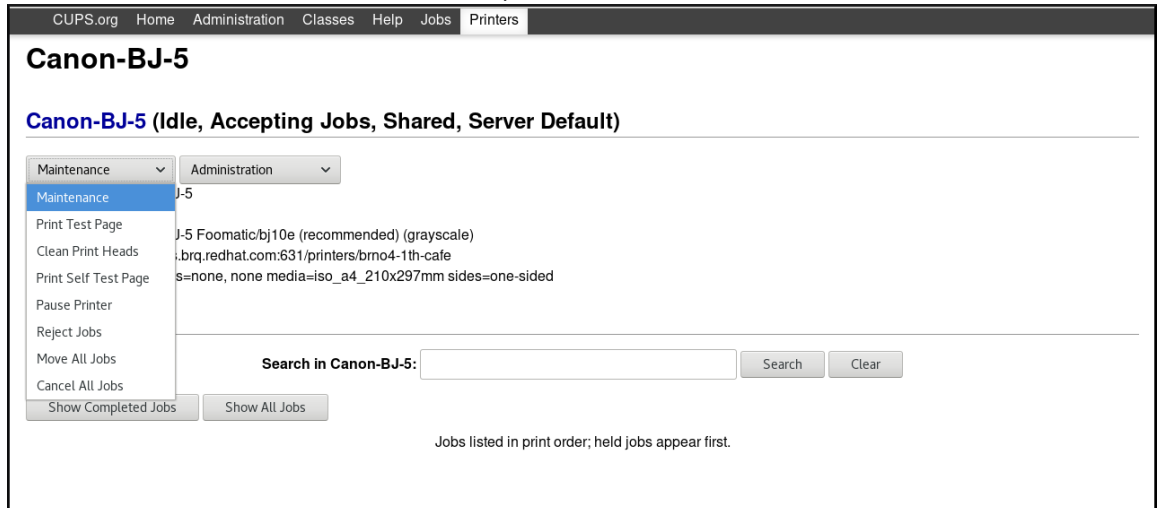


- Choose one printer that you want to configure.

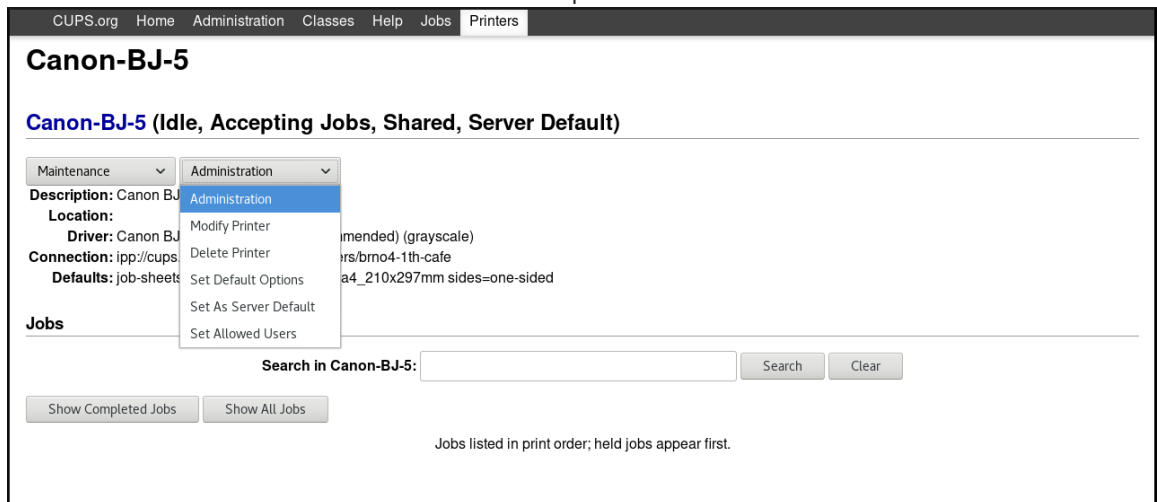


3. Perform your selected task by using one of the available menus:

- Choose **Maintenance** from the first drop-down menu.



