# Using Mapping Objects

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# Contents

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This document describes how to use the functions supplied with these PTFs:

| | | |
|---|---|---|
| SS1: SI10042 | SS1: SI10046 | IPS: SI10145 |
| IPS: SI10048 | IPS: SI10049 | SS1: SI10662 |
| IPS: SI10065 | SS1: SI10073* | SS1: SI10625 |

* Contains include files for PDF Map APIs

It supplements information abut IBM® Infoprint® Server for iSeries™ (hereafter referred to as Infoprint Server) found in *Infoprint Server for iSeries: User's Guide*. Changes to this document are marked with a revision bar ( | ) in the margin. The most current version of this document is available online from this Web page: `http://www.printers.ibm.com/internet/wwsites.nsf/vwwebpublished/ipserveruser_i_ww`.

**Restriction:** You must have these installed to use this program temporary fix (PTF):

- OS/400® V5R2 or higher
- Infoprint Server for iSeries
- These PTFs:

| | | |
|---|---|---|
| SI09449 | SI09471 | SI09474 |
| SI09470 | SI09473 | |

This document contains these sections to help you use and understand the functions supplied with this PTF:



## Where to Find More Information

There are several sources of information about the iSeries system and Infoprint Server:

- These documents can be found in the iSeries Information Center:

  *Infoprint Server for iSeries: User's Guide*, G544-5775

  *Infoprint Server for iSeries: Introduction and Planning Guide*, G544-5774

  *iSeries Guide to Output*, S544-5319
- Redbooks™ are available from `http://publib.boulder.ibm.com/pubs/html/redbooks/`:
  - *IBM @server iSeries Printing VI: Delivering the Output of e-business*, SG24-6250

- The iSeries Information Center is your starting point for looking up iSeries technical information.

  You can access the Information Center two ways:

  – From this Web site:

    `http://www.ibm.com/servers/eserver/iseries/infocenter`

  – From CD-ROMs that ship with your product order:

    *iSeries Information Center*, SK3T-4091-04. This package also includes the PDF versions of iSeries manuals, *iSeries Information Center: Supplemental Manuals*, SK3T-4092-01, which replaces the Softcopy Library CD-ROM.

## How do I Install a PTF?

For instructions to install a PTF, refer to the iSeries Information Center at `http://www.ibm.com/servers/eserver/iseries/infocenter`. From the Information Center go to: Systems management → Software and licensed programs → Use software fixes (or PTFs) → Install fixes.

## What's New with this PTF?

Infoprint Server's PDF subsystem takes an input spooled file and outputs a PDF file, an Advanced Function Presentation™ (AFP™) spooled file, or both. *Intelligent routing* is the ability to take that input spooled file and do any combination of these with it:

- Store it as a PDF file in the integrated file system.
- Send it as a PDF attachment to an e-mail.
- Spool it as a PDF file to an output queue.
- Spool it as an AFP file to an output queue.

This PTF includes these new objects and functions to use with Infoprint Server's intelligent routing:

**map object**

A *map object* is a new object that stores information that the transform uses to map iSeries Spooled file input information with PDF distribution information. This new object lets you work with the IBM-supplied mapping program, rather than having to write your own program.

- For more information about map objects, see "What is a Map Object?" on page 4.
- For information about creating a map object, see "Creating a Map Object" on page 5.
- For examples of creating a map object, see "Example of Creating a PDF Map Object" on page 6 and "Example" on page 43.

**IBM-supplied mapping program**

The IBM-supplied mapping program works with a map object to help you customize your PDF transform options. Infoprint Server passes the values specified on a map object to the IBM-supplied mapping program.

For an example of specifying the IBM-supplied mapping program, see step 4 in "Example" on page 43.

**FS45 Transform**

Infoprint Server's PDF subsystem now accepts FS45 input. This lets you include full color page segments and overlays in your PDF output. You can

use Infoprint Designer, the AFP printer driver, and Infoprint Server's image transforms to create the full color resources.

## How Does this Fit with Infoprint Server?

When you use Infoprint Server's PDF subsystem, you set up a virtual printer that specifies a PSF configuration object in its device description as a user defined object. This PSF configuration object contains information about the PDF transform, such as what to do with the output PDF file. It can also specify a user-created mapping program that can specify even more information, such as the subject text if the PDF file is being e-mailed.

With this PTF installed, instead of writing a mapping program, you can use a standard one supplied by IBM that reads mapping information out of a map object. You can use panels to enter all of the same information you could specify in the mapping program, including the recently added encryption and intelligent routing enhancements.

When you use the map object, Infoprint Server specifies the values in the map object to the IBM-supplied mapping program. This is illustrated in Figure 1.

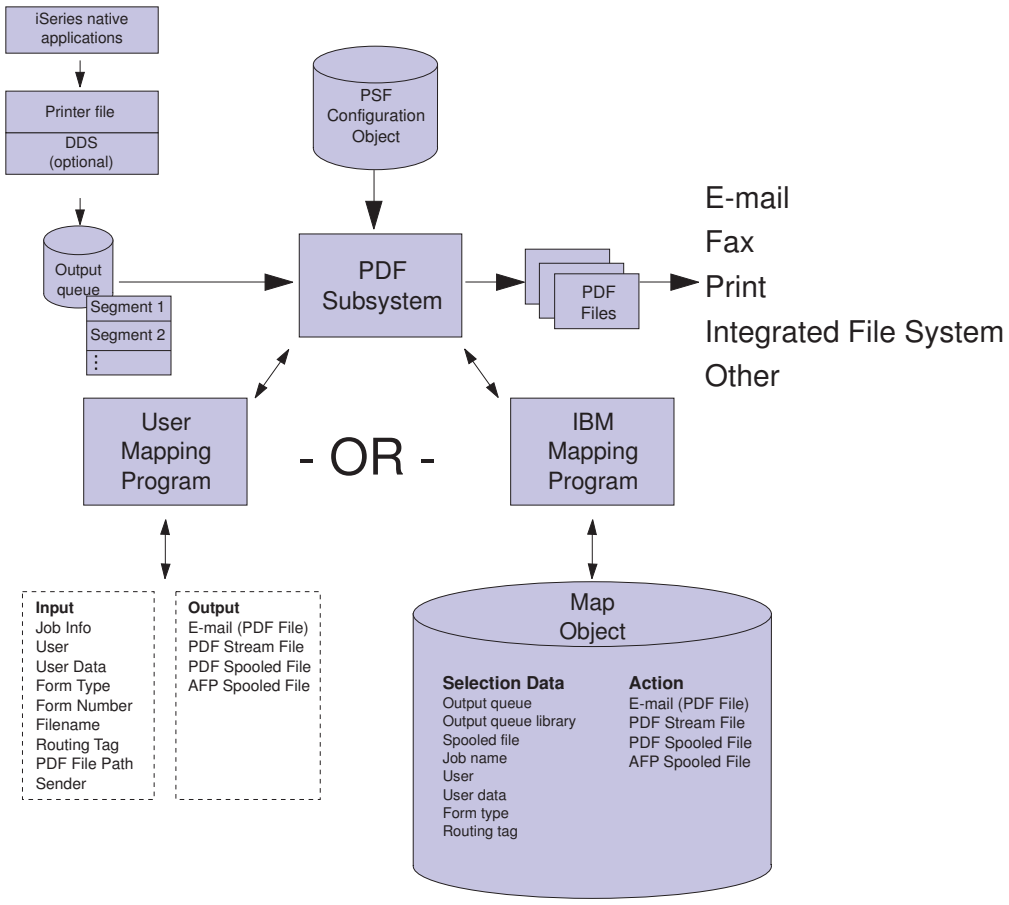


*Figure 1. Mapping Programs and Infoprint Server*

## What is a Map Object?

A map object acts as a database where the IBM-supplied mapping program looks for intelligent routing distribution rules. The rules let you map incoming print files or print file segments to the desired output method (or series of output methods). You can create a map object with OS/400 panels or with the PDF map APIs. Map objects created with this PTF have an object type of *USRIDX.

**API Note:** Before using the PDF map APIs, you must add the library QGY to your library list.

For more information about using the APIs, refer to the iSeries Information Center.

Each map object consists of multiple *map entries*; one for each set of routing actions you want done on a spooled file. For example, if you have these “types” of spooled files:

- spooled files that will be e-mailed
- spooled files that will be e-mailed and stored in the integrated file system
- spooled files that will be respooled as AFP data
- spooled files that are segmented

You would have at least four map entries in your map object, and possibly one to process errors - spooled files that don’t match the criteria for any of the map entries.

Each map entry (or *segment entry*, for segmented spooled files) has two parts:

- **File selection criteria**: This identifies the spooled files that should be processed in the ways specified by the map action for this map entry.
- **Map action**: This specifies what Infoprint Server should do with output file generated for the input spooled file. You can specify any combination of these:
  - E-mail a PDF file
  - Spool a PDF file
  - Spool an AFP file
  - Store a PDF file in the integrated file system

Generic values (in the form *abc**) and *ALL are allowed for some file selection criteria. Therefore, a spooled file might fit the selection criteria for more than one map entry. Because of this, you must specify a sequence number for each map entry. If a spooled file meets the selection criteria for more than one map entry, Infoprint Server uses the map entry with the lowest sequence number.

When working with an input spooled file that is segmented, you specify selection criteria for the input spooled file. Next, you specify the map actions for each segment, based on its *routing tag*. This tag might be an e-mail address or it could be data, such as a customer number, that gets mapped to a distribution method specified in the map object. A routing tag is specified in one of these places:

- (for non-segmented spooled files) The User defined data’s (USRDFNDTA) mailtag parameter. You can specify User defined data on the printer file or add it to the spooled file after creation with the Change spooled file attributes (CHGSPLFA) command. The form of the routing tag is `USRDFNDTA('MAILTAG(`*routing-tag*`)')`.
- (for segmented spooled files) DDS Start page group (STRPAGGRP) group names.

- (for segmented spooled files) Index tags added with Infoprint Server's Create AFP data (CRTAFPDTA) command. The routing tag is the value for Index tag definition (IDXTAG).

  **Note:** If a segment has a routing tag specified on the segment boundary and there is also one specified on the spooled file's User defined data parameter, the routing tag specified as User defined data is ignored.

Once your map object is created, you specify it on your PSF configuration object along with the IBM-supplied mapping program.

## Creating a Map Object

In general, this is how you create a map object:

1. Use the Create PDF map (CRTPDFMAP) command to create a map object. See "Create PDF Map Command" for details.
2. Use the Work with PDF map entries (WRKPDFMAPE) command and the panels described in "Working with PDF Map Entries" on page 6 to create map entries in the map object. Alternatively, you can use the PDF map APIs to create the map entries. For information about the PDF map APIs, refer to the iSeries Information Center.

## Create PDF Map Command

Use the Create PDF Map (CRTPDFMAP) command to create an empty map object. After creating the map object, use the Work with PDF map entries (WRKPDFMAPE) command to add map entries to it. You can use these parameters when creating the map object:

**PDF map** Specify the library-qualifed name of the map object to be created. You can use one of these values for the library:

- ***CURLIB** Create the map object in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name* Specify the name of the library in which to create the map object.

**Text 'description'**

Use one of these values:

- ***BLANK** No text is specified to describe the object.
- '*description*' Specify up to 50 characters of text to describe the object, enclosed in apostrophes.

**Authority** Specify the public authority for the map object. This level of authority applies to anyone who meets all of these criteria:

- They do not have specific authority to the object.
- They are not on an authorization list.
- Their group profile has no specific authority to the object.

Specify one of these values:

- ***LIBCRTAUT** The system determines the authority for the object by using the value specified on the Create authority prompt (CRTAUT parameter) on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the

Create authority prompt (CRTAUT parameter) is changed, the new value does not affect any existing objects. This is the default.

