Configuring



# Configuring to use the LPD protocol

Before a user can use the line printer daemon (LPD) protocol to submit jobs to the RICOH ProcessDirector system, an administrator must do configuration tasks on the RICOH ProcessDirector system to configure the input devices that receive the jobs, to configure the workflows that the jobs are assigned to, and to define the hosts that can use the LPD protocol to submit jobs to RICOH ProcessDirector. The administrator might also have to do some configuration tasks on these hosts.

Before you begin this procedure, review the supplied workflows. If you find one that contains some or all the steps that you want to include in your workflow, you can copy it and modify it to meet your needs.
In addition, determine whether you can use one of the LPD input devices that RICOH ProcessDirector provides or whether the installation requires a customized input device. RICOH ProcessDirector provides LPD input devices that you can use with only minor modifications or that you can copy to create a customized LPD input device.

To configure to use the LPD protocol:

1. If any LPD daemons or processes that do not belong to RICOH ProcessDirector (for example, the Common UNIX Printing System [CUPS] LPD daemon) are running on the same system as the parent server for the input device, stop them.

   **Important:**
   - Do not uninstall CUPS.

2. Update the system setting to specify the hosts that are allowed to submit jobs using the LPD protocol.
   1. Click the **Administration** tab.
   2. In the left pane, click **Settings ⇒ System**.
   3. In the **Hosts allowed to submit LPD jobs** field, type the allowed host names or IP addresses.
      Separate host names and IP addresses with semicolons.

      **Note:**
      - You can use wild cards in host names and IP addresses (for example, `*.acmeproducts.com` or `192.*`). A value of `*` means that all hosts are allowed to submit jobs. Values that contain only numbers, decimal points, and wild cards are compared to IP addresses. Values that contain wild cards and at least one alphabetic character are compared to host names. An empty value means that no hosts are allowed to submit jobs.
      - The default value is: *****
      - You cannot submit jobs to LPD input devices from the primary computer.
      - If you experience long wait times or missing jobs, set the LPD host entries to IP addresses or fully qualified host names (such as `hostserver.co.acmeproducts.com` instead of `*.acmeproducts.com`).

   4. Click **SAVE**.
3. On each system that you authorized to submit LPD jobs, determine if the print command lets you specify a server name. If it does not, do one of the following steps to create a print queue on the system to send jobs to the LPD input device.

   **Note:**
   - The LPR client that is supplied with the base operating system in some versions of Windows and that is available as an optional feature of other versions lets you specify a server name. If you use this LPR client or an equivalent, you do not have to create a print queue on Windows.

4. To create a print queue on SLES 12.0:
   1. Log in as the root user.
   2. Start YaST.
   3. Click **Hardware ⇒ Printer**. With **Printer Configurations** highlighted, click **Add**. Click **Connection Wizard**, and then select **Line Printer Daemon (LPD) Protocol**.
   4. In the **IP Address or Host Name** field, type the host name or IP address of the system where the LPD input device is defined.
   5. Type the name of the LPD input device in the **Queue Name** field, and click **OK**.
   6. In the **Set Arbitrary Name** field, type the name of the LPD input device. This name must be unique on this Linux system. Although LPD input device names are case-sensitive, Linux does not allow you to define multiple LPD input device names that are alike except for case. For example, you cannot define one LPD input device called `HotFolderLPD` and another called `hotfolderlpd`.

7. Click **OK**.

5. To create a print queue on a Red Hat-derived operating system:

> **Note:**
> - Make sure you meet these pre-requisites:
>   - You have configured CUPS.
>   - You have permissions in CUPS to manage printers.

1. Log in as the root user.
2. Use a browser and access `https://hostname:631/admin/`, where *hostname* is the host name or IP address.
3. Click **Add printer**.
4. Go to **Other Network Printers** and select **LPD/LPR Host or Printer**.
5. In the connection field, type the hostname or IP address of the system where the LPD input device is defined. For example:
   `lpd://hostname/queue`

   where *hostname* is the host name or IP address and *queue* is the queue name.
6. Click **Continue**.
7. In the **Add Printer** dialog, enter the name, description, and location of the printer.
8. Click **Continue** to select the printer make and model.
9. Click **Add Printer**.
10. Set the default options in the next dialog and click **Set Default Options**.

