

IBM InfoPrint Manager 3.1 for AIX



Procedures: Printing from SAP R/3 (4/07/99)

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Part I: Defining Output Devices for Printing ABAP and OTF on SAP R/3 Release 3

Defining Output Devices for Printing ABAP and OTF on SAP R/3 Release 3

The following topic describes how to create a new output device in SAP R/3 Release 3 for submitting both ABAP and OTF data to Infoprint Manager 3.1 for both transforming to AFP data and printing the output.

To enable this support, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

1. Ensure that you have a logical printer defined in Infoprint Manager, which will send jobs to your physical printer device.
2. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path,
or typing `/nSPAD` in the **ok-Code** field.
3. From the **Spool Administration** window, select the **Output devices** option and select the **Change** push-button.
4. Select the **Create** icon and fill in the following information on the **Create Output Device** window:

Field	Value
Output Device	<p><i>Prt1</i></p> <p>Type the name that R/3 users will need to access the printer.</p>
Device type	<p><i>IBMAFP</i></p> <p>Specify the device type that has been defined in the R/3 system for the printer model. IBMAFP is the 240-pel printer designation, while IBMAFP3 is the 300-pel printer designation.</p> <p>You may have customized versions of these device types as well.</p>
Spool server	<p><i>us01d2_P40_41</i></p> <p>Specifies the name of the R/3 application server which will be the spool server that processes requests for this device.</p>
Host printer	<p><i>prt1-lp</i></p> <p>Specifies the name of the Infoprint Manager logical printer.</p>
Device class	<p>Enter a space so that this field accepts the default value of printer.</p>
Access method in host spool	<p><i>Z</i></p> <p>Specifies the method that the spool work process uses to pass data to the host spool system.</p>

- From the menu bar, click on the **Back** icon and the system will prompt you to save the new output device.

Part II: Defining Output Devices for Printing PCL and PostScript on SAP R/3 Release 3

Defining Devices that Use Infoprint Manager for Access

Method L

The following topic describes how to create a new output device for printing PCL and PostScript data to Infoprint Manager 3.1 on SAP R/3 Release 3.

To enable this support, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

1. Ensure that you have a logical printer defined in Infoprint Manager, which will send jobs to your physical printer device.
2. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path.
or typing `/nSPAD` in the **ok-Code field**.
3. From the **Spool Administration** window, select the **Output devices** option and select the **Change** push-button.

4. Select the **Create** icon and fill in the following information on the **Create Output Device** window:

Field	Value
Output Device	<p><i>PRT1</i></p> <p>Type the name that R/3 users will need to access the printer.</p>
Device type	<p><i>POSTSCPT</i></p> <p>Select the device type that has been defined in the R/3 system for the printer model. POSTSCPT applies to any PostScript printer, while HPLJ4 applies to a Hewlett-Packard LaserJet 4 printer.</p>
Spool server	<p><i>us01d2_P40_41</i></p> <p>Select the name of the R/3 application server which will be the SAP R/3 spool server (spool work process) that processes requests for this device.</p>
Host printer	<p><i>prt1-lp</i></p> <p>Type the name of the Infoprint Manager logical printer.</p>
Device class	<p>Enter a space so that this field accepts the default value of printer, which is <i>P</i>.</p>
Access method in host spool	<p><i>L</i></p> <p>Select the method that the spool work process uses to pass data to the host spool system.</p>

5. From the menu bar, click on the **Back** icon and the system will prompt you to save the new output device.

Defining Devices that Use Infoprint Manager for Access

Method U

This method is intended for use by Infoprint Manager users whose SAP R/3 applications run on non-AIX UNIX systems. For a preferred method of submitting jobs from non-AIX UNIX systems with Infoprint Manager that provides better feedback, see [Installing Infoprint when SAP Runs on HP-UX or Sun Servers](#).

The following topic describes an alternate method for creating an output device for printing either PCL or PostScript data from an SAP R/3 system that runs on either an HP-UX or Sun server to Infoprint Manager 3.1 running on AIX.

To enable this support, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

1. Ensure that you have a logical printer defined in Infoprint Manager, which will send jobs to your physical printer device.
2. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path
or typing /nSPAD in the **ok-Code** field.
3. From the **Spool Administration** window, select the **Output devices** option and select the **Change** push-button.

4. Select the **Create** icon and fill in the following information on the **Create Output Device** window:

Field	Value
Output Device	<i>PRT1</i> Type the name that R/3 users will need to access the printer.
Device type	<i>POSTSCPT</i> Select the device type that has been defined in the R/3 system for the printer model. POSTSCPT applies to any PostScript printer, while HPLJ4 applies to a Hewlett-Packard LaserJet 4 printer.
Spool server	<i>us01d2_P40_41</i> Select the name of the R/3 application server, which will be the SAP R/3 spool server (spool work process), that transfers output across a network link.
Destination hosts	<i>nwser</i> Type the hostname for the Infoprint AIX server.
Host printer	<i>prt1-lp</i> Type the name of the Infoprint Manager logical printer.
Device class	Enter a space so that this field accepts the default value of printer, which is <i>P</i> .
Access method in host spool	<i>U</i> Select the method that the spool work process uses to pass data to the host spool system.

5. From the menu bar, click on the **Back** icon and the system will prompt you to save the new output device.

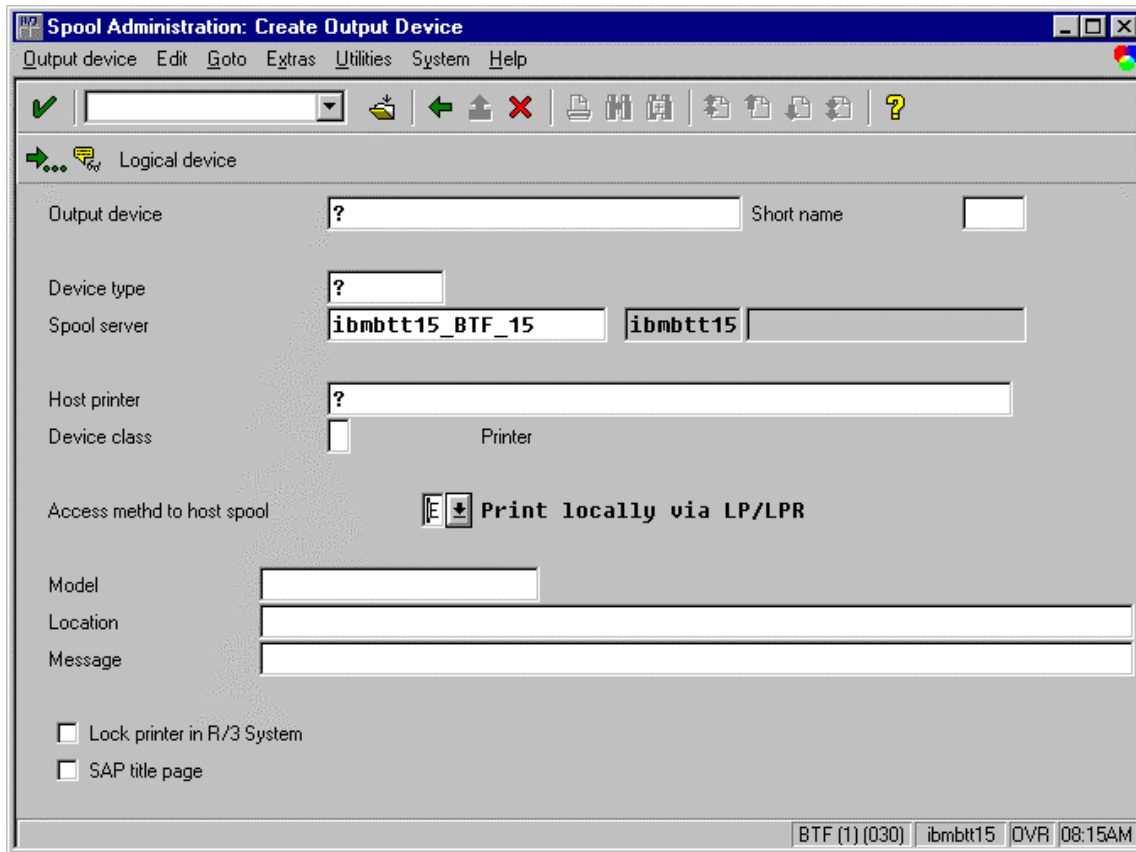
Part III: Printing from SAP R/3 Release 4 (Enhanced Status)

Printing from SAP R/3 Release 4 (Enhanced Status)

Use the following procedure to define devices to SAP R/3 Release 4. For more information, you might want to consult the "Connecting a Printer to an External Output Management System" topic in the SAP R/3 online documentation.

1. Ensure that you have a logical printer defined in Infoprint Manager, which will send jobs to your physical printer device.
2. From the SAP R/3 graphical user interface, specify the `spad` transaction.
3. From the **Spool Administration: Initial Screen** window, click the **Output Devices** button, click the **Change** (red pencil **F8** key) icon, and push the **Output Devices** push-button.
4. From the **Spool Administration: List of Output Devices** window, click the **Create** (white paper image to the right of the trash can) icon.
5. From the **Spool Administration: Create Output Device** window displayed below, fill in the following pieces of information:

From the Spool Administration: Create Output Device window displayed below, fill in the following pieces of information: Field	Examples
Output device: Specify a long name and allow the system to generate a short name.	IPM
Device type: Specifies the output data stream.	SAPGOF
Host printer: Type the Infoprint Manager logical printer name.	ip01-sam
Access method to host spool: Ensure you specify this Access Method.	E
LOMS: Specify the LOMS to which this device should be assigned. You specified this value on the Spool Admin.: Logical Output Management System window under Define the Infoprint Manager OMS to SAP R/3 .	IPM001
Spool server: Choose an applicable spool server from the entries list on the field.	ibmbtt15_BTF_15



Save this information by clicking on the folder icon (or specifying the **Ctrl + S** keys), then exit the interface.

Once you have saved these changes, you have a devices that will print to Infoprint Manager using Access Method **E**.

Because this device is defined to send jobs to Infoprint Manager, you can, among other tasks, [View Job Status, Job Events, and Job Queries](#), [Display Device Status](#), and [Cancel a Job](#).