***CHANGE** Change authority lets the user change and perform basic functions on the object. Change authority provides object operational authority and all data authorities.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can change ownership of the object.

***USE** Use authority provides object operational authority, read authority, and execute authority.

***EXCLUDE** Users cannot access the object.

*authorization-list*
Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

### Example of Creating a PDF Map Object

This command creates a map object named MY_MAP:

```
CRTPDFMAP PDFMAP(MYLIB/MY_MAP) TEXT('Map object for invoicing applications')
```

Alternatively, you can fill in these values on the display:

```
                        Create PDF Map (CRTPDFMAP)

Type choices, press Enter.

PDF Map  . . . . . .  MY_MAP       Name
  Library  . . . . . .  MYLIB      Name, *CURLIB, *LIBL
Text 'description' . . . . . .  Map object for invoicing applications
_________

                          Additional Parameters

Authority  . . . . . .  *LIBCRTAUT    Name, *LIBCRTAUT, *CHANGE...
```

*Figure 2. Creating a PDF Map Object*

## Working with PDF Map Entries

After creating your map object, use the Work with PDF map entries (WRKPDFMAPE) command to customize it. This lets you tell Infoprint Server what to do with spooled files once they are transformed. This is a menu-driven command, which means that you use panels to specify values. The panels are described in this section. 7 shows the Work with PDF map entries (WRKPDFMAPE) command flow. The options available on each panel are described in detail later in this section. For an example of using the command, see "Example of adding a PDF Map Entry" on page 37.

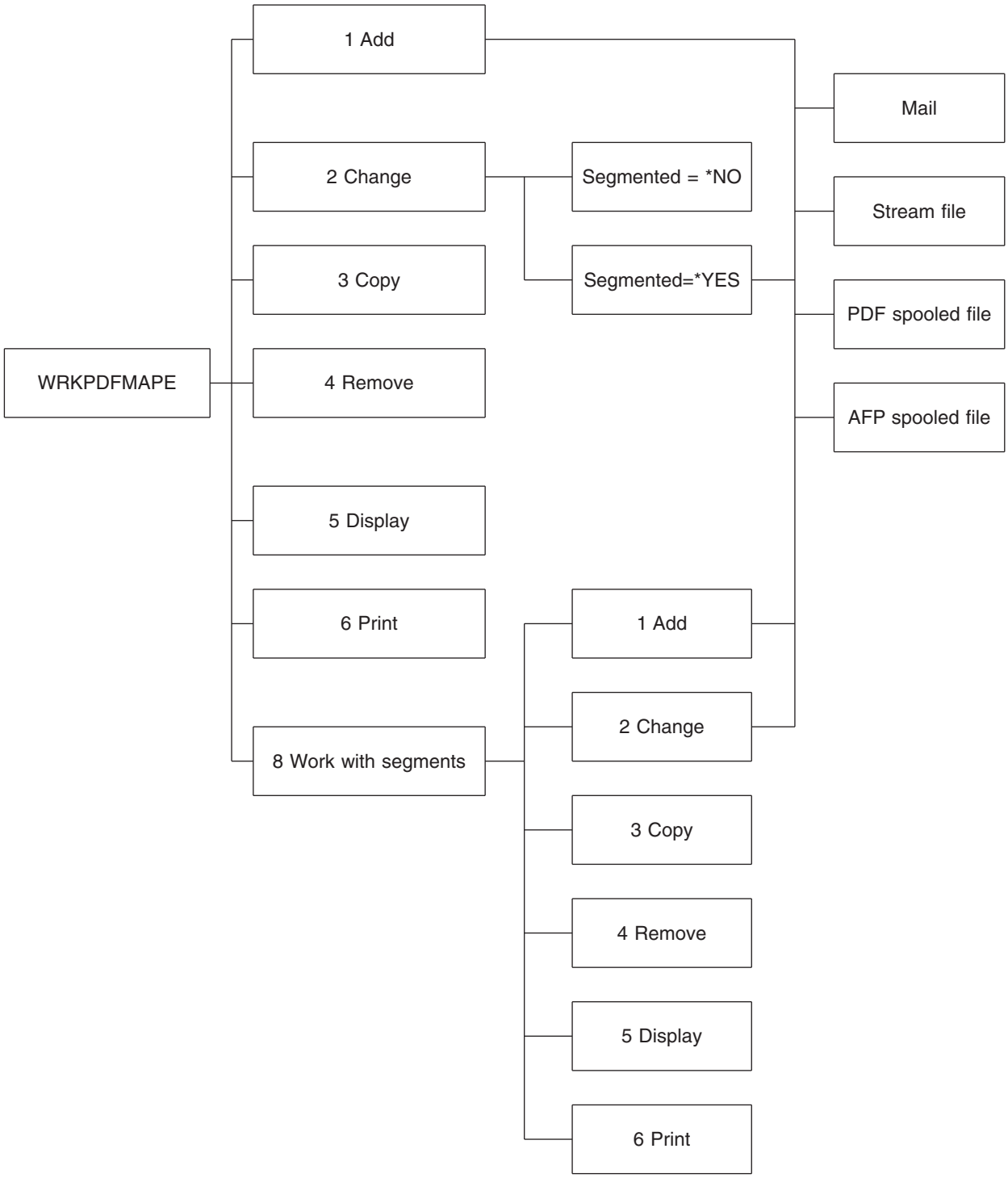


*Figure 3. Work with PDF Map Entries Command Flow*

## Work with PDF Map Entries Command

When you enter the Work with PDF map entries (WRKPDFMAPE) command on the OS/400 command line, a panel like the one shown in Figure 4 on page 8 opens. It

shows the *PDF mapping table*, along with options to work with entries in the table. The PDF mapping table is the list of all the PDF map entries in the map object. Our sample panel shows a map object that contains two map entries.

From this panel you can add, change, copy, remove, display, or print a map entry. From here you can also specify how Infoprint Server should handle each segment in your spooled file (work with segments), if applicable.

```
                          Work with PDF Map Entries
PDF Map . . . :   CUST_DATA              Position to . .__________
  Library . . :    MAPS

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print
  8=Work with segments

     Sequence
Opt  Number      Segmented  Text
 _   _________    ____
 _   1000          *NO      Sales report for Denver
 _   2000          *YES     Sales report for Chicago
```

*Figure 4. Work PDF Map Entry Command Display*

The panel has these fields, listed below in alphabetical order:

**Library** Specifies the library in which the map object is stored.

**Opt** Specify the number of the option you want and press Enter. You can specify options next to more than one entry; the tasks are processed in the same order in which they are displayed.

To add a new map entry, enter option 1 in the appropriate space by the first entry field, shown by blank lines. To do anything else, enter the appropriate option by the map entry. You can specify these options:

**1=Add** Specify this to add a new entry to the PDF mapping table. You can only use this option on the first entry field, shown as blank lines. Enter the sequence number for the new entry and whether it is segmented, then press enter.

**2=Change** Specify this to change options in the entry, such as e-mail information or where the PDF file should be stored in the integrated file system. When you specify Change for a segmented entry, you can only change the input selection criteria (spooled file attributes). To change a segment in a segmented entry, specify 8, Work with segments, on this panel. You can then specify Change by the appropriate segment.

**3=Copy** Specify this to copy an entry in the PDF mapping table. This lets you create a new map entry based on a similar one. To copy a segment entry, specify 8, Work with segments, on this panel. You can then specify Copy by the appropriate segment.

**4=Remove** Specify this to remove the entry from the PDF

mapping table. You are asked to confirm your choice before the entry is actually removed.

**5=Display** Specify this to view the entry's details. To display a segment entry, specify 8, Work with segments, on this panel. You can then specify Display by the appropriate segment.

**6=Print** Specify this to print the entry's details. To print a segment entry, specify 8, Work with segments, on this panel. You can then specify Print by the appropriate segment.

**8=Work with segments**
Specify this to work with segments in a spooled file.

**PDF Map** Specifies the map object's name.

**Position to** Helps you find a specific sequence number. To use this field, specify the sequence number of the entry you want to work with and press Enter. The entries are listed numerically, starting at the sequence number entered. If there is no sequence number that matches the number you entered, the list is positioned to the number closest to, and in front of, the position where the number would have appeared.

**Segmented file**
Specifies whether the spooled files processed as specified in this map entry are segmented.

If you specify *YES for Segmented file and a non-segmented file meets the spooled file selection criteria and has a routing tag that matches a routing tag specified in a segment entry, that spooled file is processed in the way specified by that segment entry.

If you specify *NO for Segmented file and a segmented file meets the spooled file selection criteria, any segments that have routing tags that match the routing tag selection criteria are processed in the way specified by that mapping entry. If there are segments for which no match is found, they are in error. See "Error Situations" on page 47 to determine what Infoprint Server does as a result.

**Sequence** Specifies the map entry's sequence number. Infoprint Server uses this number to determine the order in which the entries are searched for a match. For example, if you process a spooled file with this map object and the spooled file meets the selection criteria for PDF map entries 200 and 500, it is processed in the manner specified by entry 200.

**Text** Describes the map entry. When adding a map entry, you can optionally specify a description of the entry.

## Option 1 - Add PDF Map Entry

Use option 1 to add a new map entry. Creating multiple PDF map entries lets you use one map object to process different spooled files in different ways. Adding a map entry involves two main steps:

1. Specify the spooled file selection criteria. This tells Infoprint server which map entry to use to process each spooled file. This is the panel that lists all of the selection criteria:

```
                          Add PDF map entry
Segmented entry . . . . :   *NO
Sequence number . . . . .   50
Text  . . . . . . . . . .   ____________________________________


Type choices, press Enter.

Output queue  . . . . . .   *ALL             Name, Generic*, *ALL
  Library . . . . . . . .                   Name
Spooled file  . . . . . .   *ALL             Name, Generic*, *ALL
Job name  . . . . . . . .   *ALL             Name, Generic*, *ALL
User  . . . . . . . . . .   *ALL             Name, Generic*, *ALL
User data . . . . . . . .   *ALL             Character value, *ALL
Form type . . . . . . . .   *ALL             Character value, *ALL
Routing tag . . . . . . .   *ALL


                                             Character value, *ALL
```

Most of the spooled file selection criteria choices are the same whether the entry is for a segmented file or not. Routing tag is not available when Segmented = *YES. For information about specifying the routing tag selection criteria for segmented files, see “Option 8 - Work with segments” on page 18. For segmented spooled files, the routing tag is used to identify segments within the file.

See Table 1 for a description of the parameters you can specify.

2. Specify mapping actions for the map entry. The mapping action specifies what is done with the output file. It can be sent as e-mail, stored as a stream file in the integrated file system, spooled to an output queue as PDF, spooled to an output queue as AFP, or any combination of those. If you specified PDFMULT(*YES *SPLIT) on your PSF configuration object, you can specify that each generated output file is processed in any combination of the previously mentioned ways.