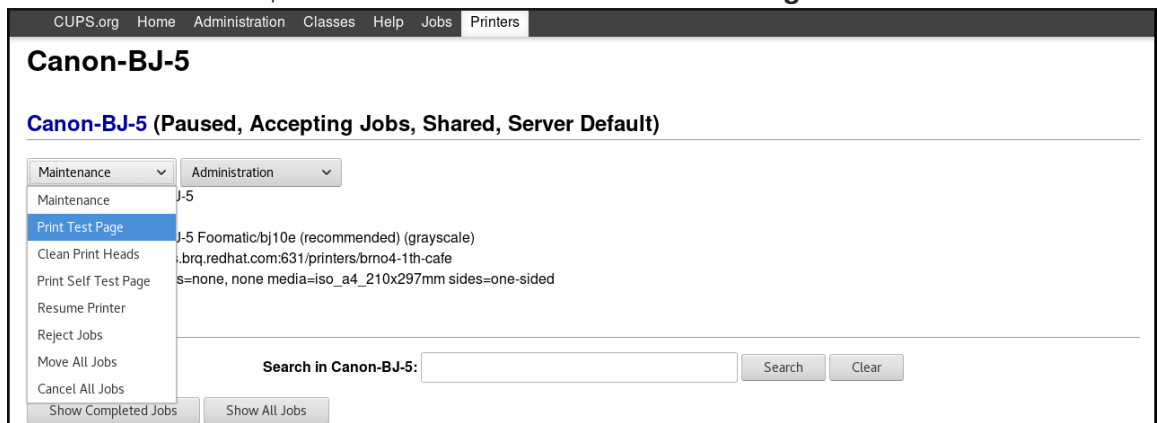
- Choose **Administration** from the second drop-down menu.



- You can also check completed print jobs or all active print jobs by clicking the **Show Completed Jobs** or **Show All Jobs** buttons.

Verification steps

- Print a test page especially if you have changed a printer configuration:
 - Go to **Printers** menu, and click **Maintenance** → **Print Test Page**.



1.8. SETTING PRINT OPTIONS USING THE CUPS WEB UI

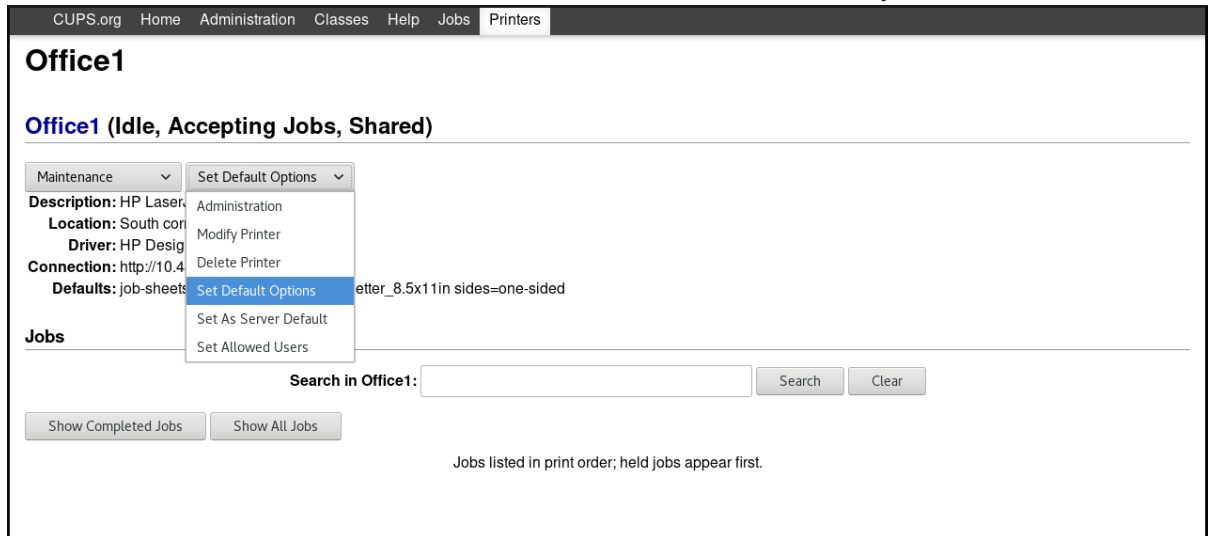
This section describes how to set common print options, such as the media size and type, print quality or the color mode, in the **CUPS web UI**.