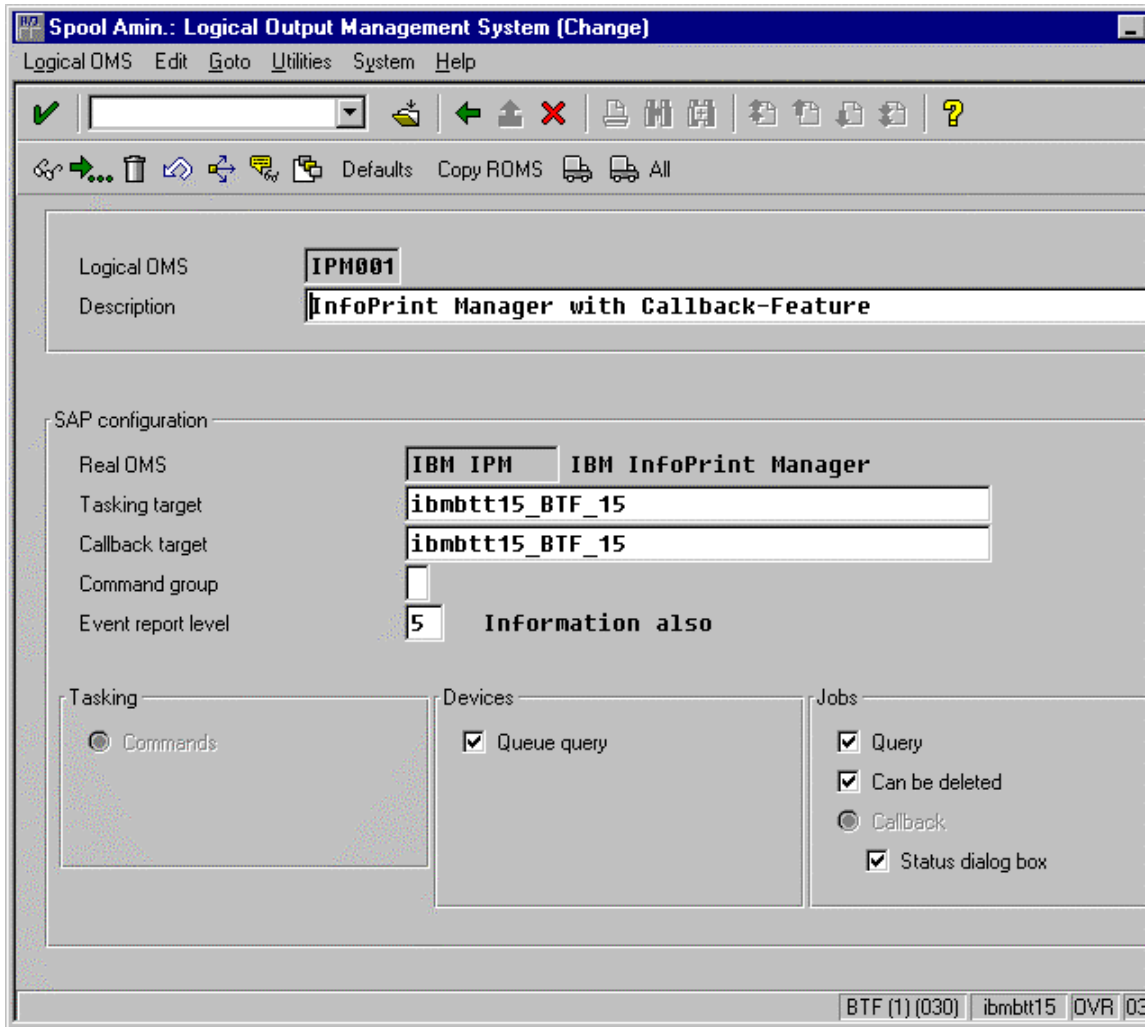
Activating End-User Pop-Ups

Infoprint Manager Version 3.1 delivers information to SAP R/3 about output requests (print jobs) as they process. SAP will alert job owners about problem completion and error information delivered from Infoprint Manager 3.1 through end-user pop-up messages.

Note: Until SAP R/3 Release 4.5B, the pop-up message is always reported only to users in the client where the OMS callback daemon has logged on. You defined this client when you [Defined a User for the OMS Callback Daemon](#). In SAP R/3 Release 4.5B, SAP delivers asynchronous pop-ups to users who are logged onto any SAP client.

To activate this support, ensure that you have done the following while installing and configuring Infoprint Manager with SAP R/3 Release 4.

1. From the SAP R/3 graphical user interface, modify the Logical Output Management System (LOMS) definitions by specifying the `spad` transaction.
2. From the **Spool Administration: Initial Screen** window, click on the **Extended admin** push-button (**f6** key) and select the **Logical OMS** push-button from the **Output management systems** pane to obtain a list of the Logical Output Management Systems (LOMS) available on your installation.
3. From the **Spool Admin.: List of Logical Output Management Systems** window, select the `IPM001` LOMS or another appropriate LOMS and click on the **Choose** (checkmark with a clock or **f2** key) icon.
4. From the **Spool Admin.: Logical Output Management (Display)** window, click the **Change** (red pencil **f8** key) icon.
5. From the **Spool Admin.: Logical Output Management System** window that is displayed below, check the **Status dialog box** field in the **Jobs** pane and save the changes.



6. Once you have specified this setting, information from the Infoprint Manager sent back to your SAP R/3 application server will be delivered in the form of a pop-up window. For example, if an output request was canceled, a pop-up **Information** window like the one displayed below should appear on the output requesters' SAPGUI.



Organizing OMS Output Devices into LOMs

While you can assign all of your R/3 OMS output devices to a single Logical Output Management System (LOMS), it might be useful to group output devices into separate LOMS. These separate LOMS can be based upon the functions that they perform, such as the four listed immediately below.

Using Separate Command Groups

You can define a different set of OMS command for each LOMS that you have defined. For example, your Infoprint Manager printers may require different submit command options, depending upon whether you are printing from ABAP and OTF input, or PCL and PostScript input. You can assign both sets of printers to their own LOMS and define a special command group that uses the special options for each LOMS.

Using Different OMS Services

You can define LOMSs to allow for the use of different OMS services by a group of printers. For example, you can restrict access to a particular ROMS feature like job cancellation. By creating a LOMS and turning off job cancellation, you can prevent SAP R/3 users from deleting output requests that are sent to the devices of the LOMS.

Distributing the Callback Workload

You can define separate LOMSs to distribute the workload of processing status reports from the Infoprint callback daemon. For each LOMS, specify a different R/3 server as the callback target. Before implementing this feature, consult the online documentation about LOMS that is provided with your SAP R/3 Release 4 system.

Using Different Report Levels or Event Delivery Criteria

You could also specify different report levels on the **Spool Admin.: Logical Output Management System (Change)** window, as described in [Selecting Event Report Levels](#).

Moving OMS Definitions Between Systems

You can maintain OMS definitions on a single application server by replicating your Infoprint Manager OMS definitions in other SAP R/3 systems. If you need to make changes to OMS definitions, you can then transport the OMS objects from the maintenance system to your other systems.

This maintenance model requires you to use only logical spool servers in the following:

- OMS ROMS and LOMS definitions
- Infoprint Manager Output device definitions

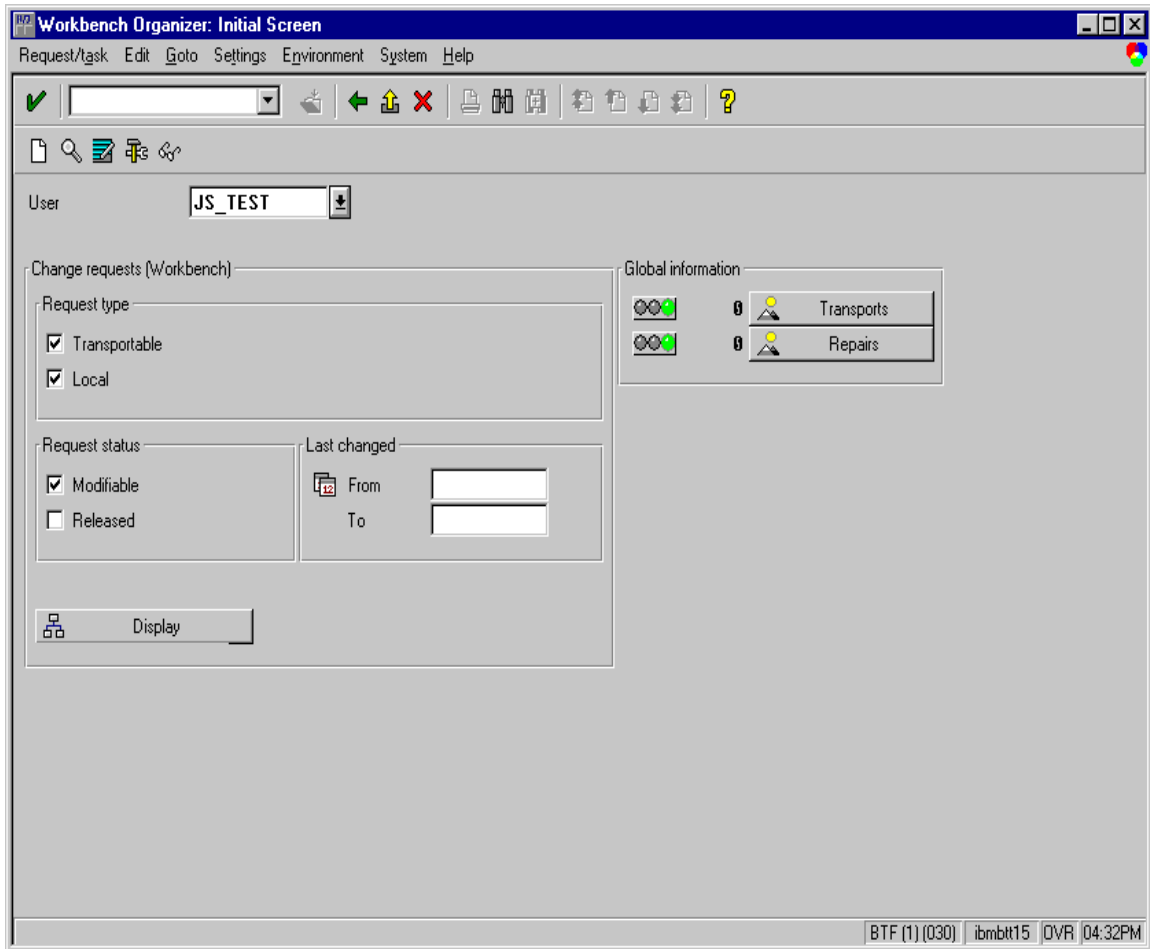
Logical servers allow you to organize your printing architecture and manage printers. By using only logical spool servers, you will not have to change server names in the OMS definitions after you have transported them. For more information about Logical Servers, refer to the "Spool Server Definitions: Classifying Servers, Using Logical Servers, and Using Alternate Servers" topic in your SAP R/3 Release 4 online documentation.