   Specify the mapping actions on the second panel of the command (Define PDF map action for spooled file) and the panels that open based on the values you enter. The Define PDF map action panel is shown below:

```
                  Define PDF map action for spooled file
Sequence number . . . . . :   50
Segmented entry . . . . . :   *NO
Text  . . . . . . . . . . :



Type options, press Enter.

PDF map actions:
  Mail  . . . . . . . . .   *NO              *YES, *NO
  PDF spooled file  . . .   *NO              *YES, *NO
  AFP spooled file  . . .   *NO              *YES, *NO
  Stream file . . . . . .   *NO              *YES, *NO
```

*Figure 5. Define PDF Map Action Panel*

You can use these parameters to customize the map entry:

*Table 1. Add PDF Map Entry Parameters*

| Parameter | Description | Panel of command | See... |
|---|---|---|---|
| **Information about the map entry:** | | | |

*Table 1. Add PDF Map Entry Parameters (continued)*

| Parameter | Description | Panel of command | See... |
|---|---|---|---|
| Segmented file | Whether the spooled file will be segmented into multiple files | Add PDF map entry | page 13 |
| Sequence | The entry's sequence number | Add PDF map entry | page 14 |
| Text | The entry's description | Add PDF map entry | page 14 |
| **Spooled file selection criteria:** | | | |
| Form type | The form type specified on the spooled file | Add PDF map entry | page 11 |
| Job name | The job that created the spooled file | Add PDF map entry | page 11 |
| Output queue | The output queue to which the writer that processed the job was started | Add PDF map entry | page 12 |
| Routing tag | The routing tag specified on the spooled file | Add PDF map entry | page 13 |
| Spooled file | The spooled file's name | Add PDF map entry | page 14 |
| User | The user who generated the spooled file | Add PDF map entry | page 14 |
| User data | The user data specified on the spooled file | Add PDF map entry | page 15 |
| **What to do with the output files:** | | | |
| PDF mapping action | What to do with the resultant PDF file | Define PDF map action for spooled file | page 12 |
| AFP spooled file = *YES | The input file should be respooled to an output queue as AFP data. | Define AFP spooled file entry | page 25 |
| Mail = *YES | The PDF file should be sent as e-mail. | Define mail entry | page 26 |
| PDF spooled file = *YES | The PDF file should be spooled to an output queue. | Define PDF spooled file entry | page 34 |
| Stream file = *YES | The PDF file should be stored as a stream file in the integrated file system. | Define PDF stream file entry | page 35 |

A detailed description of each parameter for Add or Change PDF map entry follows. The parameters are listed below in alphabetical order.

**Form type** Specify the form type on the spooled file to process. The form type is specified on the CRTPRTF, CHGPRTF, or OVRPRTF commands' FORMTYPE parameter. This parameter is used to determine which spooled files to process as specified in this map entry.

These are the valid values:

***ALL** Spooled files with anything for FORMTYPE are considered a match. This value must be entered in all uppercase letters. This is the default.

*Form-type* Specify the form type. Only spooled files with this form type are considered a match.

**Job name** Specify the job that created the spooled file to process. This parameter is used to determine which spooled files are processed as specified in this map entry.

These are the valid values:

***ALL** Spooled files created by any job are considered a match. This is the default.

*Generic*-job-name*
Specify a generic job name in the form *abc**. All spooled files created by a job name that starts with the specified value are considered a match.

*Job-name* Specify the job that created the spooled file. Only spooled files created by this job are considered a match.

**Output queue** Specify the library-qualified output queue to which the writer that processed the job was started. This parameter is used to determine which spooled files are processed as specified in this map entry.

These are the valid values:

***ALL** All output queues are considered a match. This is the default.

*Generic*-output-queue*
Specify a generic output queue name in the form *abc**. All output queues with a name that starts with the specified value are considered a match. For example, if you specify `mail*`, the output queue `mails` is considered a match, but the output queue `email` is not.

*Output-queue* Specify the name of an output queue. Only an output queue with this name is considered a match.

**PDF mapping action**
Specify how to process the output file. You can specify that the output file is processed in any combination of these: e-mail it as a PDF file, spool it as a PDF file, spool it as an AFP file, and store it as a PDF stream file:

**AFP spooled file**
Specifies whether the input spooled file is written to a spool as AFP data.

***YES** Respool the input spooled file as AFP data. You can use parameters in this map entry to specify the output queue to which the AFP data should be written, a name for the spooled file, and more. For information about these parameters, see “PDF Map Action, AFP Spooled File = *YES” on page 25.

***NO** The input spooled file is not written to a spool as AFP data.

**Mail** Specifies whether the PDF file is sent as e-mail to one or more recipients. Valid values are:

***YES** E-mail the PDF file to one or more recipients. You can use parameters in this map entry to specify the subject text, a message to put in the body of the e-mail, to, cc, and bcc addresses, encryption options, a reply-to e-mail address, the PDF file’s

name, and more. For information about these parameters, see “PDF Map Action, Mail = *YES” on page 26.

**Note:** If there is an error in any e-mail address (to, cc, bcc, or reply-to), no e-mails are sent. See “Error Situations” on page 47 for information about how errors are handled.

***NO** The PDF file is not sent as e-mail.

**PDF spooled file**

Specifies whether the PDF file is to be written to a spool as PDF data.

***YES** Spool the PDF file to an output queue. You can use parameters in this map entry to specify the output queue to which the PDF data should be written, the spooled file’s name, and more. For information about these parameters, see “PDF Map Action, PDF Spooled File = *YES” on page 34.

***NO** The PDF file is not written to a spool.

**Stream file**

Specifies whether the PDF file is stored as a stream file in the integrated file system.

***YES** Store the PDF file as a stream file in the integrated file system. You can use parameters in this map entry to specify the PDF file’s name, the path where the file will be stored, and more. For information about these parameters, see “PDF Map Action, Stream File = *YES” on page 35.

***NO** The PDF file is not stored as a stream file.

**Routing tag** Specify the routing tag on the incoming spooled file that should be processed in the methods specified in this map entry. This tag might be an e-mail address or it could be data such as a customer number that gets mapped to a distribution method specified in the map object. The routing tag on the spooled file is specified on the User defined data’s (USRDFNDTA) MAILTAG parameter. This parameter is used to determine which spooled files to process as specified in this map entry.

These are the valid values:

***ALL** Spooled files with anything for MAILTAG are considered a match. This value must be specified in all uppercase letters. This is the default.

*Routing-tag* Specify the routing tag. Only spooled files with this exact routing tag are considered a match. This value is case-sensitive.

**Segmented file**

Specify whether the spooled files processed as specified in this map entry are segmented. When a spooled file is segmented, it is split at group boundaries and one PDF file is generated for each group.

These are the valid values:

***YES** The input spooled file is segmented. Add segment entries to specify how you want the segments processed.

If you specify *YES and a non-segmented file meets the spooled file selection criteria and has a routing tag that matches a routing tag specified in a segment entry, that spooled file is processed in the way specified by that segment entry.

**Note:** You must also specify PDFMULT(*YES *SPLIT) on the PSF configuration object that uses this map object. Otherwise this value is ignored.

***NO** The input spooled file is not segmented. The actions you specify for the mapping action apply to the whole spooled file.

If you specify *NO and a segmented file meets the spooled file selection criteria, any segments that have routing tags that match the routing tag selection criteria are processed in the way specified by that mapping entry. If there are segments for which no match is found, they are in error. See "Error Situations" on page 47 to determine what Infoprint Server does as a result.

**Sequence** Specify the map entry's sequence number. The sequence number determines the order in which Infoprint Server searches for a match for the spooled file. For example, if the spooled file meets the criteria for entries with sequence numbers 100 and 200, Infoprint Server uses the mapping action specified in map entry 100.

**Spooled File** Specify the name of the spooled file to process. This parameter is used to determine which spooled files to process as specified in this map entry.

These are the valid values:

***ALL** A spooled file with any name is considered a match. This is the default.

*Generic*-spooled-file*
Specify a generic spooled file name in the form *abc**. All spooled files with a name that starts with the specified value are considered a match. For example, if you specify `region*`, the spooled file `region1` is considered a match, but the spooled file `den_region` is not.

*Spooled-file* Specify the name of a spooled file. Only a spooled file with this name is considered a match.

**Text** Specify the description of this map entry.

**User** Specify the name of the user who generated the spooled file to process. This parameter is used to determine which spooled files to process as specified in this map entry.

These are the valid values:

***ALL** Spooled files generated by any user are considered a match. This is the default.

*Generic*-user* Specify a generic user name in the form *abc**. All spooled files generated by a user with a name that starts with the specified value are considered a match. For example, if you specify `dra*`, a spooled file generated by the user `drake` is considered a match, but a spooled file generated by the user `kendra` is not.

*User* Specify the name of a user. Only spooled files generated by this user are considered a match.

**User data** Specify the user data on the spooled file to process. User data is specified on the CRTPRTF, CHGPRTF, or OVRPRTF commands' USRDTA parameter. This parameter is used to determine which spooled files to process as specified in this map entry.

These are the valid values:

***ALL** Spooled files with anything for USRDTA are considered a match. This is the default.

*User-data* Specify the user data. Only spooled files with this user data are considered a match.

## Option 2 - Change PDF Map Entry

Use this option to change a map entry. When you specify this option for a non-segmented file, the entry is displayed with its current values but you can change any value that is underlined. When you specify this option for a segmented file, you can change only the file selection criteria. To change any of the segment entries, use option 8 Work with segments. These are the entries shown on the Change PDF Map Entry panel:

*Table 2. Change PDF Map Entry Parameters*

| Parameter | Description | Panel of command | See... |
|---|---|---|---|
| **General information about the map entry** | | | |
| Segmented file[2] | Whether the spooled file should be segmented into multiple files | Change PDF map entry | page 13 |
| Sequence[1] | The entry's sequence number | Change PDF map entry | page 14 |
| Text | The entry's description | Change PDF map entry | page 14 |
| **Spooled file selection criteria** | | | |
| Form type | The form type specified on the spooled file | Change PDF map entry | page 11 |
| Job name | The job that created the spooled file | Change PDF map entry | page 11 |
| Output queue | The output queue to which the writer that processed the job was started | Change PDF map entry | page 12 |
| Routing tag | The routing tag specified on the spooled file | Change PDF map entry | page 13 |
| Spooled file | The spooled file's name | Change PDF map entry | page 14 |
| User | The user who generated the spooled file | Change PDF map entry | page 14 |
| User data | The user data specified on the spooled file | Change PDF map entry | page 15 |
| **What to do with the output files[1]:** | | | |
| PDF mapping action | What to do with the resultant PDF or AFP file | Change PDF map action for spooled file | page 12 |
| AFP spooled file = *YES | The input file should be respooled to an output queue as AFP data. | Change AFP spooled file entry | page 25 |

*Table 2. Change PDF Map Entry Parameters (continued)*

| Parameter | Description | Panel of command | See... |
|---|---|---|---|
| Mail = *YES | The PDF file should be sent as e-mail. | Change mail entry | page 26 |
| PDF spooled file = *YES | The PDF file should be spooled to an output queue. | Change PDF spooled file entry | page 34 |
| Stream file = *YES | The PDF file should be stored as a stream file in the integrated file system. | Change PDF stream file entry | page 35 |
| 1: For non-segmented entries only.<br>2: Display only. You cannot change this value. | | | |

For example, this panel opens when you specify to change a non-segmented PDF map entry. Note that Segmented entry is not underlined. Thus, you cannot change that value:

```
                          Change PDF map entry
Segmented entry . . . . :   *NO
Sequence number . . . . .   100
Text  . . . . . . . . . .   _____________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
Type choices, press Enter.

Output queue  . . . . . .   *ALL_____        Name, Generic*, *ALL
  Library . . . . . . . .     _________        Name
Spooled file  . . . . . .   *ALL_____        Name, Generic*, *ALL
Job name  . . . . . . . .   *ALL_____        Name, Generic*, *ALL
User  . . . . . . . . . .   OPER*____        Name, Generic*, *ALL
User data . . . . . . . .   *ALL_____        Name, Generic*, *ALL
Form type . . . . . . . .   *ALL_____        Character value, *ALL
Routing tag . . . . . . .   *ALL_____________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________Character value, *ALL
```

*Figure 6. Change PDF Map Entry - First Panel*

## Option 3 - Copy PDF Map Entry

If you want to create a map entry similar to one you already have, use this option to copy the entry. When you copy the entry, you must identify the copy with a new sequence number. You can then use Option 2 - Change to tailor the copy to your needs. You can specify these parameters when you copy a map entry:

**New Text** Specify the description of the new map entry.

**To Sequence number**
Specify the sequence number for the new map entry. The sequence number determines the order in which Infoprint Server searches for a match for the spooled file. For example, if the input spooled file meets the criteria for entries with sequence numbers 100 and 200, Infoprint Server uses the mapping action specified in map entry 100.