Prerequisites

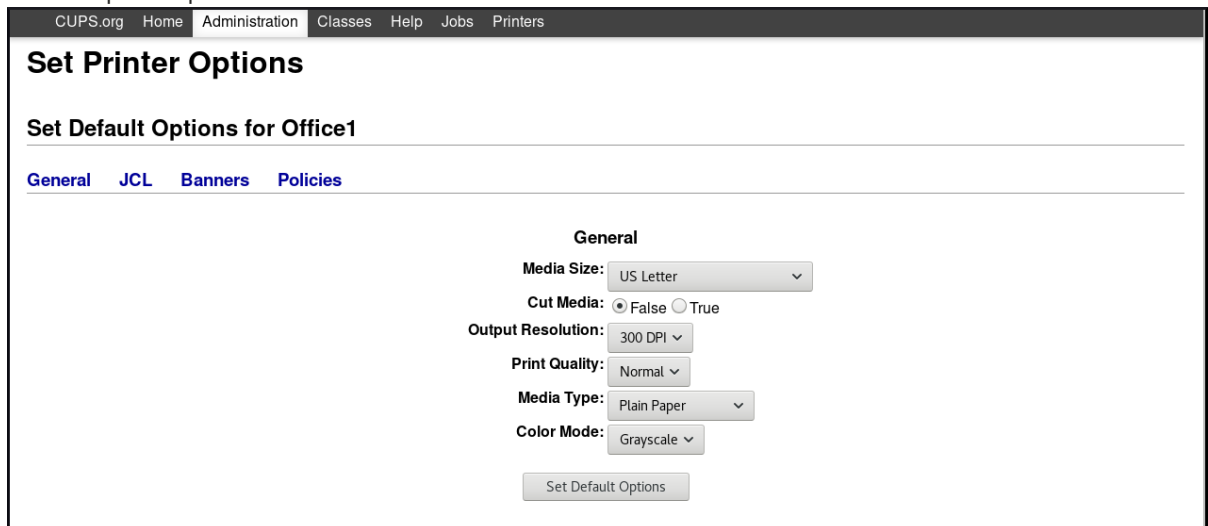
You have administration access to the **CUPS web UI** as described in [Acquiring administration access to CUPS web UI](#).

Procedure

1. Go to **Administration** menu, and click **Maintenance → Set Default Options**.



2. Set the print options.



1.9. INSTALLING CERTIFICATES FOR A PRINT SERVER

To install certificates for a print server, you can choose one of the following options:

- Automatic installation using a self-signed certificate
- Manual installation using a certificate and a private key generated by a Certification Authority

Prerequisites

For the **cupsd** daemon on the server:

1. Set the following directive in the **/etc/cups/cupsd.conf** file to:
Encryption Required
2. Restart the cups service:

```
$ sudo systemctl restart cups
```

Automatic installation using a self-signed certificate

With this option, CUPS generates the certificate and the key automatically.



NOTE

The self-signed certificate does not provide as strong security as certificates generated by Identity Management (IdM), Active Directory (AD), or Red Hat Certificate System (RHCS) Certification Authorities, but it can be used for print servers located within a secure local network.