The following procedure describes how you can use the R/3 logistics (transport) system to move OMS definitions between SAP R/3 systems:

1. From the R/3 main menu, access the **Real OMS** window by using the following path **Tools > CCMS > and Spool > Spool Administration**, or type `spad` in the **ok-Code** field.
2. From the **Spool Admin.: Initial Screen** window, click on the **Extended admin** push-button (**f6** key) and select the **Real OMS** push-button from the **Output management systems** pane to obtain a list of the Real Output Management Systems (ROMS) available on your installation.
3. From the **Spool Admin.: List of Real Output Management Systems** window, select the **Change mode** push-button from the ROMS list and double-click on the ROMS definition that you want to transport.
4. From the the **Spool Admin.: Real Output Management System** window, choose the appropriate transport function:
 - To transport only the ROMS definition, push the **Transport** (truck) icon or specify the **Ctrl + f5** key.
 - To transport both the ROMS definition and all LOMS definitions that reference it, push the **Transport all** (truck) icon to the right or specify the **Ctrl + f6** key.

In either case, a transport request is created for transporting the OMS definition objects to other R/3 systems.

To transport your OMS definitions, type /SE09 in the **ok-Code** field so you can complete this task from the R/3 software logistics transport system.



To perform this transport and verify that it is successful, refer to the SAP R/3 online logistics documentation.

Selecting Event Report Levels

The following procedure describes how you can specify the level of Events that the callback daemon reports for jobs submitted through Infoprint Manager. For an example of the **Spool Admin.: Logical Output Management System** window, refer to page 9.

1. From the SAP R/3 graphical user interface, modify the Logical Output Management System (LOMS) definitions by specifying the `spad` transaction.
2. From the **Spool Administration: Initial Screen** window, click on the **Extended admin** push-button (**f6** key) and select the **Logical OMS** push-button from the **Output management systems** pane to obtain a list of the Logical Output Management Systems (LOMS) available on your installation.
3. From the **Spool Admin.: List of Logical Output Management Systems** window, select the `Ipm001` LOMS and click on the **Choose** (checkmark with a clock or **f2** key) icon.
4. From the **Spool Admin.: Logical Output Management (Display)** window, click the **Change** (red pencil **f8** key) icon.
5. From the **Spool Admin.: Logical Output Management System (Change)** window, specify a value for the **Event report level** field in the **SAP configuration** pane. Use the downward arrow to determine the message level you want (1 is the least and 5 is the most).

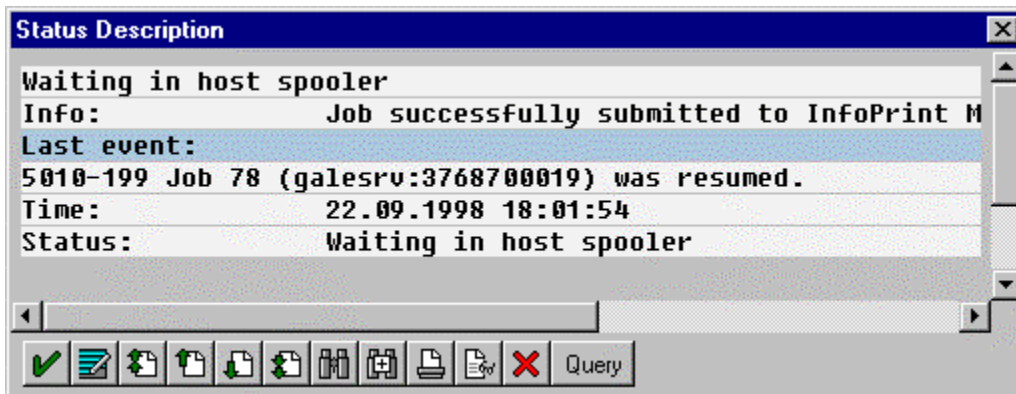
When you have finished, be sure to save your changed LOMS definition by clicking the **Save** folder icon.

Viewing Enhanced Job Status, Job Events, and Querying Jobs

The following procedure describes Output Management System (OMS) support for obtaining information about a print job sent to Infoprint Manager. By using this feature, you can see asynchronous events and synchronous queries about jobs reported to your SAP R/3 system.

To view the status of an output request, use the following procedure from the SAP R/3 Release 4 graphical user interface:

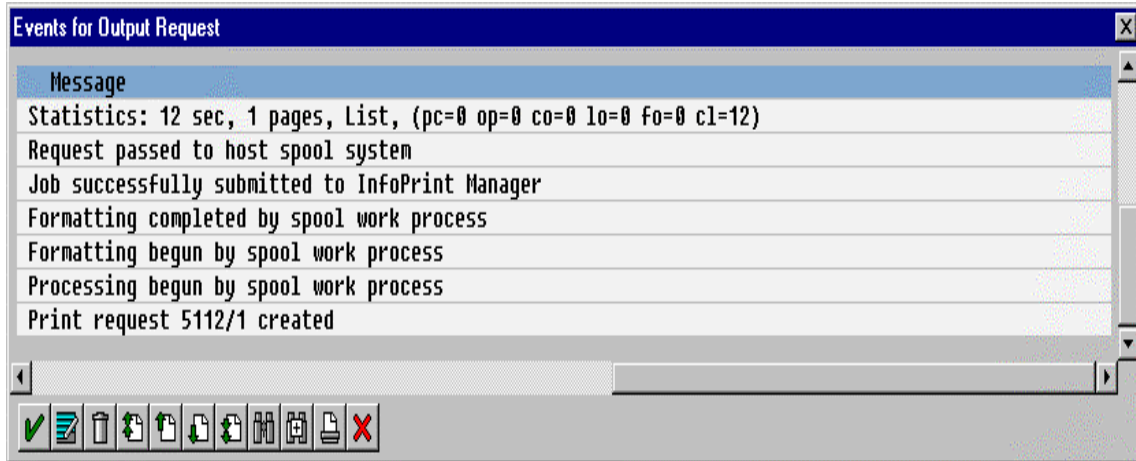
1. From the **Output Requests for Spool Request** xxxxxxxx window (where xxxxxxxx refers to the SAP Spool ID), double-click on the output request you want to view in the **Status** column on the far right.
2. From the **Status Description** pop-up window (example displayed below), you can see current information about the job, including the last event received. Click on the Events (**F5** key) button.



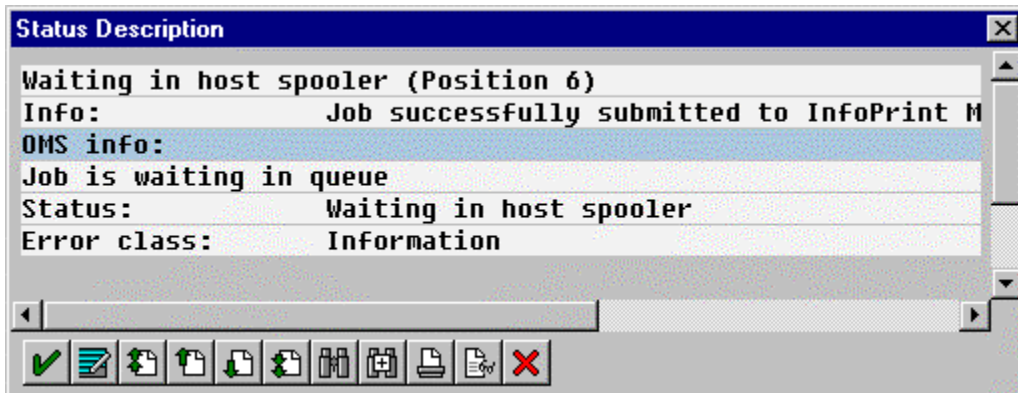
3. From the **Events for Output Requests** pop-up window (displayed below), you can view all the events concerning this job.

Date	Time	Class	Area	Status	Printout
22.09.1998	18:28:46	Problem	Spool	Waiting in host spooler	Not printed
22.09.1998	18:01:54	Information	Spool	Waiting in host spooler	Not printed
22.09.1998	18:01:42	Information	Spool	Waiting in host spooler	Not printed
22.09.1998	18:01:31	Problem	Spool	Waiting in host spooler	Not printed
22.09.1998	17:58:53	Information	Spool	Waiting in host spooler	Not printed
22.09.1998	17:58:53	Information	Spool	Waiting in host spooler	Not printed
22.09.1998	17:57:11	Information	R/3 spool		Not printed

Note: This **Events for Output Requests** pop-up window is displayed two times to show (1) the right side of the window with the date, time, and current status of the job, and (2) the left-side of the window with its message text.



4. From the **Status Description** pop-up window, you can also click on the Query (f8 key) button and issue a query to return the current information for a job, including its position in the queue. For example, the following displays the result of a 'Query' for a job that has been successfully submitted for printing:



When you close this 'query' **Status Description** window, the system updates the latest status for that job in other displays.