## Option 4- Remove PDF Map Entry

When you specify that a map entry should be removed, you are asked to confirm the removal. To remove the selection, press Enter. If you do not want to remove the selection, press F12.

## Option 5 - Display PDF Map Entry

When you specify to display a map entry, a display like the one in Figure 7 opens that shows all of the values specified in the entry. You cannot change anything when displaying the values. For information about each parameter and value shown, see the parameters listed in “Option 1 - Add PDF Map Entry” on page 9.

```
                          PDF Map Information
PDF Map . . . :   MY_MAP                Sequence
  Library . . :     MYLIB                 number  . . :   100

Spooled file  . . . . . :   *ALL
Output queue  . . . . . :   *ALL
  Library . . . . . . . :
Job name  . . . . . . . :   *ALL
User  . . . . . . . . . :   OPER*
User data . . . . . . . :   *ALL
Form type . . . . . . . :   *ALL
Routing tag . . . . . . :   *ALL



Text  . . . . . . . . . :
Segmented entry . . . . :   *NO


                                                                    More...
Press Enter to continue.

F3=Exit   F6=Print entry   F10=Print data   F12=Cancel
```

*Figure 7. Display PDF Map Entry, First Panel*

```
                          PDF Map Information
PDF Map . . . :   MY_MAP                Sequence
  Library . . :     MYLIB                 number  . . :   100

PDF map actions:
  Mail  . . . . . . . . . :   *YES
  PDF spooled file  . . :   *NO
  AFP spooled file  . . :   *YES
  PDF stream file . . . :   *NO









                                                                  Bottom
Press Enter to continue.

F3=Exit   F6=Print entry   F10=Print data   F12=Cancel
```

*Figure 8. Display PDF Map Entry - Second Panel*

If you press F6, you print the entire entry. This is the same result as you get when you use option 6, Print PDF map entry. If you press F10, you print the information in the section of the entry shown. For example, if you press F10 on either panel above, the printout shows the values in the first two panels of the display. Note that the second panel says Bottom instead of More... at the bottom. This shows you that you are at the end of a section.

## Option 6 - Print PDF Map Entry

When you print the map entry, a spooled file named DSPPDFMAPE is generated with the name of the map object as the user data. This spooled file is placed on the default output queue associated with the current job. When you print this spooled file, the output is formatted like the panels shown when you use option 5 to display the entry.

## Option 8 - Work with segments

These panels display when you select Option 8 or when you specify *YES for Segmented on the Add or Change map entry panel. Use these panels to specify what Infoprint Server does with the segments in the spooled file. When the appropriate values are specified in the PSF configuration object, each segment in the spooled file is transformed into a PDF or AFP output file.

**Note:** To use a map entry to break a spooled file with groups into multiple segments, you must specify both of these:

- PDFMULT(*YES *SPLIT) on the PSF configuration object
- Segmented = *YES on the map entry

Adding a segment for a map entry is much like adding a map entry for a spooled file. It involves these main processes:

1. If you have not already done so, tell Infoprint Server how to select the input spooled file that the segments are part of.
2. Tell Infoprint Server how to select a segment. To do this, you specify a routing tag. The routing tag specified must match the routing tag on the input segment. It is specified on the DDS keyword STRPAGGRP, Infoprint Server's CRTAFPDTA command with the IDXTAG parameter, or AFP Toolbox's Begin Group program call. If there is also a routing tag specified on the spooled file as User defined data, it is ignored.
3. Tell Infoprint Server what to do with each segment. You specify a mapping action for each segment, just as you do for the map entry. With segments, you cannot set up a completely generic segment error entry as you can with map entries. There must be a segment entry set up for each segment that will be processed.

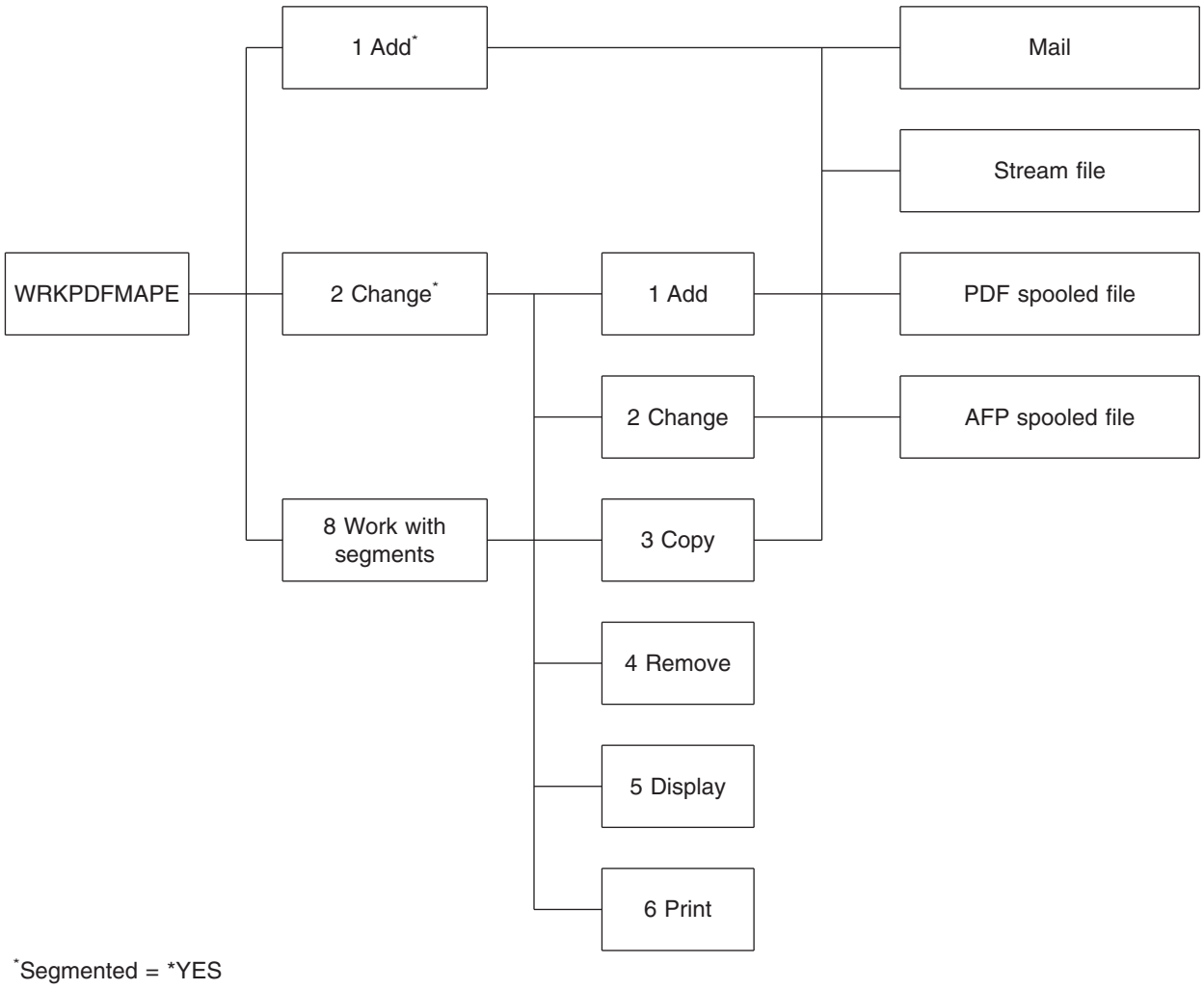


*Figure 9. Work with Segments Command Flow*

## Option 1 - Add segment Entry

Use option 1 to add a new segment entry. You must have a segment entry for every segment in the file. Adding a segment entry involves two main steps:

1. Specify the segment selection criteria; the routing tag. This is the panel that opens when you specify to add a segment entry. We will add a segment entry for the routing tag "CUST1009":

```
                    Work with PDF Map Segmented Entries
Sequence                                Job name  . . :   *ALL
  number  . . :   200                   User  . . . . :   *ALL
Spooled file  :   *ALL                  User data . . :   *ALL
Output queue  :   *ALL                  Form type . . :   *ALL
  Library . . :
Position to . . _____________________________________________________

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print

Opt  Routing tag
 1   CUST1009

  (No segments in entry)
```

*Figure 10. Add Segment Entry - Panel 1, Routing Tag*

2. Specify mapping actions for the segment entry. The mapping action specifies what is done with the output file. It can be sent as a PDF attachment to an e-mail, stored as a PDF stream file in the integrated file system, spooled to an output queue as PDF, spooled to an output queue as AFP, or any combination of those. You specify the map action on the Add Segment Entry panel and on the panels that open based on your specified actions. This is the Add Segment Entry panel:

```
                              Add Segment Entry
Type choices, press Enter.

Routing tag . . . . . .   CUST1009_____________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
PDF map actions:
  Mail  . . . . . . . . .   *NO              *YES, *NO
  PDF spooled file  . . .   *NO              *YES, *NO
  AFP spooled file  . . .   *NO              *YES, *NO
  Stream file . . . . . .   *NO              *YES, *NO
```

*Figure 11. Add Segment Entry Panel*

These are the parameters on the Add segment entry page:

**PDF mapping action**

Specify how Infoprint Server should process this segment after converting it to the proper output format. You can specify any combination of these values:

**AFP spooled file**

Specifies whether the input spooled file segment is written to a spool as AFP data.

***YES** Spool the AFP file to an output queue. You can specify its name, the output queue on which it is placed, the spooled file's name, and more. You can save these types of spooled files as AFP, as long as the spooled file is converted to AFP prior to being sent to the ultimate device destination. For example, If IPDS passthrough is set and the IPDS does not require conversion to AFP, then Infoprint Server cannot respool the IPDS as AFP:

- SCS

- AFP Data Stream (AFPDS)
- Intelligent Printer Data Stream™ (IPDS™)
- USERASCII data (that contains PostScript, PDF, or PCL); this requires Infoprint Server and Infoprint Server's Transform Manager. When Transform Manager is used, the resultant PDF file is an image, not text.
- Line data[1]
- Mixed data[1]

For more information, see "PDF Map Action, AFP Spooled File = *YES" on page 25.

You must specify AFPRESPOOL(*YES) as a PSF defined option on the PSF configuration object to enable respooling. If you want the whole spooled file respooled as AFP, enable respooling in the spooled file. Refer to the document *Using Intelligent Routing* for instructions. This document is available with PTF SI09493. If you have installed the PTF, it is stored in this location:

```
/QIBM/ProdData/InfoprintServer/Transforms/Intelligent_Routing.pdf
```

***NO** Do not spool the AFP file to an output queue. This is the default.

**Mail** Specifies whether the PDF file is sent as e-mail to one or more recipients. Valid values are:

***YES** Send the PDF file as e-mail. The e-mail address can be specified on the spooled file's User defined data parameter or you can specify addresses on this segment entry. If there are addresses specified in both locations, the PDF file is sent to all of the addresses.

You can also use parameters in this segment entry to specify the subject text, a message to put in the body of the e-mail, cc and bcc addresses, encryption options, a reply-to e-mail address, the PDF file's name, and more. For information about these parameters, see "PDF Map Action, Mail = *YES" on page 26.

***NO** Do not send the PDF file as e-mail. This is the default.

**PDF spooled file**

Specifies whether the PDF file is to be written to an output queue.

***YES** Spool the PDF file to an output queue. You can use parameters in this segment entry to specify the output queue to which the PDF data should be written, the spooled file's name, and more. For

1. In order to respool line or mixed data, you must first convert it to AFPDS. To convert data to AFPDS, use the printer file's Convert line data (CVTLINDTA) parameter or use the Create AFP Data (CRTAFPDTA) command, as appropriate.

information about these parameters, see “PDF Map Action, PDF Spooled File = *YES” on page 34.

***NO** Do not spool the PDF file to an output queue. This is the default.

**Stream file**

Specifies whether the PDF file is stored as a stream file in the integrated file system.