6. On the RICOH ProcessDirector system, copy and modify a workflow that contains the processing steps that you want the jobs that are submitted using the LPD protocol to follow.
   To copy and modify one or more workflows:
   1. Click the **Workflow** tab.
   2. Right-click the workflow that you want to copy, and click **Copy**.
   3. Name the copy of the workflow, fill in or edit other values that you need, and click **Continue**.
   4. Right-click each step and select **Properties**. Modify the properties as necessary.
      Remove `${Job.InputFile}` from the **Job name** property in the **SetJobPropsFromTextFile** step.
   5. If you have the AFP Support feature installed and the AFP resources (such as fonts, overlays, and page segments) required by the jobs that are processed through this workflow are not going to be sent inline with the input file, make sure that those resources are available to the RICOH ProcessDirector system. We recommend that you move these resources to `/aiw/aiw1/resources` or `/usr/lpp/psf/reslib`, so that they are available to all the components of RICOH ProcessDirector. If you cannot use those directories, you can set the **AFP resource path** property on one of the steps in the workflow to refer to the directory or directories that hold the resources.

      > **Note:**
      > - The **AFP resource path** can be set as a default job property on various step templates, including **EnableRepositioning**, **PrintJobs**, and **ConvertLineDataJobIntoAFP**. You only need to set the value on one of the steps; the others inherit the value.

   6. To use the workflow, save and enable it by changing  , the Save & Enable/Disable switch, to the On position.
   7. Repeat these steps if you want to create additional workflows.

7. On the RICOH ProcessDirector system, configure an input device so that it assigns the correct workflow or workflows for the input files that it receives. We recommend that you copy and rename one of the supplied LPD input devices, then verify or update the settings described below.
   1. Click the **Administration** tab.
   2. In the left pane, click **Devices ⇒ Input Devices**.
   3. Right-click the input device that you want to copy and select **Copy**.

      > **Note:**
      > - The new input device is the same type as the copied input device. For example, you cannot create a new LPD input device by copying a hot folder.

   4. In the left pane, click **Show all tabs** to display all the properties for this input device.
   5. Verify or update the values for these properties:

      *Input device name*
      Make sure that the input device name does not include any spaces. The LPR client cannot process names with spaces.
      It is best to limit the input device name to 8 characters. Depending on the print command that you use, you might have to create a print queue on the sending system with the same name as the input device. Some systems truncate print queue names to 8 characters.

*Folder location*
The directory on the primary computer that receives jobs from authorized hosts. Make sure that the file system is set up so that the directory you list here is large enough to handle the amount of data that the LPR client sends without filling the file system.

*Staging location*
The directory that RICOH ProcessDirector moves input files to before they are submitted as jobs. Make sure that the file system is set up so that the directory you list here is large enough to handle the amount of data that the LPR client sends without filling the file system. Remember that there might be two copies of an input file in the system at any time, one in the **Folder location** directory and one in the **Staging location** directory.

*Parent server*
The RICOH ProcessDirector server where the files will be received; for example, a submitter would specify this server name on the **lpr** or **lprafp** command. The server specified here must be configured to accept jobs over the LPD protocol.

6. To assign workflows to jobs, with either single or multiple input files:

> **Note:**
> - Input devices with a Linux parent server cannot create a parent job with multiple children. Instead, one parent job and one child job are created for each input file.

   1. Set the **Submit step** property to **SubmitInputFiles** and the **Workflow** property to **ParentNoPrint**.
   2. Determine how you want the input device to assign the workflow for each single job or child job. You can select one of these:
      - Set the **Child workflow initialization step** property to **SetJobTypeFromRules** and use the **Child workflow parsing rules** property to specify the name of the control file that can set the workflow from a value of an option of the print command. RICOH ProcessDirector provides two sample control files that are used to set the workflow. The sample control files, called `receive_lpd_jobtype.cfg` and `receive_lpd_pdf_jobtype.cfg`, are installed in the `/aiw/aiw1/samples/rules/` directory. You can copy one of the files to the `/aiw/aiw1/control_files/rules/` directory and modify it to meet your needs, then update the value of the **Child workflow parsing rules** property to point to your file.
      - Set the **Child workflow initialization step** property to **SetJobTypeFromFileName** and use the **Child workflow pattern** property to specify the string that RICOH ProcessDirector should look for in the input file name and use as the workflow name. If you use this method, you must make sure that a workflow with the corresponding name exists.

8. If the control file that you created in the previous step sets job scheduling properties such as **Media** or **Job size** based on the values of options of the print command, make sure that the corresponding scheduling properties are set on the target printers in RICOH ProcessDirector. If the scheduling properties do not match, the jobs are not automatically scheduled to those printers.
9. Make sure that the LPD input devices are connected and enabled.

> **Note:**
> - The LPD input device does not return status information in response to the **lpq** command.

10. From a host system that you authorized, submit some test jobs. If errors occur, correct the errors that messages from the host system or RICOH ProcessDirector identify.

Parent topic: Preparing for job submission