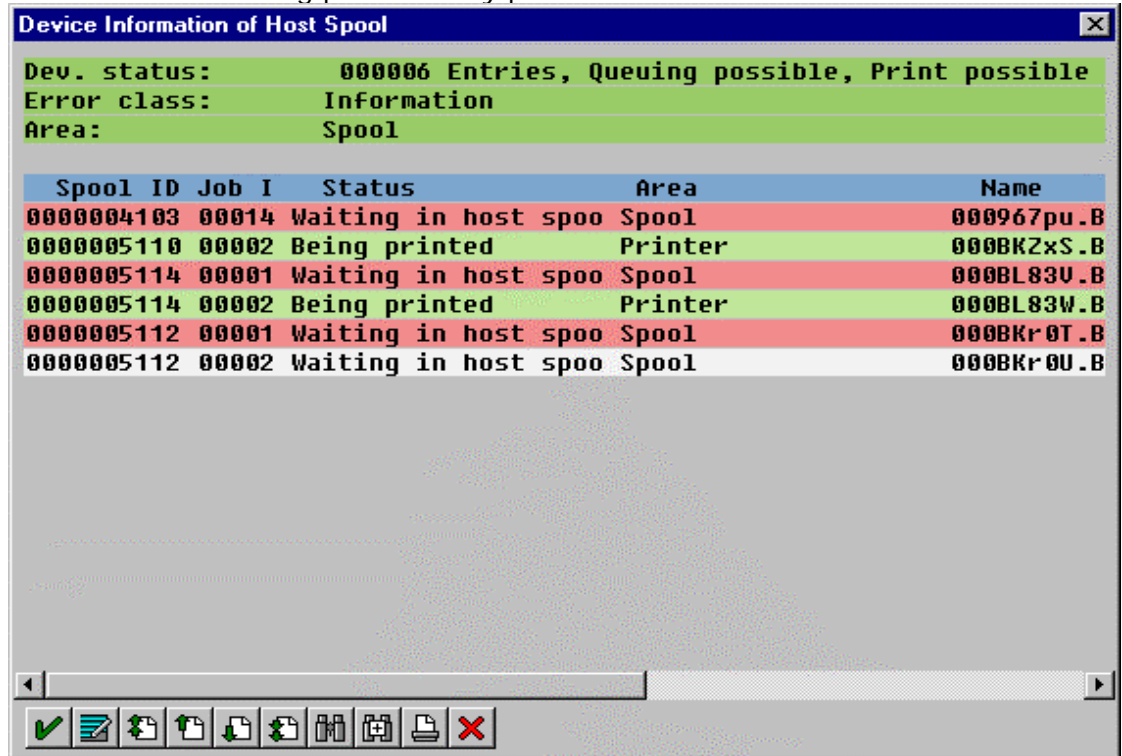
Displaying Device Status

To display the status of Infoprint Manager printers and the queue of jobs that have been sent to an Infoprint printer, use the following procedure from the SAP R/3 graphical user interface:

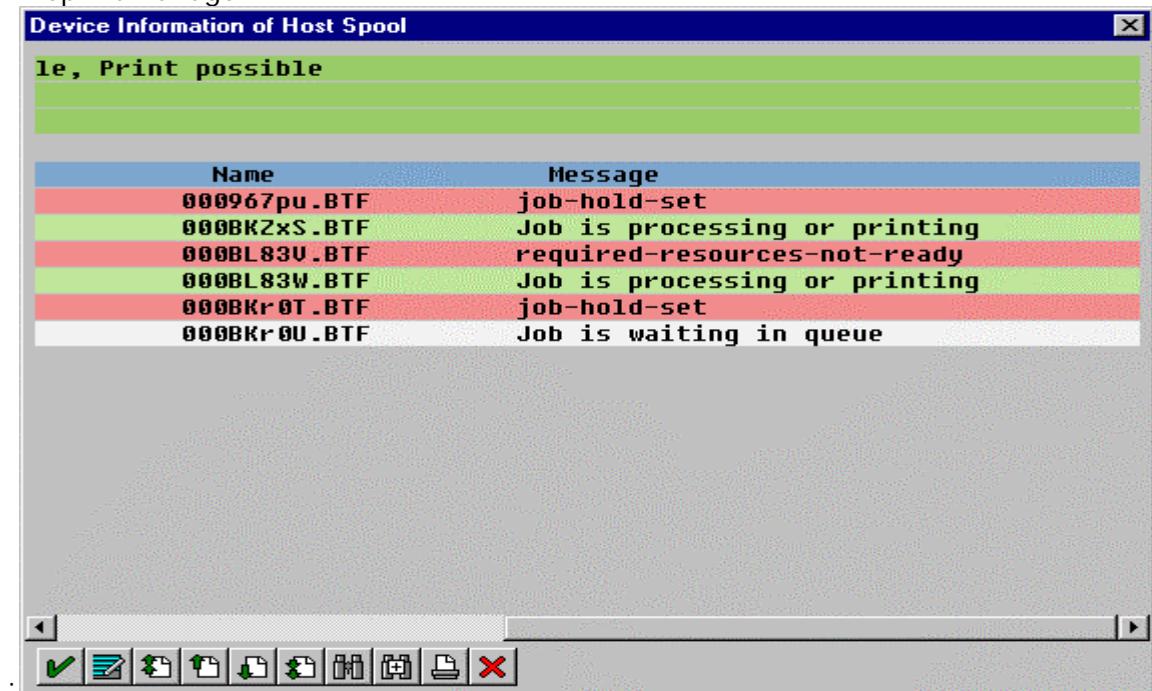
1. From the R/3 main menu, access the **Spool Administration: Initial Screen** window by selecting the Tools main menu and then selecting the **Tools--Administration--Spool--Spool Administration** path
or typing /nSPAD in the **ok-Code** field.
2. From the **Spool Administration: Initial Screen** window, click on the **Output devices** button from the **Configuration** area.
3. From the **Spool Administration: List of Output Devices** window, do the following:
 1. Highlight the your Infoprint printer from the **Devices** column.
 2. Press the **Output device** pull-down menu and select the **Choose** option (or specify the **f2** key).
4. From the **Spool Administration: Change Output Device (Display)** window, click on the **External jobs** button.
5. The **Device Information of Host Spool** pop-up window displays the status of this device.

Note that this window is displayed twice to capture both the right and the left sides.

1. This section indicates that there are six jobs in the Infoprint Manager queue, two of which are being processed by printers:



- (2) The list of jobs includes information about each job, including its current status in Infoprint Manager:

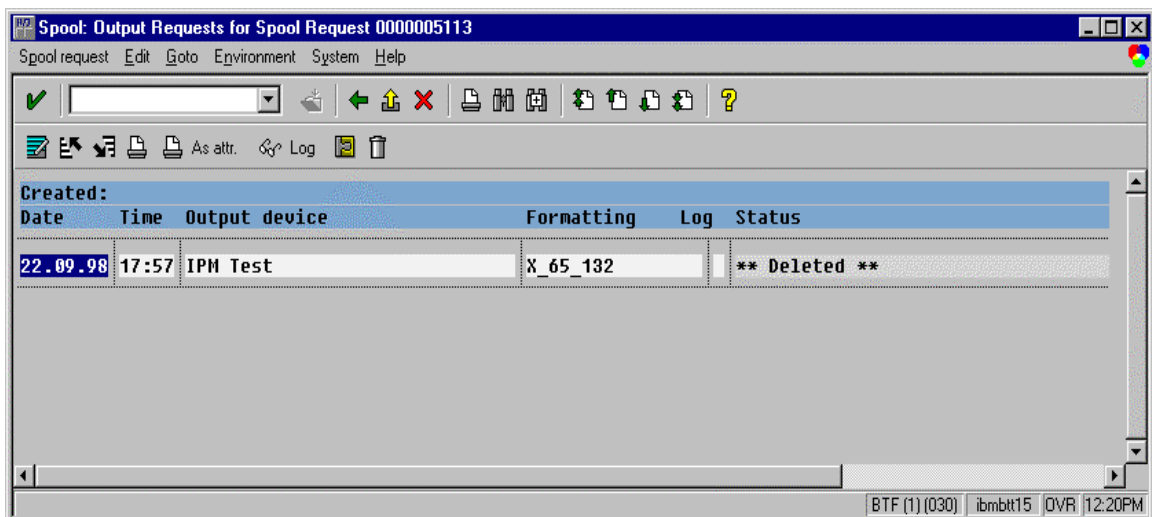


Canceling Jobs

The following procedure describes how you can cancel SAP print jobs that you have sent to the Infoprint AIX server. Use the following procedure from the SAP R/3 Release 4 graphical user interface. Note that this procedure provides only one of many methods for accessing the **Spool Output Requests for Spool Request XXXXXXXXXX** window.

1. From the R/3 main menu, access the **Spool Administration: Initial Screen** window by typing `/nspad` in the **ok-Code** field.
2. From the **Spool Administration: Initial Screen** window, click on the **Output devices** button from the **Configuration** area.
3. From the **Spool Administration: List of Output Devices** window, do the following:
 1. From the **Devices** column, use the mouse to highlight the SAP device that you used to send your job to Infoprint Manager.
 2. Press the **Spool Requests (shift + f6 key)** button.
4. From the **Spool Requests for Device XXX** (where **XXX** is the name of the device that you selected), double-click on the spool request of the output request that you want to cancel.
5. From the **Spool: Attributes** window, click on the **Output requests** button.
6. From the **Spool Output Requests for Spool Request XXXXXXXXXX** window (where **XXXXXXXXXX** is the number of your spool request), click on the output request you want to cancel to highlight it and then click on the trash can icon (or specify the **shift + f2 key**) to delete the output request from Infoprint Manager.

This step invokes the Infoprint Manager command for canceling a job (`pdrm`).



Shutting Down the SAP Callback Daemon

The following procedure describes how you can shut down the SAP Callback daemon and restart it. This procedure is useful if you are moving the SAP Callback daemon from one SAP application server to another, or if the SAP R/3 system it supports is not going to be used for awhile.

From an AIX command line on the system where the SAP Callback daemon is currently running (whether Infoprint AIX server or SAP application server), type:

```
stopcbd systemname
```

where *systemname* is your 3-character SAP R/3 system name.

This command stops the Callback daemon, enabling you to migrate it from one server to another.

If you do not want a reboot of the system to restart the SAP Callback daemon, remove its entry in the **/etc/rc.ipsap** file.

If you are moving the SAP Callback daemon to another system, remember to follow the instructions for both [Configuring the Callback Daemon](#) and [Starting the SAP Callback Daemon](#) from the SAP R/3 Release 4 installation instructions.

Part IV: Using AFP Printing (sap2afp transform) Procedures

Customizing Print Characteristics by Defining a Customized Device Type

A Device Type is a collection of table entries that you can access and modify online to describe the fonts, the printer driver to use to create the data, and the formats that can be used for SAPscript printing. Every Output Device must have a Device Type that is used to process the Output Document. A physical printer can have many Output Devices, with different Device Types for each one.

For basic printing, the **SAP** transform can use existing Device Types (such as *IBMAFP*, *IBMAFP3*, or *SAPGOF*) and existing formats, such as *LETTER* or *X_65_255*. However, if you plan on customizing any of these print characteristics, you should create a customized device type so that you will not lose data when you upgrade your SAP R/3 system.