***YES** Store the PDF file as a stream file in the integrated file system. You can use parameters in this segment entry to specify the PDF file’s name, the path where the file will be stored, and more. For information about these parameters, see “PDF Map Action, Stream File = *YES” on page 35.

***NO** Do not store the PDF file in the integrated file system. This is the default.

**Routing tag** Specify the routing tag for the new segment. The routing tag must match the routing tag in the segment, specified on the DDS keyword Start page group (STRPAGGRP), Infoprint Server’s CRTAFPDTA command with the IDXTAG parameter, or AFP Toolbox’s Begin Group program call. If there is also a routing tag specified on the spooled file as User defined data, it is ignored.

**Text** Specify the description of this segment entry.

## Option 2 - Change segment Entry

Use this option to change a segment entry. When you specify this option, the entry is displayed with its current entries, but you can change any value that is underlined. For example, this panel is shown when we specify to change a segment in our example map object:

```
                          Change Segment Entry
Type choices, press Enter.

Routing tag . . . . . .   CUST1009
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
PDF map actions:
  Mail  . . . . . .  .    *NO              *YES, *NO
  PDF spooled file  . .   *NO              *YES, *NO
  AFP spooled file  . .   *NO              *YES, *NO
  Stream file . . . . .   *YES             *YES, *NO
```

*Figure 12. Change Segment Entry Panel*

See “Option 1 - Add segment Entry” on page 19 for a description of the parameters.

## Option 3 - Copy segment Entry

If you want to create a segment entry similar to one you already have, use this option to copy the segment. When you copy the segment, you must identify the copy with a new routing tag. You can then use Option 2, Change to tailor the copy to your needs. The Copy segment entry panel is shown below:

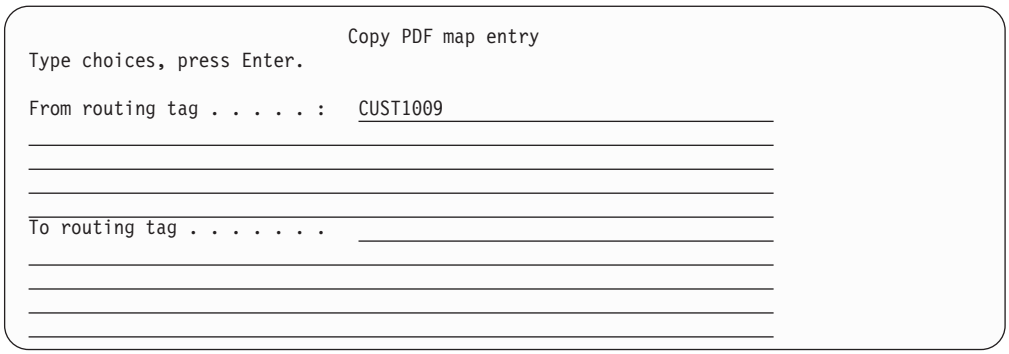


*Figure 13. Copy Segment Entry Panel*

You can specify this parameter when you copy a segment entry:

**To routing tag**

Specify the routing tag for the new segment. The routing tag must match the group tag's name, specified on the DDS keyword Start page group (STRPAGGRP), Infoprint Server's CRTAFPDTA command with the IDXTAG parameter, or AFP Toolbox's Begin Group program call. If there is also a routing tag specified on the spooled file as User defined data, it is ignored.

## Option 4- Remove segment Entry

When you specify that a segment entry should be removed, you are asked to confirm the removal. To remove the selection, press Enter. If you do not want to remove the selection, press F12.

## Option 5 - Display segment Entry

When you specify to display a segment entry, a display like the one in Figure 14 on page 24 opens that shows all of the values specified in the segment. You cannot change anything when displaying the values. For information about each parameter and value shown, see the parameters listed in "Option 1 - Add segment Entry" on page 19. The first panel shows the selection criteria for the spooled file, along with the routing tag for the segment to be processed. The rest of the panels show values specific to the specified mapping actions.

```
                          PDF Map Information
PDF Map . . . :   MY_MAP                Sequence
  Library . . :     MYLIB                  number  . . :   100

Spooled file  . . . . . :   REPORTS
Output queue  . . . . . :   *ALL
  Library . . . . . . . :
Job name  . . . . . . . :   *ALL
User  . . . . . . . . . :   *ALL
User data . . . . . . . :   *ALL
Form type . . . . . . . :   *ALL
Routing tag . . . . . . :   Northwest



Text  . . . . . . . . . :   SALES REPORT DATA
Segmented entry . . . . :   *YES



                                                                      More...
Press Enter to continue.

F3=Exit   F6=Print entry   F10=Print data   F12=Cancel
```

*Figure 14. Display Segment Entry - First Panel*

```
                          PDF Map Information
PDF Map . . . :   MY_MAP                Sequence
  Library . . :     MYLIB                  number  . . :   100

PDF stream file:
  Stream file . . . . . :   /month/northwest.pdf



  Public authority  . . :   *EXCLUDE









                                                                      Bottom
Press Enter to continue.

F3=Exit   F6=Print entry   F10=Print data   F12=Cancel
```

*Figure 15. Display Segment Entry - Second Panel*

If you press F6, you print the entire entry. This is the same result as you get when you use option 6, Print PDF map entry. If you press F10, you print the information in the section of the entry shown. For example, if you press F10 on the panel above, the printout shows the values in the first two panels of the display. Note that the second panel says Bottom instead of More... at the bottom. This shows you that you are at the end of a section.

## Option 6 - Print segment Entry

When you print the segment entry, a spooled file named DSPPDFMAPE is generated with the name of the map object as the user data. This spooled file is

placed on the default output queue associated with the current job. When you print this spooled file, the output is formatted like the panels shown when you use option 5 to display the segment entry.

## PDF Map Action, AFP Spooled File = *YES

When you specify AFP spooled file = *YES for the PDF map action, the generated AFP file is spooled to an output queue. You must specify AFPRESPOOL(*YES) as a PSF defined option on the PSF configuration object to use this option. These are the parameters you can specify, listed below in alphabetical order:

**Output queue** Specify the library-qualified output queue to which the AFP file is written. These are the possible values:

***PSFCFG** Write the AFP file to the output queue specified on the PSF configuration object's AFPOUTQ parameter, specified as a PSF defined option. This is the default. If you specify *PSFCFG and the output queue does not exist, the file is spooled to QGPL/QPRINT. If you are not doing anything else with this segment, no PDF file is generated.

*Output-queue-name*
Specify the output queue's name. If this output queue does not exist when you try to use this map object, the file is spooled to QGPL/QPRINT.

**Form type** Specify the form type for the AFP spooled file. These are the possible values:

***SPLF** Use the original spooled file's form type. This is the default.

*Form-type* Specify the AFP spooled file's form type.

**Spooled file** Specify a name for the AFP spooled file. These are the possible values:

***SPLF** Use the original spooled file's name. This is the default.

*Spooled-file-name*
Specify the AFP spooled file's name.

**User Data** Specify the user data for the AFP spooled file. These are the possible values:

***SPLF** Use the original spooled file's user data. This is the default.

*User-data* Specify the AFP spooled file's user data.

**User Defined Data**
Specify the user defined data for the AFP spooled file. These are the possible values:

***SPLF** Use the original spooled file's user defined data. This value must be specified in all uppercase letters. This is the default.

*User-defined-data*
Specify the AFP spooled file's user defined data. This value is case-sensitive. If you want to print the AFP data and specified AFPRESPOOL(*PRINT) on

the spooled file's User defined data, you should specify different User defined data here.

## PDF Map Action, Mail = *YES

The mail panels let you customize the e-mail; specifying the e-mail addresses, cc addresses, additional attachments, encryption options for the PDF file, and more. These are the parameters you can specify when sending the PDF file as e-mail, listed below in alphabetical order:

**Attachments** Specify the files to attach to the e-mail in addition to the PDF file. If this parameter is specified and your PSF configuration object specifies PDFMAILSVR(*SNDDST) any spooled files that match this map entry are held.

You can specify one of these values:

***NONE** Only the PDF file being generated is attached to the e-mail. This value must be specified in all uppercase letters. This is the default.

*Attachments* Specify up to four fully-qualified files in the integrated file system to be attached to the e-mail. The first character in the path must be a forward slash (/). The directory names in the path cannot contain these characters: \ < > ″ ? : * | If you specify the PDF file being generated, it is attached again.

**Notes:**

1. You must specify a threadsafe file system. These file systems are not threadsafe:
   - QNetware
   - QFileSvr.400
   - Network File System (NFS)
   - QDLS
2. All files must be encoded in a character set (CCSID) that matches the CCSID/code page of the target system.

**BCC e-mail address**

Specify the blind carbon copy (bcc) e-mail addresses to which the e-mail is sent. If this parameter is specified and your PSF configuration object specifies PDFMAILSVR(*SNDDST) any spooled files that match this map entry are held.

**Note:** If there is an error in any e-mail address (to, cc, bcc, or reply-to), no e-mails are sent. See "Error Situations" on page 47 for information about how errors are handled.

You can specify one of these values:

***FILE** The bcc e-mail addresses are stored in a data file in the integrated file system. When you specify *FILE, you can specify a value for BCC e-mail stream file. This value must be specified in all uppercase letters.

*BCC-e-mail-address*

Specify up to 100 addresses to copy on the e-mail message. Each address can be up to 80 characters long. Press F9 to specify more than one bcc address. If you want more than 100 bcc addresses, specify them in a stream file, then specify *FILE as the value for this parameter.

**BCC e-mail stream file**

Specify the name and path of a data file in the integrated file system that contains the bcc e-mail addresses. Each address must be separated by a carriage control and can be up to 80 characters long. This parameter is only available when you specify *FILE for bcc e-mail address.

The data file path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. For example, you could specify either of these on this parameter:

```
/home/mine/addresses
/QSYS.LIB/LIBRARY.LIB/MYFILE.FILE/MYMEMBER.MEMBER
```

You can specify a pattern in the last part of the path name. Use an asterisk (*) to match any number of characters and a question mark (?) to match a single character. If the path name is qualified or contains a pattern, you must enclose it in apostrophes.

For more information about specifying path names, refer to “Object naming rules” in the “CL concepts and reference” topic in the iSeries Information Center.

**CC e-mail address**

Specify the carbon copy (cc) e-mail addresses to which the e-mail is sent. If this parameter is specified and your PSF configuration object specifies PDFMAILSVR(*SNDDST) any spooled files that match this map entry are held.

**Note:** If there is an error in any e-mail address (to, cc, bcc, or reply-to), no e-mails are sent. See “Error Situations” on page 47 for information about how errors are handled.

You can specify one of these values:

***FILE**

The cc e-mail addresses are stored in a data file in the integrated file system. When you specify *FILE, you can specify a value for CC e-mail stream file. This value must be specified in all uppercase letters.

*CC-e-mail-address*

Specify up to 100 addresses to copy on the e-mail message. Each address can be up to 80 characters long. Press F8 to specify more than one cc address. If you want more than 100 cc addresses, specify them in a stream file, then specify *FILE as the value for this parameter.

**CC e-mail stream file**

Specify the name and library of a data file in the integrated file

system that contains the cc e-mail addresses. Each address must be separated by a carriage control and can be up to 80 characters long. This parameter is only available when you specify *FILE for CC e-mail address.

The data file path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. For example, you could specify either of these on this parameter:

```
/home/mine/addresses
/QSYS.LIB/LIBRARY.LIB/MYFILE.FILE/MYMEMBER.MEMBER
```

You can specify a pattern in the last part of the path name. Use an asterisk (*) to match any number of characters and a question mark (?) to match a single character. If the path name is qualified or contains a pattern, it must be enclosed in apostrophes.

For more information about specifying path names, refer to “Object naming rules” in the “CL concepts and reference” topic in the iSeries Information Center.