Procedure

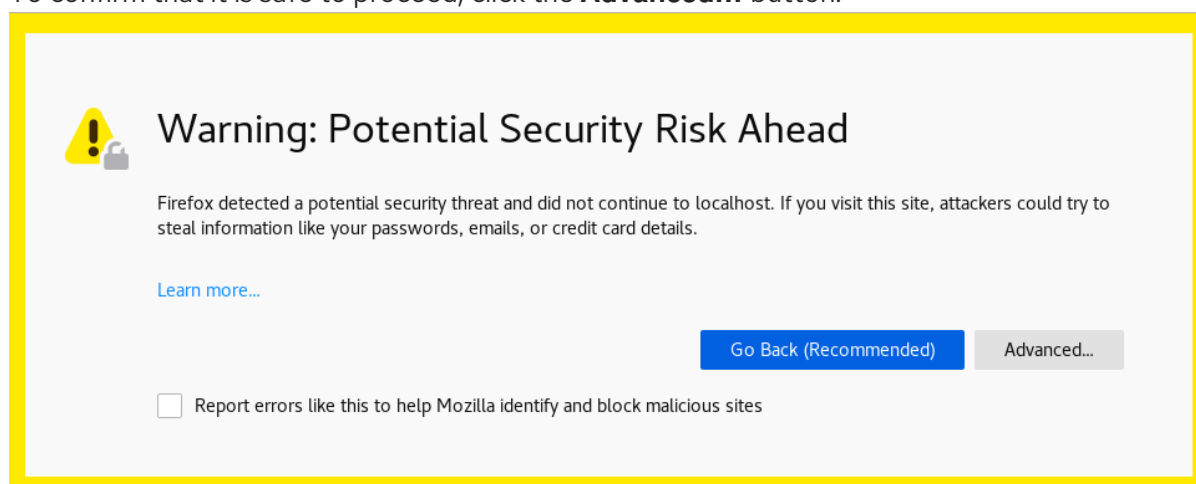
1. To access the CUPS Web UI, open your browser and go to **<https://<server>:631>** where **<server>** is either the server IP address or the server host name.