To create a customized device type, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

1. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path.

or typing /nSPAD in the **ok-Code** field.
2. From the **Spool Administration** window, select the **Utilities-->Copy device type** pull-down option.
3. From the **Copy Device Type** window, specify the device type you want to customize (in this case, *SAPGOF*) in the **Copy device type** field and provide a name for your customized Device Type (in this case, *ZDOCGOF*) in the **to device type** field.

Note that any customized Device Type must start with the Z character or it will be overwritten when you upgrade to a new level of SAP R/3.

4. From the menu bar, click on the **execute** icon.
5. From the **Create object catalog entry** window directly below, decide whether or not you want to be able to copy this customized device type to another SAP system. If you do, specify a **Development class** field value.

If you do not need to copy this Device Type to another SAP system, click on the **Local object** push-button as displayed in the example below:

Create object catalog entry [X]

Object

Attributes

Development class [v]




Author

Repaired

Original system

Original language

Generated object

 Local object  Lock overview 

6. Click on the **save** icon.

SAP R/3 provides a screen to show the customized Device Type and the original device type from which it was copied.

Changing Document Print Orientation

The **sap2afp** transform allows you to enhance the quality of your printing from a SAP R/3 enterprise through the use of form definitions. Form definitions allow you to use electronic overlays and specify both media orientation (how the page is printed) and bin selection. The **sap2afp** transform defines which form definition should be used for printing through the use of Formats. Every spool job in R/3 requires a Format (Paper type), whether it is ABAP data ("X_65_80") or OTF data ("LETTER"). SAP R/3 formats are mapped to Advanced Function Presentation (AFP) form definitions in the **pagedef.tab** configuration file. You can display the Format of a spool request in the output controller (**SP01**).

By default, the **sap2afp** transform uses **F1SAP**, which by default defines duplex, portrait printing. In addition, Infoprint Manager provides an assortment of form definitions, which are documented in the [IBM Infoprint Manager Commands Reference](#). Consult this list to find a form definition that meets your printing needs.

The following topic describes how to specify landscape media orientation through a form definition for an entire document and then [connect](#) the newly-created Format to a Device Type. By mapping a SAP Format to a form definition in the **pagedef.tab** file, you can define the media style for the entire job. Depending upon the type of data you wish to print, there are two separate procedures:

- [Defining a New ABAP Format](#)
- [Defining a New OTF Format](#)

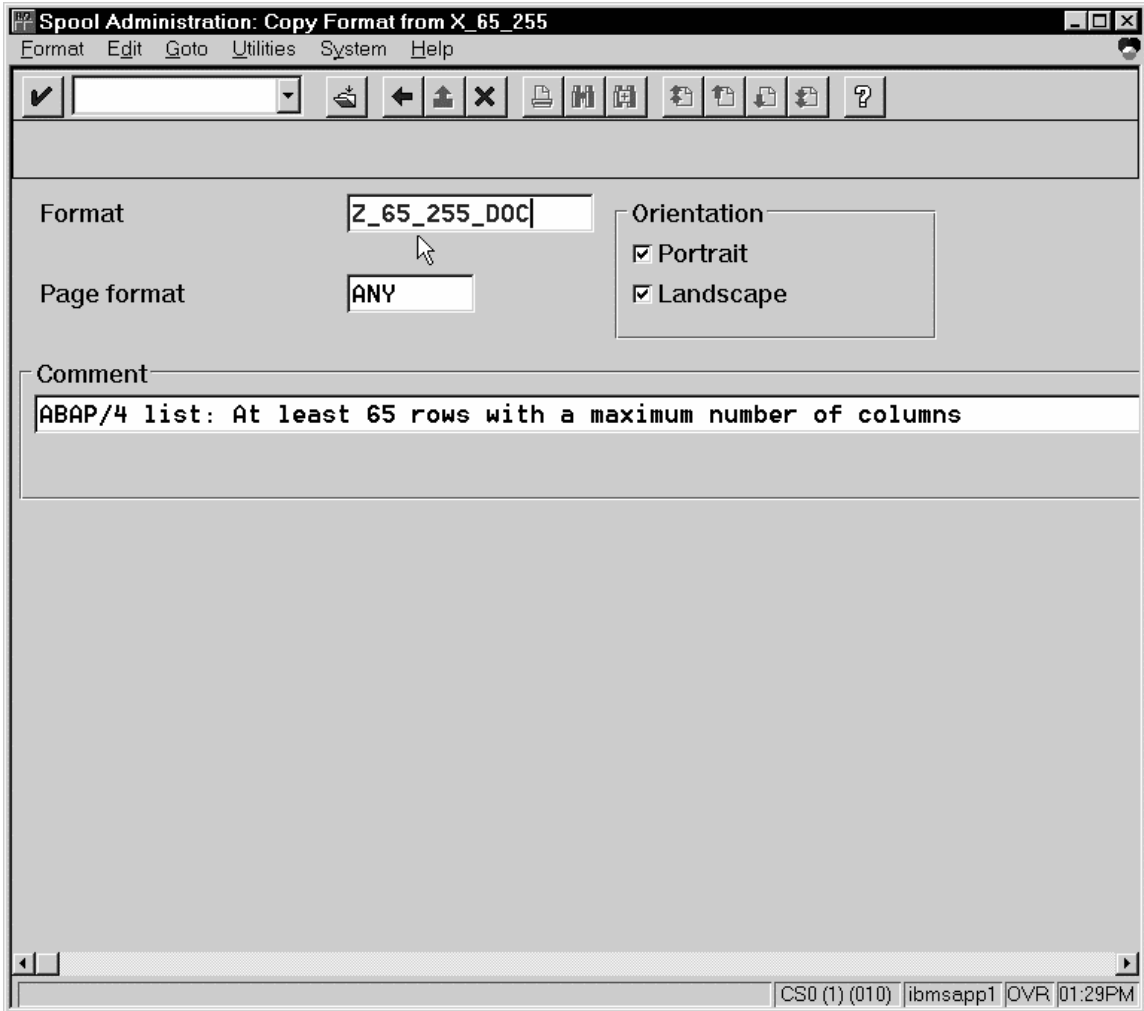
Defining a New ABAP Format

If you are printing Advanced Business Application Programming (ABAP) jobs, you must create a blank ABAP Format in the SAP system by using the following procedures:

1. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path,
or typing `/nSPAD` in the **ok-Code** field.
2. From the **Spool Administration: initial screen** window, select the **Formats** option and click the **Change** push-button.
3. From the **Spool Administration: Format** window, select an existing Format (in this case, `X_65_255`) from which to copy.

Note that all ABAP system formats follow the naming convention of `x_number-of-rows_number-of-columns`.

4. From the **Spool Administration: Copy Format from X_65_255** panel, specify the name of your customized Format with the naming convention of `Z_number-of-rows_number-of-columns_more-identifying-text` as shown below:



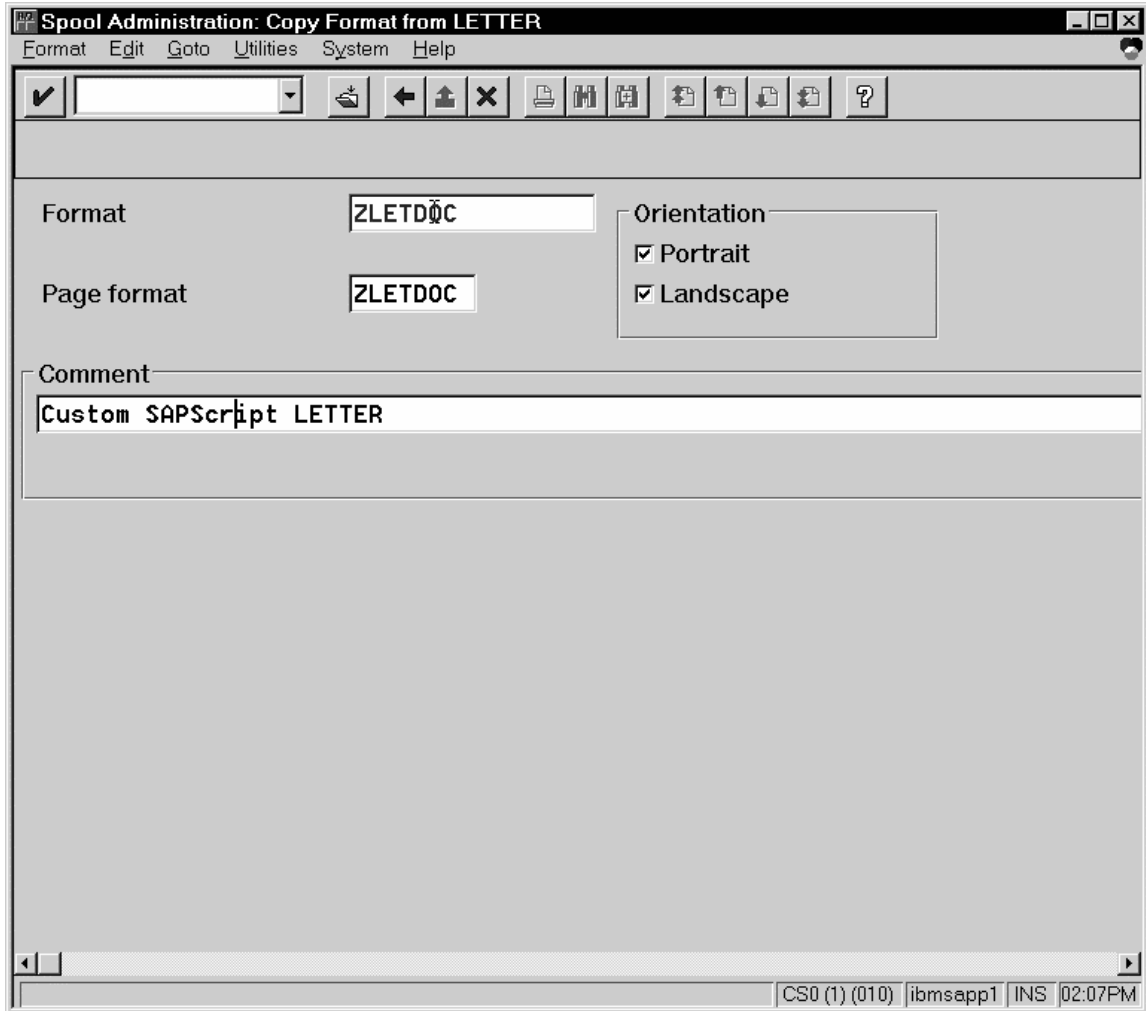
5. Select the back **icon** (the left-pointing arrow) and the system prompts you to save the new ABAP format.