**E-mail body** Specify the files to be used for the body of the e-mail. If a file is specified, it is opened (when possible) and placed in the body of the e-mail after the message text. If the file cannot be opened and placed in the body (such as an audio file), it is attached to the e-mail. If this parameter is specified and your PSF configuration object specifies PDFMAILSVR(*SNDDST) any spooled files that match this map entry are held.

You can specify one of these values:

***NONE** No files are placed in the body of the e-mail. This value must be specified in all uppercase letters. This is the default.

*Files-for-body* Up to four fully-qualified files in the integrated file system to be used for the body of the e-mail. The first character in the path must be a forward slash ( / ). The directory names in the path cannot contain these characters: \ < > ″ ? : * | If you specify the PDF file being generated, it is attached again. The files are placed in the body of the e-mail in the order in which you specify them.

**Notes:**

1. You must specify a threadsafe file system. These file systems are not threadsafe:
   - QNetware
   - QFileSvr.400
   - Network File System (NFS)
   - QDLS
2. All files must be encoded in a character set (CCSID) that matches the CCSID/code page of the target system.

**Encryption level**

Specifies the PDF file’s encryption level.

***NONE**
The PDF file is not encrypted. This is the default.

***40RC4**
Use 40-bit RC4 encryption. This level has a lower level of security and is compatible with Adobe Acrobat Reader 3.X and higher. You can also specify values for these parameters:

**Print** Specifies whether users can print the PDF file.

***YES** Users can print the PDF file. This is the default

***NO** Users cannot print the PDF file.

**Change**
Specifies whether users can change the PDF file.

***YES** Users can change the PDF file.

***NO** Users cannot change the PDF file. This prevents users from filling-in form fields and making other changes. This is the default.

**Copy** Specifies whether users can copy or extract text and graphics in the PDF file. This also specifies whether the accessibility interface is enabled.

***YES** Users can copy and extract text and graphics in the PDF file. The accessibility interface is enabled. This is the default.

***NO** Users cannot copy and extract text and graphics in the PDF file. The accessibility interface is disabled.

**Change comments**
Specifies whether users can add or change comments (annotations) or form fields in the PDF file. Values are:

***YES** Users can add or change comments and form fields in the PDF file.

***NO** Users cannot add or change comments or form fields in the PDF file. Users can fill in form fields. This is the default.

***128RC4**
Use 128-bit RC4 encryption. This level has a higher level of security but is only compatible with Adobe Acrobat Reader 5.X and higher. You can also specify values for these parameters:

**Print** Specifies whether users can print the PDF file, and if so, at what resolution.

***YES** Users can print the PDF file. This is the default.

***NO** Users cannot print the PDF file.

***IMAGE**
Users are only allowed to print at low

resolution (image). This prevents the user from re-creating the PDF file with different security settings. Printing might be slower because each page is printed as a bitmapped image.

**Change**

Specifies whether users can change the PDF file.

***YES** The user is allowed general editing, comment and form field authoring, and has document assembly authority. This lets the user do anything to the PDF file except extract contents and print, which are controlled by the Copy and Print parameters.

**Note:** If you specify *YES for Change, Assemble is set to *YES, no matter what you specify for Assemble.

***NO** Users cannot change the PDF file. This prevents users from filling-in form fields and making other changes. This is the default.

**Assemble**

Specifies whether users are given document assembly authority.

***YES** Users have document assembly authority. They can insert, delete, and rotate pages, and create bookmarks and thumbnails.

***NO** Users do not have document assembly authority. This is the default.

**Note:** If you specify *YES for Change, Assemble is set to *YES, no matter what you specify for Assemble.

**Change comments**

Specifies whether users can change comments (annotations) and form fields.

***YES** Users can add and change comments, and fill-in and sign forms.

***NO** Users cannot add or change comments. They cannot add or change fields but they can fill in forms. This is the default.

**Copy** Specifies whether users can copy or extract text and graphics in the PDF file.

***YES** Users can copy and extract text and graphics in the PDF file. This is the default.

***NO** Users cannot copy or extract text and graphics in the PDF file.

**Content access**

Specifies whether content accessibility for the visually impaired is enabled for the PDF file.

***YES** Content accessibility is enabled for the PDF file.

***NO** Content accessibility is not enabled for the PDF file. This is the default.

**Mail sender** Specify the name of the mail sender. You can specify one of these values:

***PSFCFG** Use the mail sender specified on the PSF configuration object. This is the default.

*Mail-sender* Specify the name of the mail sender. This sender must be a valid user profile enrolled in the System Distribution Directory.

If PDFMAILSVR(*SNDDST) is not specified on the PSF configuration object, the entry in the System Distribution Directory must have an SMTP user ID and domain specified. For example, if the sender's e-mail `address is name@business.com`, the SMTP user ID is `name` and the SMTP domain is `business.com`. For information about specifying System Distribution Directory entries, refer to *Infoprint Server for iSeries: User's Guide*.

**Master password**

Specify the password needed in order to change security settings for the PDF file. When password protected, the PDF file can be opened with either the user password or master password.

If you specify any security restrictions, you must specify a user password, a master password, or both. It is best to specify a master password and, optionally, a user password. Otherwise anyone who opens the file could remove the restrictions. If you specify a master password and specify *NONE for the user password, users can view the PDF file but cannot change the security settings.

You can specify these values:

***NONE** There is no master password. This is the default.

***AUTO** Specifies that a master password for the PDF file is automatically generated by the system. No one can change the security settings.

*Master-password*

Specify the password needed to change the PDF file's security settings. The password can contain uppercase alphabetic characters (A-Z), lowercase alphabetic characters (a-z) or numbers 0-9.

**Message text** Specify the text to be placed in the body of the e-mail. This is the first text in the e-mail. If you specify a file in Files for body of e-mail, it is placed after this text.

***PSFDFT** Use the default text from message PQT4133 in

message file QPQMSGF. This value must be specified in all uppercase letters. This is the default value.

*Message-text* Specify up to 255 characters for the message text.

**PDF file name**

Specify a name for the e-mailed PDF file. These are the possible values:

***PSFDFT** Use the default name from Infoprint Server. This name is 000001.PDF for a single spooled file e-mailed by SNDDST. It is longer when sent by an SMTP server. If the PDF file is encrypted, the sequence number, such as 000001, is prepended by an X. If the spooled file is segmented, the file name is incremented for each segment. For instance, the PDF files from a spooled file with 20 segments would have names ending with 000001.PDF – 000020.PDF or X000001.PDF – X000020.PDF when e-mailed.

This value must be specified in all uppercase letters.

*PDF-file-name* Specify the PDF file's name. If you are using SNDDST to send the e-mail, this file name cannot be longer than 10 characters. You must specify the .pdf file extension if you want it. IBM recommends using a lowercase file extension for compatibility with other operating systems.

**Reply to e-mail address**

Specify the address to which replies to your e-mail should be sent. If this parameter is specified and your PSF configuration object specifies PDFMAILSVR(*SNDDST) any spooled files that match this map entry are held.

You can specify one of these values:

***MAILSENDER**
Replies are sent to the e-mail address specified on the Mail Sender parameter. This value must be specified in all uppercase letters. This is the default.

*Reply-to-address*
Specify an address up to 80 characters long to which replies to the e-mail are sent.

**Subject** Specify the text for the e-mail's subject. You can specify one of these values:

***PSFDFT** Use the default subject from the first 22 characters of message PQT4133 in message file QPQMSGF plus the original spooled file's name. This value must be specified in all uppercase letters. This is the default.

*Subject* Specify up to 80 characters for the subject text.

**To e-mail address**

Specify the addresses to which the e-mail should be sent. Each

e-mail address can be up to 80 characters long. You can specify the addresses here, specify them in an external stream file, or they can be specified in the spooled file. If there are addresses specified on the spooled file and in the mapping program, the PDF file is sent to all of the addresses.

**Note:** If there is an error in any e-mail address (to, cc, bcc, or reply-to), no e-mails are sent. See “Error Situations” on page 47 for information about how errors are handled.

These are the possible values:

***FILE** The e-mail addresses are stored in a data file in the integrated file system. When you specify *FILE, you can specify a value for To e-mail stream file. This value must be specified in all uppercase letters.

***SPLF** The e-mail address is specified on the spooled file. Infoprint Server uses the embedded routing tag. It might be specified as user defined data, the group name for DDS keyword Start page group, or the index tag name specified on Create AFP Data. To specify the address as user defined data, it must be in this format: USRDFNDTA('mailtag(*name@domain*)') Only one address can be specified on the spooled file.

*E-mail address*
Specify up to 100 e-mail addresses. Press F7 to specify more than one address. If you want to specify more than 100 addresses, specify them in an external file and specify *FILE for this parameter.

**To e-mail stream file**

Specify the name and library of a data file in the integrated file system that contains the TO e-mail addresses. Each address must be separated by a carriage control. This parameter is only available when you specify *FILE for To e-mail address.

The data file path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. For example, you could specify either of these on this parameter:

```
/home/mine/addresses
/QSYS.LIB/LIBRARY.LIB/MYFILE.FILE/MYMEMBER.MEMBER
```

You can specify a pattern in the last part of the path name. Use an asterisk (*) to match any number of characters and a question mark (?) to match a single character. If the path name is qualified or contains a pattern, it must be enclosed in apostrophes.

For more information about specifying path names, refer to “Object naming rules” in the “CL concepts and reference” topic in the iSeries Information Center. You can specify these values for library:

***CURLIB** The file that contains e-mail addresses is in the current library for the job. If no library is specified as the current library for the job, QGPL is used. This is the default.

*library* The library that contains the e-mail file.

**User password**

Specify the password that the user must specify to open the PDF file. When password protected, the PDF file can be opened with either the user password or master password.

If you specify any security restrictions, you must specify a user password, a master password, or both. It is best to specify a master password and, optionally, a user password. Otherwise anyone who opens the file could remove the restrictions. If you specify a master password and specify *NONE for the user password, users can view the PDF file but cannot change the security settings.

You can specify these values:

***NONE**
There is no user password. This is the default.

*User-password*
Specify the password needed to open the PDF file. The password can contain uppercase alphabetic characters (A-Z), lowercase alphabetic characters (a-z) or numbers 0-9.

## PDF Map Action, PDF Spooled File = *YES

When you specify PDF spooled file = *YES for the PDF map action, the generated PDF file is spooled to an output queue. The spooled file panels let you customize the PDF spooled file. You can name the PDF file and specify the output queue to place the spooled file on. You can also specify the user data, form type, and user defined data to associate with the spooled file. These are the parameters you can specify when spooling the PDF file, listed below in alphabetical order:

**Form type** Specify the form type for the PDF spooled file. These are the possible values:

***SPLF** Use the original spooled file's form type. This is the default.

*Form-type*
Specify the PDF spooled file's form type.

**PDF output queue**

Specify the library-qualified output queue to which the PDF file will be written. These are the possible values:

***PSFCFG**
Write the PDF file to the output queue specified on the PSF configuration object's PDFOUTQ parameter. This is the default. If you specify *PSFCFG and output queue specified on the PSF configuration object does not exist, the file is spooled to QGPL/QPRINT.

*Output-queue-name*
Specify the output queue's name. If this output queue does not exist when you use this map object, the file is spooled to QGPL/QPRINT.

**Spooled file** Specify a name for the PDF spooled file. These are the possible values:

***SPLF** Use the original spooled file's name. This is the default.

*Spooled-file-name*
Specify the PDF spooled file's name.

**User Data** Specify the user data for the PDF spooled file. These are the possible values:

***SPLF** Use the original spooled file's user data. This is the default.

*User-data*
Specify the PDF spooled file's user data.

**User Defined Data**
Specify the user defined data for the PDF spooled file. These are the possible values:

***SPLF** Use the original spooled file's user defined data. This value must be specified in all uppercase letters. This is the default.

