Configuring

Configuring to use Download for z/OS

Before Download for z/OS can send data sets from z/OS to the RICOH ProcessDirector system, an administrator must do configuration tasks on z/OS. The administrator also does corresponding tasks on the RICOH ProcessDirector system to configure the input devices that receive the data sets and to configure the workflows that the data sets are assigned to.

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. The **DownloadAFP** and **DownloadLineData** workflows are recommended for use with Download for z/OS.
In addition, determine whether you can use one of the Download input devices that RICOH ProcessDirector provides or whether the installation requires a customized input device. RICOH ProcessDirector provides several Download input devices that you can use with only minor modifications or that you can copy to create a customized Download input device.

To configure to use Download for z/OS:

1. On the RICOH ProcessDirector system, copy and modify a workflow that contains the processing steps that you want the jobs that are submitted by Download for z/OS 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 select **Copy**.
   3. Name the copy of the workflow, fill in or edit other values that you need, and click **Continue**.
   4. In the workflow editor, right-click each step and select **Properties**. Modify the properties as necessary.
   5. If 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. It is recommended that you move these resources to `/aiw/aiw1/resources` (Linux) or `C:\aiw\aiw1\resources` (Windows) or `/usr/lpp/psf/reslib` (Linux) or `C:\Program Files (x86)\Ricoh\PSF\reslib` (Windows), 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**, **CreatePageRanges**, **PrintJobs**, and **ConvertLineDataJobIntoAFP**. You only need to set the value on one of the steps; the others inherit the value.

   6. When you are ready to use the new 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.
2. On the RICOH ProcessDirector system, configure an input device so that it assigns the correct workflow or types for the z/OS data sets that it receives. It is recommended that you copy and rename one of the supplied Download 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 Download input device that you want to copy and select **Copy**.

      > **Note:**
      > - The new input device that RICOH ProcessDirector creates through the copy action is the same type as the copied input device. You cannot create a new Download input device by copying a hot folder or an LPD input device.

   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:

      Port number
      The port number that this input device uses to communicate with Download for z/OS. Make note of the port number that you specify so that you can use it in your routing control data set on z/OS. If InfoPrint Manager for Windows is also receiving jobs from this z/OS system, make sure you assign a port number that InfoPrint Manager is not using.

      Folder location

The directory on the primary computer that receives data sets from Download for z/OS. 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 Download for z/OS 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 Download for z/OS 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.

6. If the input device needs to accept single or multiple data set jobs:
    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 **Not set** and set the **Child workflow** property to the name of an existing workflow to assign the same workflow to every job that this input device processes.
        - 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 JCL parameter value.
          RICOH ProcessDirector provides a sample control file that uses the values of JCL parameters to set the workflow. The sample control file, called `receive_jcl_jobtype.cfg`, is installed in the `/aiw/aiw1/samples/rules/` (Linux) or `C:\aiw\aiw1\samples\rules\` (Windows) directory. You can copy that file to the `/aiw/aiw1/control_files/rules/` (Linux) or `C:\aiw\aiw1\control_files\rules\` (Windows) 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.

> **Note:**
> - If you want to merge multiple input data sets into a single job, specify **Yes** for the **Merge multiple data sets** property of the input device. If you are using RICOH ProcessDirector for Windows and merging data sets, you can use the **Destination control file** property to specify a file that contains a list of directories to search for AFP resources.

3. On z/OS, use the Download for z/OS documentation to install and configure Download for z/OS. You might want to create several Download for z/OS functional subsystems (FSSs).

> **Note:**
> - When Download for z/OS is running in multiple dataset mode with Exit 15, each Download input device can receive jobs from only one Download for z/OS functional subsystem application (FSA).

4. Set up the Download for z/OS Print Parameters Exit 15, either **APSUX15** or **APCUX15**, as required for the installation. If RICOH ProcessDirector processes z/OS jobs that contain multiple data sets, the exit must pass the output-group identifier, **OUTGRP**, with the **-opa** parameter. The **OUTGRP** value is either **FIRST**, **NEXT**, **LAST**, or **ONLY**.

> **Note:**
> - IBM can customize the exit to meet unique requirements of the installation. Contact IBM for further information.

5. Update the routing-control data set on z/OS to include the TCP/IP address of the parent server that is running the target input device. The routing-control data set must also specify the port numbers of the target input devices that you verified or updated in a previous step. These examples show RICOH ProcessDirector entries in the routing-control data set that send different types of data sets to different input devices on the RICOH ProcessDirector system:

```
/**** RICOH PROCESSDIRECTOR ROUTING FOR LINE DATA
DEST=PRT01,PRT02,       /* ALL DATA SETS WITH DESTINATION PRT01 PRT02
CLASS=C,                /* AND A CLASS OF C
IPADDR=9.99.176.136,    /* SEND TO RICOH PROCESSDIRECTOR AT THIS IP ADDRESS
PORTNUM=7777;           /* AND THIS INPUT DEVICE PORT NUMBER

/**** RICOH PROCESSDIRECTOR ROUTING FOR LINE DATA
CLASS=A,               /* ALL DATA SETS WITH A CLASS OF A
FORMS=BILLS,           /* AND WITH A FORMS VALUE OF BILLS
      RECEIPTS,        /* OR A FORMS VALUE OF RECEIPTS
IPADDR=9.99.176.136,   /* SEND TO RICOH PROCESSDIRECTOR AT THIS IP ADDRESS
PORTNUM=6001,          /* AND THIS INPUT DEVICE PORT NUMBER
RETRY=3,               /* RETRY 3 TIMES IF TRANSMISSION FAILS
RETRYINTV=60;          /* WAIT 60 SECONDS BETWEEN RETRY ATTEMPTS

/**** RICOH PROCESSDIRECTOR ROUTING FOR POSTSCRIPT AND PDF
DEST=PRT03,             /* ALL DATA SETS WITH DESTINATION PRT03
CLASS=D,                /* AND A CLASS OF D
IPADDR=9.99.176.136,    /* SEND TO RICOH PROCESSDIRECTOR AT THIS IP ADDRESS
PORTNUM=8488,           /* AND THIS INPUT DEVICE PORT NUMBER
SEND_REC_LENGTH=NO;     /* DO NOT PREPEND 2-BYTE LENGTH FIELD
```

6. On z/OS, make any installation-specific modifications to the z/OS Download printer. For example, an administrator might assign a RICOH ProcessDirector-specific destination name to the printer. Then, jobs can use the DEST JCL parameter to request the RICOH ProcessDirector destination.
7. Drain and restart the z/OS Download printer to use the updated routing-control data set.
8. Submit and print jobs to verify that Download for z/OS can send data sets, without errors, as a standalone program.
9. If in a previous step you created a control file that sets job scheduling properties such as Class, Form, or Destination based on the JCL parameters of the job, 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 cannot be scheduled to those printers.
10. On the RICOH ProcessDirector system, make sure that the input devices that correspond to the routing-control data set entries are connected and enabled.
11. On the z/OS system, submit jobs to RICOH ProcessDirector. If errors occur, correct the errors that messages from z/OS or RICOH ProcessDirector identify.

Parent topic: Preparing for job submission