Once you have saved the new ABAP format, you must [Connect the New Format to a Device Type](#).

Defining a New OTF Format

If you are printing Output Text Format (OTF) jobs, you must create page format with the same name as the customized format you plan to apply.

1. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path,
or typing /nSPAD in the **ok-Code** field.
2. From the **Spool Administration: initial screen** window, select the **Page formats** option and click the **Change** push-button.
3. Select the page format that you want to copy (in this case, LETTER) and click on the **copy from** push-button.
4. From the **Spool Administration: Copy Page Format from LETTER** window, specify the name of the customized paper type that you are creating (in this case, ZLETD0C).
5. Select the back icon (the left-pointing arrow) and the system prompts you to save the new page format.
6. Specify /nSPAD in the **ok-Code** field.
7. From the **Spool Administration: initial screen** window, select the **Formats** option and click the **Change** push-button.
8. Select the Format that you wish to copy (in this case, ZLETD0C), and select the **copy from** push-button.
9. From the **Spool Administration: Copy Format from LETTER** window, fill in the values as displayed below:



10. Select the back **icon** (the left-pointing arrow) and the system prompts you to save the new OTF format.

Once you have saved the new OTF format, you must [Connect the New Format to a Device Type](#).

Connecting a New Format to a Device Type

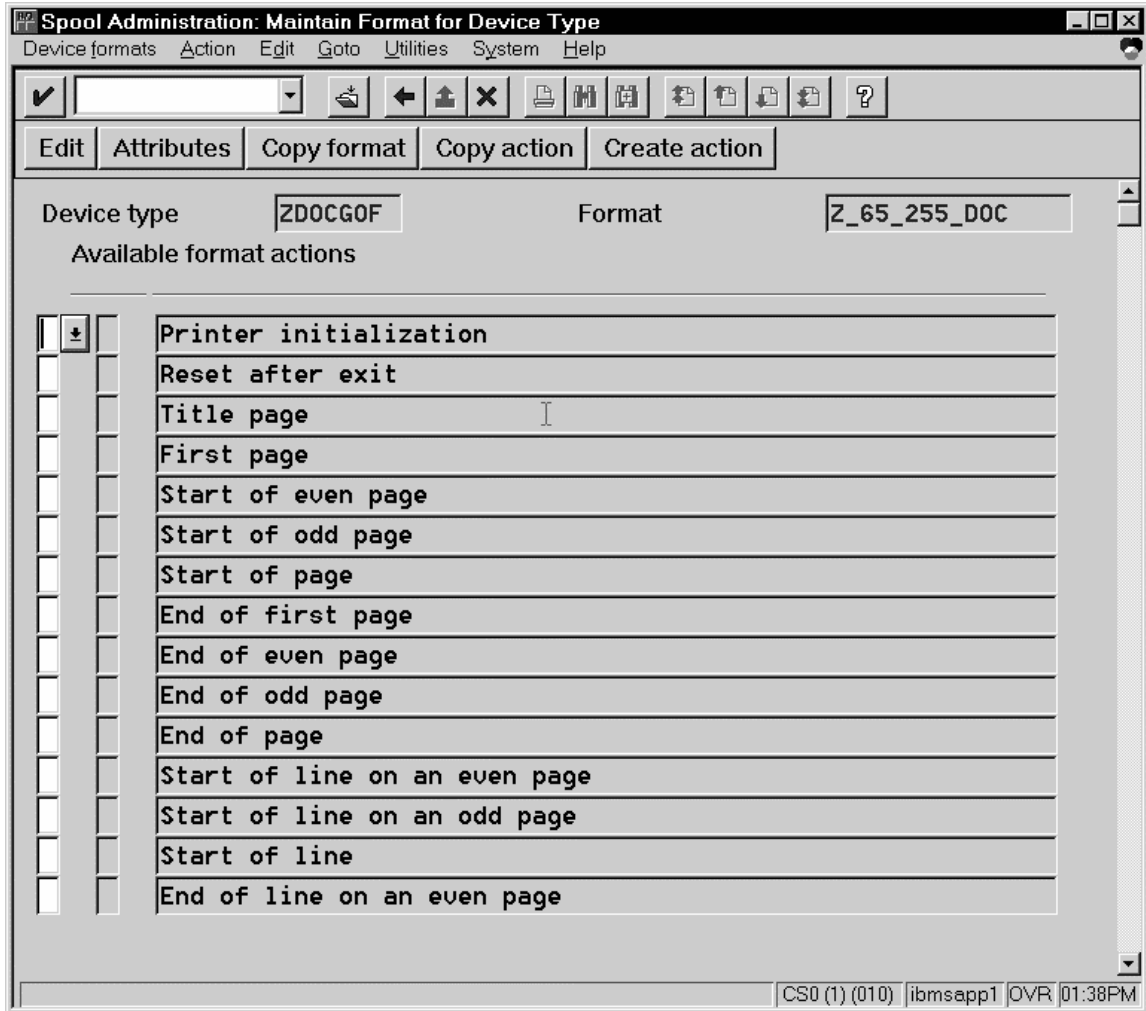
To use the format you created, you must connect the format to a device type by performing the following steps:

1. From the R/3 main menu, access the **Spool Administration** window by selecting the Tools main menu and then selecting the **Tools-- Administration--Spool-- Spool Administration** path.

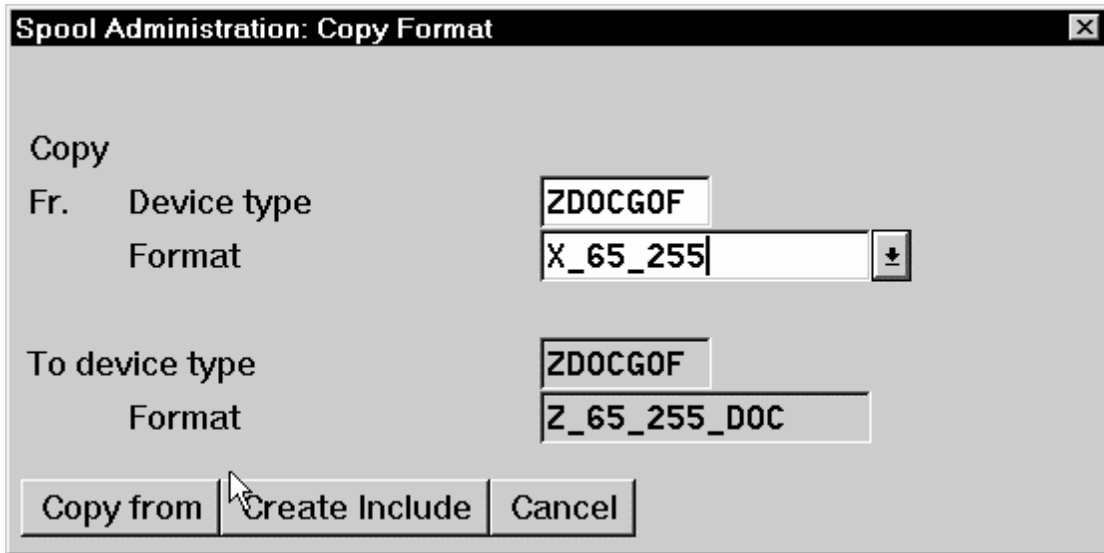
or typing /nSPAD in the **ok-Code** field.
2. From the **Spool Administration: initial screen** window, select the **Device formats** option and click the **Change** push-button.
3. From the **Spool Administration: Choose Format for Device Type** window, specify the Device Type (link to creating custom device types) and your customized Format name (in this case, *Z_65_255_DOC* or *ZLETDOC*) in the appropriate fields.

Note that all ABAP customized user Formats follow the naming convention of *Z_number-of-rows_number-of-columns_descriptive-text*.

4. Select the Execute icon.
5. From the **Maintain Format for Device Type** window displayed immediately below, the blank left column indicates that the customized format has not yet been initialized:



6. Click on the **Copy format** push-button.
7. From the **Spool Administration: Copy Format** window, you can see that the system has filled in the information from the **Maintain Format for Device Type** window:



8. Press the **Copy from** push-button to initialize your new Format.
 9. Select the back **icon** (the left-pointing arrow) and the system prompts you to save the new format.
 10. From your Infoprint AIX server, move to the `/usr/lpp/psf/sap2afp` directory and access the **pagedef.tab** configuration file.
 11. Within the **pagedef.tab** configuration file, create a new entry for the format that you just created. If you are printing landscape, specify **F1C10011** as the form definition value.
- Note that all fields must be specified in **pagedef.tab**. However, for OTF printing, only the form definition value is used, while ABAP printing uses all values.
12. Exit and save the **pagedef.tab** configuration file.

F1SAP Form Definition

After you apply this APAR, the form definition specified in the **pagedef.tab** configuration file will be submitted with every [Advanced Function Presentation \(AFP\)](#) data stream document. **F1SAP** is the default form definition, which each of the media maps references. The following briefly describes the media maps contained within this form definition. Note that the print direction is "across" and the Page Position in inches from the edge of the paper is 0.165,0.165 for all 25 media maps.

Media Map	Bin	Sides	Presentation Mode
F1A10111	1	2	Portrait
S100000P	1	1	Portrait
S200000P	2	1	Portrait
S300000P	3	1	Portrait
S400000P	4	1	Portrait
D100000P	1	2	Portrait
D200000P	2	2	Portrait
D300000P	3	2	Portrait
D400000P	4	2	Portrait
T100000P	1	2 (Tumble)	Portrait
T200000P	2	2 (Tumble)	Portrait
T300000P	3	2 (Tumble)	Portrait
T400000P	4	2 (Tumble)	Portrait
T100000P	1	2 (Tumble)	Portrait
S100000L	1	1	Landscape
S200000L	2	1	Landscape

Media Map	Bin	Sides	Presentation Mode
S300000L	3	1	Landscape
S400000L	4	2	Landscape
D100000L	1	2	Landscape
D200000L	2	2	Landscape
D300000L	3	2	Landscape
D400000L	4	2	Landscape
T100000L	1	2 (Tumble)	Landscape
T200000L	2	2 (Tumble)	Landscape
T300000L	3	2 (Tumble)	Landscape
T400000L	4	2 (Tumble)	Landscape

Changing Page Print Orientation

The **sap2afp** transform allows you to enhance the quality of your printing from a SAP R/3 enterprise through the use of form definitions. Form definitions allow you to use electronic overlays and specify both media orientation (how the page is printed) and bin selection. A form definition can consist of multiple copy groups, which are also known as media maps.