*User-defined-data*
Specify the AFP spooled file's user defined data. This value is case-sensitive. If you want to print the AFP data and specified AFPRESPOOL(*PRINT) on the spooled file's User defined data, you should specify different user defined data here.

## PDF Map Action, Stream File = *YES

The stream file panels let you specify the name and location of the PDF stream file and what the public authority is for the file. These are the parameters you can specify, listed alphabetically:

**Authority**
Specify the public authority for the PDF stream file and any directories Infoprint Server creates. This level of authority applies to anyone who meets all of these criteria:

- They do not have specific authority to the object.
- They are not on an authorization list.
- Their group profile has no specific authority to the object.

Specify one of these values:

***EXCLUDE**
Users cannot access the object. This is the default.

***RWX** Users have object operational authority and all the data authorities. This lets them change the object and perform basic functions on it. With this authority level, users can perform all operations on the object except those limited to the owner or controlled by object existence, object management, object alter, and object reference authorities.

***RX** Users can perform basic operations on the object, such as display its contents. The user cannot change the object. This provides object operational authority and read and execute authorities.

***RW** Users can view and change the object. This provides object operational authority and data read, add, update, and delete authorities.

***WX** Users can change the contents of the object. This authority level provides object operational authority and data add, update, delete, and execute authorities.

***R** Users can view the contents of the object. This provides object operation and data read authorities.

***W** Users can change the contents of the object. This level of authority provides object operation authority and data add, update, and delete authorities.

***X** Users can run a program or search a library or directory. This level of authority provides object operation and data execute authorities.

**PDF stream file**

The PDF stream file's name and the path in the integrated file system where it will be stored. Specify one of these values:

***PSFCFG** Infoprint Server builds the path and file name from the value specified for PDF directory (PDFDIR) on the PSF configuration object. This value must be specified in all uppercase letters. This is the default.

The file name is generated based on characteristics of the job that generated the spooled file. If you specify a QDLS directory, the file path and name is generated as follows:
`/QDLS/folder-name/job-name/job-number/job-user-name/file-number/spooled-file-name/date/sequence-number`

If you specify a Root File System directory name, the file path and name is generated as follows:
`/PDF-directory-name/job-name/job-user-name /job-number_file-number_spooled-file-name_date_sequence-number`

For more details about this, refer to *Infoprint Server for iSeries: User's Guide*.

*PDF-file-name* Specify the PDF file's name and the path in the integrated file system where it will be stored. The path and file name will be exactly as specified. No subdirectories are created, as they are if you specify *PSFCFG. The first character in the path must be a forward slash ( / ). The directory names in the path cannot contain these characters: \ < > ″ ? : * |

Infoprint Server creates the directories if they do not exist. These directories are owned by the original spooled file owner and have the public authority specified in the Authority parameter.

When specifying the file's name, be sure to add the file extension if you want one. IBM recommends using a lowercase file extension for compatibility with other operating systems.

**Notes:**

1. If you specify a file name that already exists, Infoprint Server replaces the existing file.
2. If you specified to use an SMTP mail server, you must specify a threadsafe file system. These file systems are not threadsafe:
   - QNetware
   - QFileSvr.400

- Network File System (NFS)
- QDLS

## Creating a PDF Map Entry to Catch Errors

If you try to process a spooled file with a map object but it doesn't match any of the file selection criteria for any of the PDF map entries, the spooled file is not transformed to PDF and is held. To avoid having the spooled file be held, while still being notified that there is a problem, you can set up a map entry to deal with such spooled files. This section describes how to set up a map entry to specify that spooled files in error should be transformed to PDF then processed in one or both of these ways:

- Notify an administrator by e-mail that the spooled file could not be processed and attach a PDF version of the spooled file to the e-mail.
- Have the generated PDF file put in the integrated file system.

**To e-mail or store a PDF version of the spooled file in error, set up a map entry this way:**

Use these parameters and values to create the map entry. If you want the PDF file e-mailed and stored as a stream file, use Mail = *YES and Stream file = *YES. Otherwise, choose the appropriate value.

*Table 3. Setting up a PDF Map Entry to E-mail Errors*

| Parameter | Value |
|---|---|
| Sequence | 99999 |
| Text | For processing spooled files in error |
| Output queue | *ALL |
| Spooled file | *ALL |
| Job name | *ALL |
| User | *ALL |
| User data | *ALL |
| Form type | *ALL |
| Routing tag | *ALL |
| segmented file | *NO |
| PDF mapping action | Mail = *YES[1] |
| | Stream file = *YES[2] |
| To e-mail address[1] | administrator's e-mail address in the form *name@domain* |
| PDF file name[2] | *PSFCFG |
| **Notes**:<br><br>1: Specify this only if you want to e-mail the PDF file.<br>2: Specify this only if you want to store the PDF file as a stream file. | |

## Example of adding a PDF Map Entry

This example shows how to use the WRKPDFMAPE command to add an entry to the map object MY_MAP in library MYLIB.

1. Enter the command `WRKPDFMAPE PDFMAP(MYLIB/MY_MAP)`. This panel opens:

```
                          Work with PDF Map Entries
PDF Map . . . :   MY_MAP                 Position to . . _____________
  Library . . :     MYLIB

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print
  8=Work with segments

     Sequence
Opt  Number      Segmented  Text
 _   _________      ____

  (No entries in table)
```

*Figure 16. Work with PDF Map Entries Panel*

2. We will add a map entry with sequence number 100 that is not segmented. Fill in these values and press return:

```
                          Work with PDF Map Entries
PDF Map . . . :   MY_MAP                 Position to . . _____________
  Library . . :     MYLIB

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print
  8=Work with segments

     Sequence
Opt  Number      Segmented  Text
 1   100         *NO
  (No entries in table)
```

*Figure 17. Adding a PDF Map Entry*

3. On the first Add PDF Map Entry panel, specify the file selection criteria. This identifies the spooled files you want processed with this map entry. For our example, we have several operators (all with user names such as OPER1) that could generate spooled files that should be processed as specified in this map entry, so we specify the user name as the only file selection criteria.

```
                            Add PDF map entry
Segmented entry . . . . :   *NO
Sequence number . . . . .   100
Text  . . . . . . . . . .   ____________________________________


Type choices, press Enter.

Output queue  . . . . . .   *ALL            Name, Generic*, *ALL
  Library . . . . . . . .     _____________  Name
Spooled file  . . . . . .   *ALL            Name, Generic*, *ALL
Job name  . . . . . . . .   *ALL            Name, Generic*, *ALL
User  . . . . . . . . . .   OPER*           Name, Generic*, *ALL
User data . . . . . . . .   *ALL            Character value, *ALL
Form type . . . . . . . .   *ALL            Character value, *ALL
Routing tag . . . . . . .   *ALL
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________ Character value, *ALL
```

*Figure 18. Specifying File Selection Criteria*

4. Specify what you want done with the output file. We will specify that the output file is e-mailed and that the input spooled file is respooled as AFP so we can fax the document:

```
                  Define PDF map action for spooled file
Sequence number . . . . . :   100
Segmented entry . . . . . :   *NO
Text  . . . . . . . . . . :



Type options, press Enter.

PDF map actions:
  Mail  . . . . . .   *YES              *YES, *NO
  PDF spooled file  . . .   *NO         *YES, *NO
  AFP spooled file  . . .   *YES        *YES, *NO
  Stream file . . . . . .   *NO         *YES, *NO
```

*Figure 19. Specifying the Mapping Actions*

5. Next, you customize the map actions that you selected. The first panels shown are for e-mail:

```
                            Add PDF map entry
Type choices, press Enter.

To e-mail addresses . . .   marketing@ibm.com
                                          Character value, *FILE, *SPLF

Subject . . . . . .   Summary report
                                          Character value, *PSFDFT

Message text  . . . . . .   Here is the field summary report for last month
                                          Character value, *PSFDFT

CC e-mail addresses . . .   manager@ibm.com
                                          Character value, *FILE
```

*Figure 20. Specifying E-mail Information - First Panel, General Information*

Note that the PDF file name has the .pdf extension specified (below). Infoprint Server does not add an extension for you.

```
                            Add PDF map entry
Type choices, press Enter.

BCC e-mail addresses  . .
                                          Character value, *FILE

ReplyTo e-mail address      *MAILSENDER
                                          Character value, *MAILSENDER

Mail sender . . . . . .   *PSFCFG        Name, *PSFCFG

PDF file name . . . . . .   summary.pdf
                                          Stream file, *PSFDFT
```

*Figure 21. Specifying E-mail Information - Second Panel, General Information*

This is a file that will be opened and added to the e-mail body after the message text.

```
                            Add PDF map entry
Type choices, press Enter.

E-mail body:
                           /home/OPERATORS/REPORT_TEXT.HTM
                                                                  Character value, *NONE
```

*Figure 22. Specifying E-mail Information - Third Panel, Files for E-mail Body*

This panel lets you specify other files to attach to the e-mail. For this example, we don't specify any.

```
                            Add PDF map entry
Type choices, press Enter.

E-mail attachments:
                           *NONE
                                                                  Character value, *NONE
```

*Figure 23. Specifying E-mail Information - Fourth Panel, E-mail Attachments*

This panel lets you specify security options. We will specify a master password and 128-bit encryption. After pressing Enter, the values you can specify for encryption are shown. We specify values that let the user print the document and copy text and graphics from it, and enable accessibility. Users cannot change the document in any way:

```
                            Add PDF map entry
Type choices, press Enter.

Master password . . . . .   mpassw0rd        Password, *NONE, *AUTO
User password . . . . . .   *NONE            Password, *NONE
Encryption level  . . . .   *128RC4           *NONE, *40RC4, *128RC4

  Print . . . . . .  . .    *YES              *YES, *NO, *IMAGE
  Change  . . . . . . .    *NO               *YES, *NO
  Copy  . . . . . . . .    *YES              *YES, *NO
  Content access  . . . .  *YES              *YES, *NO
  Assemble  . . . . . .    *NO               *YES, *NO
  Change comments . . . .  *NO               *YES, *NO
```

*Figure 24. Specifying E-mail Information - Fifth Panel, PDF Encryption Options*

This panel lets you specify information for the AFP spooled file. If we had specified other routing options, more panels would follow.

```
                          Add AFP spooled file
Type choices, press Enter.

AFP spooled file:
  Output queue . . . . . .   *PSFCFG      Name, *PSFCFG
    Library  . . . . . .     _________     Name
  Spooled file . . . . . .   *SPLF          Name, *SPLF
  User data  . . . . . . .   *SPLF                  Character value, *SPLF
  Form type  . . . . . . .   *SPLF                  Character value, *SPLF
  User-defined data  . . .   SUMMARY REPORT
  ____________________________________________________________________
  ____________________________________________________________________
  ____________________________________________  Character value, *SPLF
```

*Figure 25. Specifying AFP Spooled File Information*

6. After filling out all of the values, press Enter. The Work with Map Entries panel is shown with your new map entry listed in the PDF mapping table:

```
                          Work with PDF Map Entries
PDF Map . . . :   MY_MAP                 Position to . . ____________
  Library . . :     MYLIB

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print
  8=Work with segments

     Sequence
Opt  Number      Segmented  Text
 _   _________      ____

 _    100           *NO
```

*Figure 26. Work with PDF Map Entries Panel with One Entry*

## Displaying or Printing a Map Object

To display or print a map object, use the Display PDF map entries (DSPPDFMAPE) command. You must specify the library-qualified name of a map object and can specify whether the output is printed to an actual printer or displayed on your monitor. By default, it is displayed on your monitor. For example, specifying this command opens the display shown in Figure 27 on page 42:

```
DSPPDFMAPE(MYLIB/MY_MAP)
```

```
                          PDF Map Information
PDF Map . . . :   MY_MAP                 Sequence
  Library . . :     MYLIB                  number  . . :   100

Spooled file  . . . . . :   *ALL
Output queue  . . . . . :   *ALL
  Library . . . . . . . :
Job name  . . . . . . . :   *ALL
User  . . . . . . . . . :   OPER*
User data . . . . . . . :   *ALL
Form type . . . . . . . :   *ALL
Routing tag . . . . . . :   *ALL



Text  . . . . . . . . . :
Segmented entry . . . . :   *NO


                                                                    More...
Press Enter to continue.
```

*Figure 27. Displaying a PDF Map*

When you print a map object, a spooled file named DSPPDFMAPE is generated with the name of the map object as the user data. This spooled file is placed on the default output queue associated with the current job. The printout is formatted in the same way as the display.