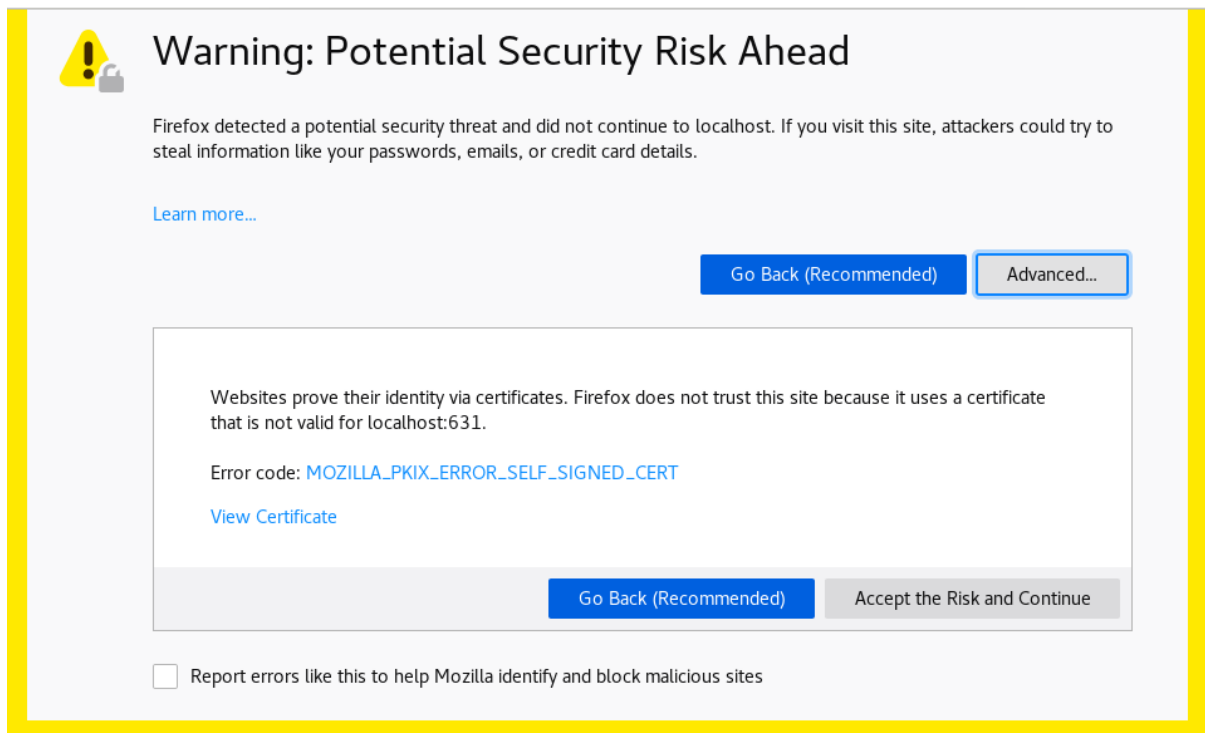
NOTE

When CUPS connects to a system for the first time, the browser shows a warning about the self-signed certificate being a potential security risk.

2. To confirm that it is safe to proceed, click the **Advanced...** button.



3. Click **Accept the Risk and Continue** button.



CUPS now starts to use the self-generated certificate and the key.



NOTE

When you access the CUPS Web UI after an automatic installation, the browser displays a warning icon in the address bar. This is because you added the security exception by confirming the security risk warning. If you want to remove this warning icon permanently, perform the manual installation with a certificate and a private key generated by a Certification Authority.

Manual installation using a certificate and a private key generated by a Certification Authority

For print servers located within a public network or to permanently remove the warning in the browser, import the certificate and the key manually.

Prerequisites

- You have certificate and private key files generated by IdM, AD, or by RHCS Certification Authorities.

Procedure

1. Copy the **.crt** and **.key** files into the **/etc/cups/ssl** directory of the system on which you want to use the CUPS Web UI.
2. Rename the copied files to **<hostname>.crt** and **<hostname>.key**.
Replace **<hostname>** with the host name of the system to which you want to connect the CUPS Web UI.
3. Set the following permissions to the renamed files:
 - **# chmod 644 /etc/cups/ssl/<hostname>.crt**

- **# chmod 644 /etc/cups/ssl/<hostname>.key**
- **# chown root:root /etc/cups/ssl/<hostname>.crt**
- **# chown root:root /etc/cups/ssl/<hostname>.key**

4. Restart the cups service:

- **# systemctl restart cupsd**

1.10. USING SAMBA TO PRINT TO A WINDOWS PRINT SERVER WITH KERBEROS AUTHENTICATION

With the **samba-krb5-printing** wrapper, Active Directory (AD) users who are logged in to Red Hat Enterprise Linux can authenticate to Active Directory (AD) by using Kerberos and then print to a local CUPS print server that forwards the print job to a Windows print server.

The benefit of this configuration is that the administrator of CUPS on Red Hat Enterprise Linux does not need to store a fixed user name and password in the configuration. CUPS authenticates to AD with the Kerberos ticket of the user that sends the print job.

This section describes how to configure CUPS for this scenario.



NOTE

Red Hat only supports submitting print jobs to CUPS from your local system, and not to re-share a printer on a Samba print server.

Prerequisites

- The printer that you want to add to the local CUPS instance is shared on an AD print server.
- You joined the Red Hat Enterprise Linux host as a member to the AD.
- CUPS is installed on Red Hat Enterprise Linux and the **cups** service is running. For details, see [Activating CUPS service](#).
- The PostScript Printer Description (PPD) file for the printer is stored in the **/usr/share/cups/model/** directory.