The following procedure shows how you can define a name for each defined page within an existing Layout Set. If you do not need to change page orientation on a page-by-page basis, refer to [Changing Document Print Orientation](#). Page-by-page mapping is necessary only if different pages within a document are formatted differently. You should use a custom layout set when making these changes. If you use a system Layout Set, your changes are overwritten each time you upgrade your SAP R/3 system. Remember that each media map remains in effect until SAP R/3 encounters a new media map.

Every spool job in R/3 requires a Format (Paper type), whether it is ABAP data ("X_65_80") or OTF data ("LETTER"). SAP R/3 formats are mapped to Advanced Function Presentation (AFP) form definitions in the **pagedef.tab** configuration file. You can display the Format of a spool request in the output controller (**SP01**).

When mapping an SAP Format to a form definition in the **pagedef.tab** file, the first media map within the form definition will define the media style for the entire job. If you have a job that contains different electronic overlays on each page, you might have to switch media styles on each page. **SAP2AFP** converts names defined in the paper resources for pages within Layout Sets to AFP media map names, and for each page that defines a paper resource, that AFP media map will be used.

By default, the **sap2afp** transform uses **F1SAP**, which contains 25 separate media maps for simplex printing, duplex printing, bin selection, and page orientation. In addition, Infoprint Manager provides an assortment of form definitions, which are documented in the [IBM Infoprint Manager Commands Reference](#).

1. From the SAP R/3 graphical user interface, access the Layout Set menu screen.

You can access this view from the SAP R/3 main menu by selecting:

Tools -- Word Processing -- Layout Set

2. From the **Layout Set** main menu, access the Change Pages option and select the job for which you are changing page orientation (in this case, ZASORDER1).
3. From the first page of the job, double-click so that it is highlighted and fill in the **Resource Name** field (under the **Print Attributes** pane) as shown below:

Layout Set: Change Pages: ZASORDER1

Layoutset Edit Goto Attributes Utilities Environment System Help

Choose Header Paragraphs Character strings Windows Page windows

Pages

Page	Meaning	NextPage	Mode	No. type
FIRST	First page	NEXT	START	ARABIC
NEXT	Next page	NEXT	INC	ARABIC

Page 1 frm 2

Standard attributes

Page: FIRST Description: First page

Next page: NEXT

Page counter: Mode: START

Numbering type: ARABIC

Print attributes

Resource name: S100000L

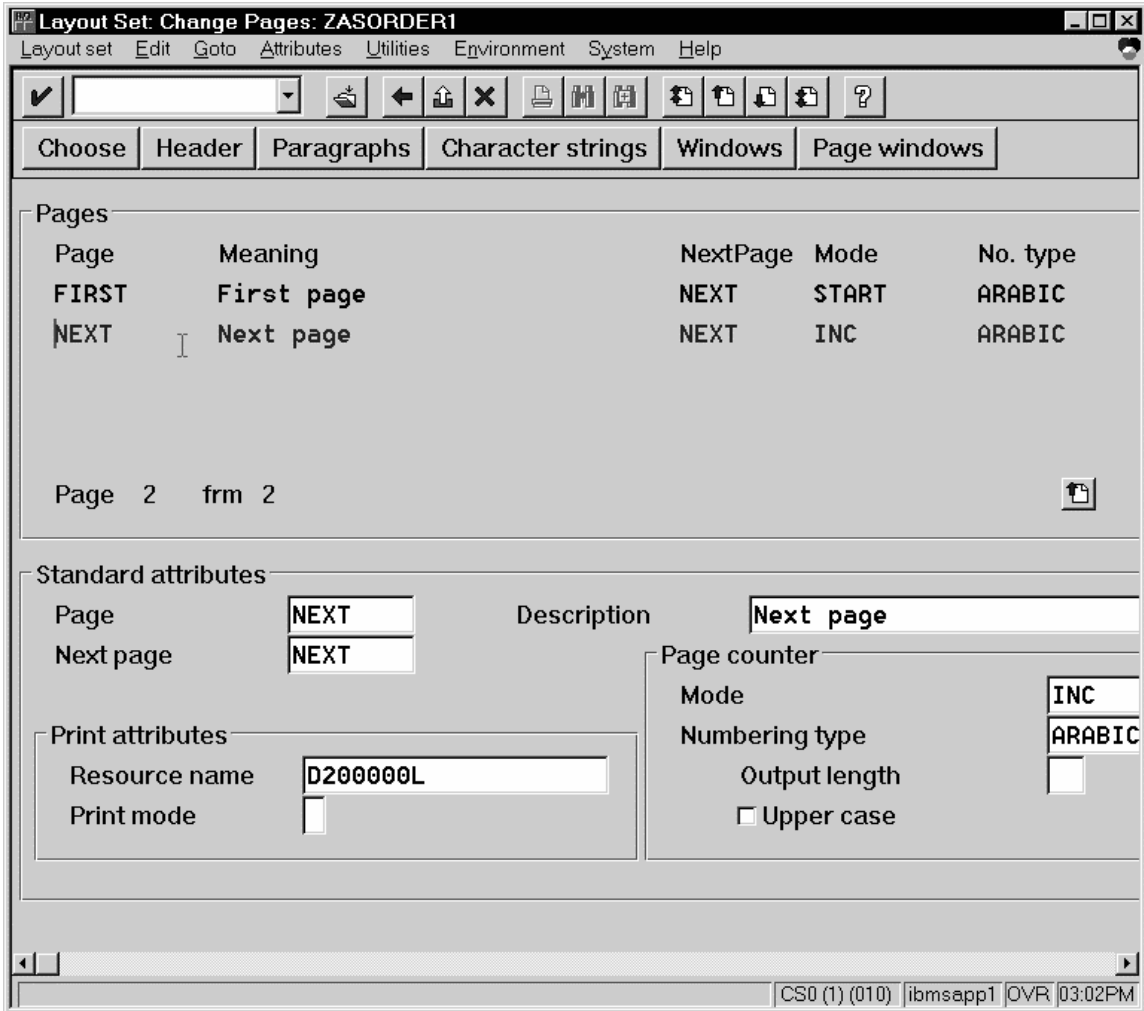
Print mode:

Output length:

Upper case

CS0 (1) (010) | ibmsapp1 OVR 03:01PM

4a. Double-click on the next page that you intend to modify and fill in the **Resource Name** field on the second page as shown below:



4. Continue with the same procedure on any page where you want to specify a new media style.
5. Once you have finished, click on the **save** (open folder) icon to save this setting.

Enabling Multi-Byte Character Sets for Japanese Fonts

The **sap2afp** data stream transform supports the use of multi-byte character sets (MBCS) through the use of the **iconv** utility on an AIX operating system. To use this support, you must run the SAPGOF (or a compatible) device type on a SAP R/3 system at Release 4.0A or higher.

To enable this support, an Infoprint Manager AIX administrator must perform the following procedure:

1. Ensure that the **iconv** utility is installed on the Infoprint Manager system where the **sap2afp** transform is running.

To support the printing of box characters, IBM now provides three new customized conversion file with the **sap2afp** transform:

- **IBM-932-SAP2AFP**: which extends the **IBM-932** conversion file
- **IBM-1030-SAP2AFP**: which extends the **IBM-930** conversion file
- **IBM-1031-SAP2AFP**: which extends the **IBM-939** conversion file

For Japan, the **sap2afp** transform uses the conversion file **IBM-932-SAP2AFP_IBM-1031-SAP2AFP** by default. You can modify the 'convert to' segment of the **80000000.tab** and **defcp.tab.japan** to match by setting the value to **IBM-1030-SAP2AFP**.

1. Create a backup copy of the current **/usr/lpp/psf/sap2afp/defcp.tab** file.
2. Copy the **/usr/lpp/psf/sap2afp/defcp.tab.japan** file to the **/usr/lpp/psf/sap2afp/defcp.tab** file.
3. Create a backup copy of the current **/usr/lpp/psf/sap2afp/pagedef.tab** file.
4. Copy the **/usr/lpp/psf/sap2afp/pagedef.tab.japan** to the **/usr/lpp/psf/sap2afp/pagedef.tab** file.
5. Obtain the fonts needed for printing.

Font recommendations are given in both the files **/usr/lpp/psf/sap2afp/fonts.tab** and **/usr/lpp/psf/sap2afp/pagedef.tab**.

Setting Up Your SAP R/3 System to Support New OTF User Fonts

Use the following procedure when using the **sap2afp** data stream transform to print with a new font that you have created for the job:

1. From the R/3 main menu, access the **Font** window so you can create a font family for this new, customized font, by selecting the Tools main menu and then selecting the **Word Processing -- Font** path.
or typing `/nSP73` in the **ok-Code** field.
2. From the **SAPscript Font Maintenance: Initial Screen** window, select the **Font families** option and select the **Change** push-button.
3. Select the **Create** icon and fill in the font information on the **Create/Change Font Family** window as shown in below:

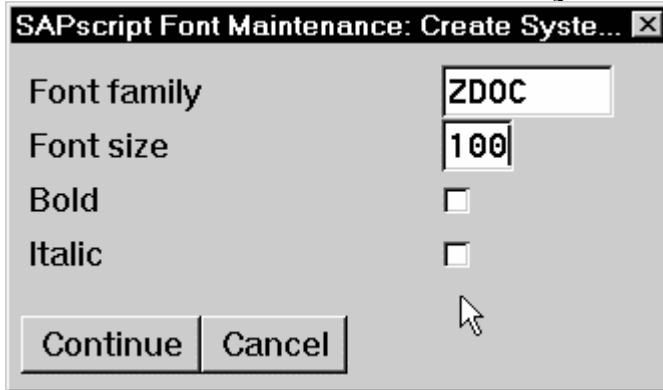
The screenshot shows a dialog box titled "SAPscript Font Maintenance: Create/Change Font Family". The fields are filled as follows:

Font family	ZDOC
Description	Documentation MICR font
Proportional	<input type="checkbox"/>
Replacement family 1	OCRA
Replacement family 2	
Replacement family 3	
Character set	4001

Buttons: Continue, Cancel

4. Select the **Continue** push-button.
5. When the system prompts you for a **Change Request Query** request, select the **Cancel** push-button.
6. From the **SAPscript Font Maintenance: Initial Screen** window, select the **System Fonts** option and select the **Create** push-button.