## Deleting a Map Object

To delete a map object, use the Delete map object (DLTPDFMAP) command and specify the map object you want to delete. You are prompted to confirm your choice before the object is deleted.

## Using a Map Object

To use a map object specify these on your PSF configuration object:

- Specify the map object on the PSF defined option (PSFDFNOPT) parameter:

  PSFDFNOPT('PDFMAP(*library/name*)')

- Specify the IBM-supplied mapping program on the PDF mapping program (PDFMAPPGM) parameter. This program is QPQMAPEXIT in library QSYS:

  PDFMAPPGM(QSYS/QPQMAPEXIT)

For example, this command (entered all on one line) changes the PSF configuration object MY_CONFIG in library MY_LIB to specify the IBM-supplied mapping program and the map object MY_MAP in MY_LIB.

```
CHGPSFCFG PSFCFG(MY_LIB/MY_CONFIG) PDFMAPPGM(QSYS/QPQMAPEXIT)
          PSFDFNOPT('PDFMAP(MY_LIB/MY_MAP)')
```

For more information about setting up and using a PSF configuration object, refer to *Infoprint Server for iSeries: User's Guide* or *IBM @server iSeries Printing VI: Delivering the Output of e-business*.

"Example" on page 43 has an example of creating the map object then specifying it with the IBM-supplied mapping program.

## Example

This example illustrates how to create, edit, and specify a map object. For more examples of using the PDF subsystem, refer to the Redbook *IBM @server iSeries Printing VI: Delivering the Output of e-business* or *Infoprint Server for iSeries: User's Guide*.

**Follow these steps to create, change, and use a map object for a segmented spooled file:**

This example shows how to create and change a map object with segments and how to specify it and the IBM-supplied mapping program on the PSF configuration object. In this example, we use a map object and the IBM-supplied mapping program to process our spooled file. The spooled file is a monthly sales report file that is split at group boundaries.

1. Add routing tags to the data. In this example, we use DDS to insert routing tags within a print file. The DDS STRPAGGRP (Start Page Group) and ENDPAGGRP (End Page Group) keywords identify the segment boundaries and provide a unique name to each segment.

   To set this up for our sales report deployment, edit the DDS printer file for the target application to insert logical divisions between the regions. We use the printer file SALESRPT. In our example, we assume there are five logical divisions in the data: Northwest, West, Central, South, and Northeast. We provide a logical name for each region with the STRPAGGRP keyword. The DDS coding for one segment is shown below:

```
....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....
     A
     A          R RECORD1
     A  02                                STRPAGGRP('NORTHWEST')
     A          R JIMDATA
     A            FLD           80A       3SPACEA(1)
     A          R JANETDATA
     A            FLD           80A       3SPACEA(1)
     A          R JEFFDATA
     A            FLD           80A       3SPACEA(1)
     A          R JUNEDATA
     A            FLD           80A       3SPACEA(1)
     A          R JILLDATA
     A            FLD           80A       3SPACEA(1)
     A          R ENDPAGE                 ENDPAGE
     A          R RECORD1                 ENDPAGGRP
     A
```

*Figure 28. DDS Coding for File Segmentation*

   If you do not have access to printer file DDS, such as when you are using Infoprint Designer for document layout, you can use the CRTAFPDTA command for segmentation.

2. Create a map object using this command:

   `CRTPDFMAP PDFMAP(`*`mylib/mymap`*`) TEXT('`*`description`*`')`

3. Add entries to the map object to specify intelligent routing:
   a. Enter this command: `WRKPDFMAPE PDFMAP(`*`mylib/mymap`*`)`
   b. On the panel that opens, specify Option 1, Add. Also specify the sequence number for the entry and whether it will be for segmented spooled files:

```
                          Work with PDF Map Entries
PDF Map . . . :   mymap                 Position to . . _____________
  Library . . :     mylib

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print
  8=Work with segments

     Sequence
Opt  Number      Segmented  Text
 1   100           *YES

  (No entries in table)
```

c. Use the panels that follow to specify the spooled file selection criteria and the mapping actions. This is what we want to do for the northwest region:
   - E-mail the northwest data as a PDF to Jim, Janet, and Jeff.
   - Print one hard copy to an AFP printer and mail it to Ahmad.
   - Fax a copy to Aalyah (we will respool this as AFP for use with an AFP fax program).
   - Store one copy as an archive in the integrated file system.

   Figure 29 shows the Add PDF map Entry display, where you enter the filter criteria. In our example, we have a spooled file with a unique name (SALESRPT) that contains all of the regional reports:

```
                            Add PDF map entry
Segmented entry . . . . :   *YES
Sequence number . . . . .   100
Text  . . . . . . . . . .   Sales reports


Type choices, press Enter.

Output queue  . . . . . .   *ALL              Name, Generic*, *ALL
  Library . . . . . . . .                    Name
Spooled file  . . . . . .   SALESRPT          Name, Generic*, *ALL
Job name  . . . . . . . .   *ALL              Name, Generic*, *ALL
User  . . . . . . . . . .   *ALL              Name, Generic*, *ALL
User data . . . . . . . .   *ALL              Character value, *ALL
Form type . . . . . . . .   *ALL              Character value, *ALL


                                              Character value, *ALL
```

*Figure 29. Adding an Entry for the Northwest Region*

Next, we create the segment entries. To create the segment for the northwest region, we specify these values, where NORTHWEST is the routing tag in the spooled file:

```
                    Work with PDF Map Segmented Entries
Sequence                                Job name  . . :   *ALL
  number  . . :   100                   User  . . . . :   *ALL
Spooled file  :   SALESRPT              User data . . :   *ALL
Output queue  :   *ALL                  Form type . . :   *ALL
  Library . . :
Position to . .

Type options, press Enter.
  1=Add   2=Change   3=Copy   4=Remove   5=Display   6=Print

Opt  Routing tag
 1   NORTHWEST

  (No segments in entry)
```

*Figure 30. Add Segment Entry for Northwest Region*

Now we define what we want done with this segment, using the criteria specified above

```
                              Add Segment Entry
Type choices, press Enter.

Routing tag . . . . . .   NORTHWEST

PDF map actions:
  Mail  . . . . . .   *YES              *YES, *NO
  PDF spooled file  . . .   *NO         *YES, *NO
  AFP spooled file  . . .   *YES        *YES, *NO
  Stream file . . . . . .   *YES        *YES, *NO
```

*Figure 31. Specifying the Mapping action for the Northwest Segment*

We accept the default values on all of the panels except the ones shown. On the first e-mail panel, press F7 to specify more than one e-mail address, this panel opens:

```
                      Specify more values for To e-mail

Type TO e-mail addresses, press Enter.

TO e-mail addresses:
                              jim@company.com
                              janet@company.com
                              jeff@company.com
```

*Figure 32. Specifying E-mail Addresses for Northwest report*

To specify where the AFP file is to be spooled, fill in these values:

**Note:** If your input spooled file specifies AFPRESPOOL(*PRINT) as user-defined data, specify different user-defined data here. Otherwise, the job will not print and will be held.

```
                          Add AFP spooled file
Type choices, press Enter.

AFP spooled file:
  Output queue . . . . . .   AFPQUEUE          Name, *PSFCFG
    Library  . . . . . .      MYLIB            Name
  Spooled file . . . . . .   *SPLF             Name, *SPLF
  User data  . . . . . . .   *SPLF             Character value, *SPLF
  Form type  . . . . . . .   *SPLF             Character value, *SPLF
  User-defined data  . . .   *SPLF
  _____________________________________________________________________
  _____________________________________________________________________
  _____________________________________________________________________
  _____________________________________________ Character value, *SPLF
```

*Figure 33. Specifying AFP Respool Parameters for the Northwest Report*

Specify where to store the PDF stream file:

```
                          Add PDF stream file
Type choices, press Enter.

PDF stream file:
  Stream file  . . . . . .   /reports/northwest/month.pdf
  _____________________________________________________________________
  _____________________________________________________________________
  _____________________________________________ file name, *PSFCFG
  Public authority . . . . .   *EXCLUDE        *EXCLUDE, *RWX, *RX, *RW,
                                                 *WX, *R, *W, *X
```

*Figure 34. Specifying PDF Stream File Parameters for the Northwest Report*

Follow the same process to add segment entries for the other sales regions.

4. Specify the appropriate values in a PSF configuration object. In this example, we create a new PSF configuration object. It specifies to use the IBM-supplied mapping program and the map object that we created in step 2. It also specifies to split the spooled file and create multiple spooled files. We specified AFPRESPOOL(*YES) so that one or more segments can be spooled as AFP.

   In order to have the spooled file sent to the PDF subsystem, we must specify something other than *NONE for PDFGEN. However, Infoprint Server uses the values specified in the mapping program for PDFGEN and any related parameters, such as PDFSENDER.

   Use these keywords to activate segmentation and intelligent routing:

   ```
   CRTPSFCFG PSFCFG(myconfig) PDFGEN(*MAIL) PDFMULT (*YES *SPLIT)
             PDFMAILSVR (SMTP mail server) PDFMAPPGM(QSYS/QPQMAPEXIT)
             PSFDFNOPT('PDFMAP(mylib/mymap)''AFPRESPOOL(*YES)'
             'AFPOUTQ(mylib/myoutq)')
   ```

5. Configure the device. Because PDF transform services use a virtual writer concept, we must create a printer device description for that virtual writer. These are the key parameters to specify on the CRTDEVPRT (Create Device Description, Printer) command:

   ```
   TYPE(*IPDS)
   DEVCLS(*LAN)
   MODEL(0)
   LANATTACH(*IP)
   AFP(*YES)
   PORT(nnnn)
   RMTLOCNAME(127.0.0.1)
   USRDFNOBJ(mylib/myconfig *PSFCFG)
   ```

*nnnn* is a unique port number and the IP address 127.0.0.1 is a loopback address that identifies this writer as a virtual writer. The USRDFNOBJ (User Defined Object) specifies the PSF configuration object created in step 4.

6. Vary on the device:

   ```
   VRYCFG CFGOBJ(myconfig) CFGTYPE(*DEV) STATUS(ON)
   ```

7. Start the writer:

   ```
   STRPRTWTR(device)
   ```

8. We can place this new distribution into production simply by routing the monthly sales report to the PDF device (writer) we created in Step 5 on page 46. All the segmentation, PDF transformation, and routing takes place automatically.

## Error Situations

There are different ways Infoprint Server treats your spooled file when there is an error in matching to a map object entry. This applies to a situation in which no match is found for an input spooled file or when a match is found for a segmented input spooled file, but no match is found for a certain segment within that file:

- **When there is a PDF administrator defined**, the PDF administrator is notified of the error in an e-mail with the PDF file attached. This PDF file is not encrypted, even when encryption is specified. The input spooled file is held, and if there are more segments to process, processing continues.
- **When there is no PDF administrator defined**, the input spooled file is held, and processing stops.

The PDF administrator is specified on the PSF defined option of the PSF configuration object.

In addition, if there is a syntax error in a specified To, BCC, CC, or reply-to e-mail address for a PDF file, that PDF is not e-mailed to any of those addresses. If an administrator is specified, the PDF file is sent to that address and processing continues. If no administrator is specified, processing stops.

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# W

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