Procedure

1. Install the **samba-krb5-printing**, **samba-client**, and **krb5-workstation** packages:

```
# dnf install samba-krb5-printing samba-client krb5-workstation
```

2. Optional: Authenticate as a domain administrator and display the list of printers that are shared on the Windows print server:

```
# smbclient -L win_print_srv.ad.example.com -U
administrator@AD_KERBEROS_REALM --use-kerberos=required
```

```
Sharename      Type      Comment
-----      -

```

```
...
Example      Printer  Example
...
```

- Optional: Display the list of CUPS models to identify the PPD name of your printer:

```
lpinfo -m
...
samsung.ppd Samsung M267x 287x Series PXL
...
```

You require the name of the PPD file when you add the printer in the next step.

- Add the printer to CUPS:

```
# lpadmin -p "example_printer" -v smb://win_print_srv.ad.example.com/Example -m
samsung.ppd -o auth-info-required=negotiate -E
```

The command uses the following options:

- **-p *printer_name*** sets the name of the printer in CUPS.
- **-v *URI_to_Windows_printer*** sets the URI to the Windows printer. Use the following format: **smb://*host_name*/*printer_share_name***.
- **-m *PPD_file*** sets the PPD file the printer uses.
- **-o *auth-info-required=negotiate*** configures CUPS to use Kerberos authentication when it forwards print jobs to the remote server.
- **-E** enables the printer and CUPS accepts jobs for the printer.

Verification steps

- Log into the Red Hat Enterprise Linux host as an AD domain user.
- Authenticate as an AD domain user:

```
# kinit domain_user_name@AD_KERBEROS_REALM
```

- Print a file to the printer you added to the local CUPS print server:

```
# lp -d example_printer file
```

1.11. WORKING WITH CUPS LOGS

1.11.1. Types of CUPS logs

CUPS provides three different kinds of logs:

- Error log - Stores error messages, warnings and debugging messages.
- Access log - Stores messages about how many times CUPS clients and web UI have been accessed.

- Page log - Stores messages about the total number of pages printed for each print job.

In Red Hat Enterprise Linux 8, all three types are logged centrally in **systemd-journald** together with logs from other programs.



WARNING

In Red Hat Enterprise Linux 8, the logs are no longer stored in specific files within the **/var/log/cups** directory, which was used in Red Hat Enterprise Linux 7.

1.11.2. Accessing all CUPS logs

You can list all CUPS logs available in **systemd-journald**.

Procedure

- Filter CUPS logs:

```
$ journalctl -u cups
```

1.11.3. Accessing CUPS logs for a specific print job

If you need to find a CUPS log for a specific print job, you can do it by filtering the logs using the number of a print job.

Procedure

- Filter logs for a specific print job:

```
$ journalctl -u cups JID=N
```

Where **N** is a number of a print job.

1.11.4. Accessing CUPS logs by specific time frame

If you need to access CUPS logs during a certain time period, you can filter the logs in **systemd-journald**.

Procedure

- Filter logs within the specified time frame:

```
$ journalctl -u cups --since=YYYY-MM-DD --until=YYYY-MM-DD
```

Where **YYYY** is year, **MM** is month and **DD** is day.

Additional resources

- The **journalctl(1)** man page

1.11.5. Configuring the CUPS log location

This section describes how to configure the location of CUPS logs.

In Red Hat Enterprise Linux 8, CUPS logs are by default logged into systemd-journald, which is ensured by the following default setting in the **/etc/cups/cups-files.conf** file:

ErrorLog syslog



IMPORTANT

Red Hat recommends keeping the default location of CUPS logs.

If you want to send the logs into a different location, you need to change the settings in the **/etc/cups/cups-files.conf** file as follows:

ErrorLog <your_required_location>



WARNING

If you change the default location of CUPS log, you might experience SELinux issues.