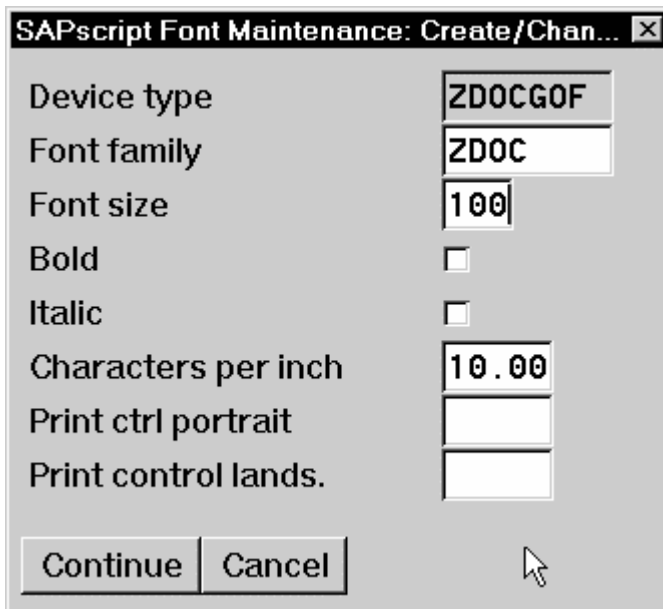
7. Fill in the information from the **Create System...** window as indicated below:



The screenshot shows a dialog box titled "SAPscript Font Maintenance: Create System...". It contains the following fields and controls:

Font family	ZDOC
Font size	100
Bold	<input type="checkbox"/>
Italic	<input type="checkbox"/>
Continue Cancel	

8. Select the **Continue** push-button.
9. When the system prompts you for a **Change Request Query** request, select the **Cancel** push-button.
10. From the **SAPscript Font Maintenance: Initial Screen** window, select the **Printer fonts/AFM metrics** option and select the **Change** push-button.
11. From the **Create/Change...** window displayed below, select the intended device type (ZDOCGOF) and fill in the remaining information:



The screenshot shows a dialog box titled "SAPscript Font Maintenance: Create/Change...". It contains the following fields and controls:

Device type	ZDOCGOF
Font family	ZDOC
Font size	100
Bold	<input type="checkbox"/>
Italic	<input type="checkbox"/>
Characters per inch	10.00
Print ctrl portrait	
Print control lands.	
Continue Cancel	

12. Select the **Continue** push-button.

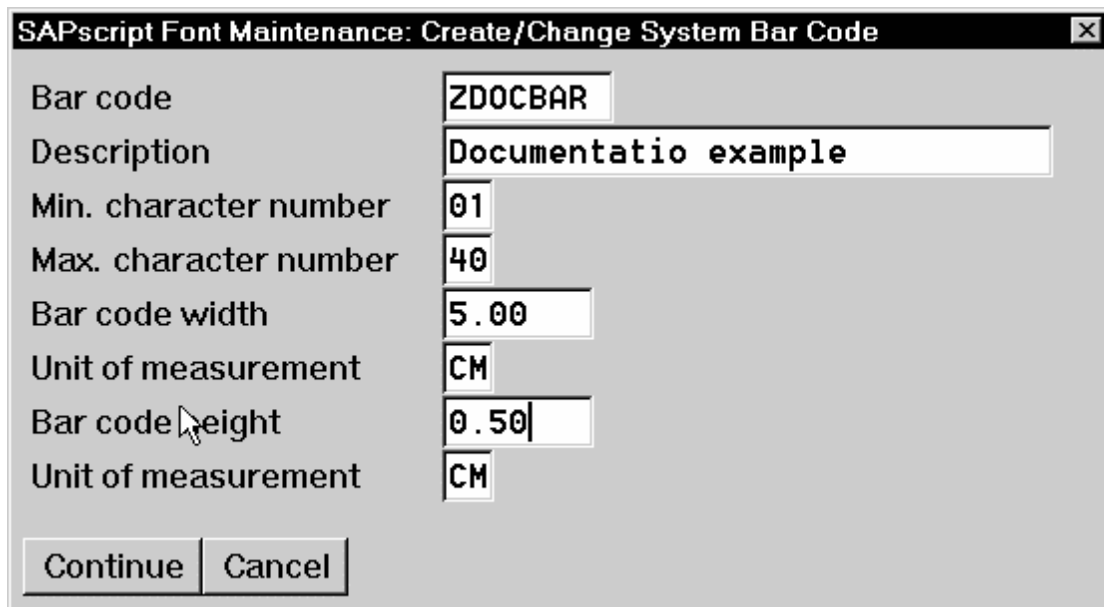
Before you can use this new Output Text Format (OTF) font, you must define a layout set that contains this new font to use your device type.

13. Add an entry in the **fonts.tab** configuration file that identifies this new OTF font and ensure that these resources are on the Infoprint AIX server where your Infoprint physical printer resides.

Setting Up Your SAP R/3 System to Support New OTF User Bar Codes

Use the following procedure when using the **sap2afp** data stream transform to print with a new bar code that you have created for the job:

1. From the R/3 main menu, access the **Font** window by either taking the **Word Processing -- Font** path. or typing `/nSP73` in the **ok-Code** field.
2. From the **SAPscript Font Maintenance: Initial Screen** window, select the **System bar codes** option and select the **Change** push-button.
3. Select the **Create** icon and fill in the bar code information on the **Create/Change System Bar Code** window as shown in below:



Field	Value
Bar code	ZDOCBAR
Description	Documentatio example
Min. character number	01
Max. character number	40
Bar code width	5.00
Unit of measurement	CM
Bar code height	0.50
Unit of measurement	CM

Buttons: Continue, Cancel

4. Select the **Continue** push-button.

5. When the system prompts you for a **Change Request Query** request, select the **Cancel** push-button.
6. From the **SAPscript Font Maintenance: Initial Screen** window, select the **Printer bar codes** option and select the **Change** push-button.
7. From the **Create/Change...** window displayed below, select the intended bar code (ZDOCGOF) and fill in the remaining information:

Device type	ZDOCGOF
Bar code	ZDOCBAR
Bar code prefix	SBP01
Bar code suffix	SBS01

Continue Cancel

8. Select the **Continue** push-button.

Before you can use this new Output Text Format (OTF) bar code, you must define a layout set that contains this new bar code to use your device type (in this case, ZDOCGOF).

9. Add an entry in the **barcode.tab** configuration file that identifies this new OTF bar code name to an actual bar code type. The **barcode.tab** configuration file identifies values in the following format:

```
BarCode=ZDOBAR Type=017 Mode=002 Flag=128
```

Note: Ensure that the new bar code resources are in your AIX resource path and reside on the Infoprint AIX server, where your Infoprint physical printer resides.

For more information about the information in the barcode.tab configuration file and how it relates to the Bar Code Object Content Architecture (BCOCA), see the next topic.

Barcodes and Printing from SAP R/3 Through Infoprint Manager

The following information maps the Bar Code Object Content Architecture values with the SAP R/3 system values found in the **barcode.tab** configuration file.

Barcode Type Field Values	Description
X'01'	Code 3 of 9
X'02'	MSI
X'08'	EAN-8
X'09'	EAN-13
X'0C'	Interleaved 2 of 5
X'11'	Code 128
X'18'	POSTNET

'Mode' Field Values	Barcode Type	Meaning
1	X'01'	Present the bar code without a generated check digit.
2	X'01'	Generate a check digit and present it with the bar code.
1	X'02'	Present the bar code without check digits generated by the printer.
2	X'02'	Present the bar code with generated IBM modulo-10 check digit. This check digit will be the second check digit; the first check digit is the last byte of the BSA data.
3	X'02'	Present the barcode with two check digits. Both check digits are generated using the IBM modulo-10 algorithm.

'Mode' Field Values	Barcode Type	Meaning
5	X'02'	Present the barcode with two check digits. The first check digit is generated using the IBM modulo-11 algorithm; the second using the IBM modulo-10 algorithm. The first check digit equals the remainder; exception condition EC-OE00 exists if the first check-digit calculation results in a value of 10.
0	X'08'	Present an EAN-8 barcode symbol. The input data consists of seven digits: two flag digits and five article digits. All seven digits are encoded along with a generated check digit.
0	X'09'	Present an EAN-13 barcode symbol. The input data consists of twelve digits: two flag digits and ten article digits, in that order. The first flag digit is not encoded. The second flag digit, the article number digits, and generated check digits are encoded. The first flag digit is presented in HRI form at the bottom of the left quiet zone. The first flag digit governs the A and B number-set pattern of the barcode and space coding of the six digits to the left of the symbol center pattern.
1		Present the bar code without a generated check digit. In sequence, the input data consists of a start character, digits to be encoded, and a stop character.
2	X'0C'	Generate a check digit and present it with the bar code. In sequence, the input data consists of a start character, digits to be encoded, and a stop character.
2	X'11'	Generate a Code 128 symbol using subset A, B, or C as appropriate, to produce the shortest possible bar code from the given data. The Code 128 code page is used to interpret the bar code symbol data. Generate a check digit and present it with the data.
0	X'18'	Present the ZIP code as 5 digits.
1	X'18'	Present the ZIP code as 9 digits.

Flag Field Values	Meaning
128	Present without Human Readable Text (HRI)
0	Present with Human Readable Text

Adding Box Shading Values to Printed Output

Infoprint Manager for AIX supports both Output Text Format (OTF) shading values and border thickness values.

Note that this support is now provided in the [ipm_print command](#). You do not need to use this procedure, unless you are specifying the **sap2afp** Command directly from the command line.

If your printer supports the graphics object content architecture (GOCA) feature, you can use the **BX** OTF command to print boxes that are either clear, solid, or contain four different levels of shading. The levels of shading are a percentage between 0 and 100, with 0 indicating a clear box and 100 a solid box. To recognize input from the **BX** Output Text Format (OTF) command, specify the following command on the SAP R/3 panel:

```
rspo/host_spool/custom_print=/usr/lpp/psf/bin/sap2afp -d &S -f &F -g
```

This command allows you to print boxes that are either clear, solid, or contain four different levels of shading. You perform this task during installation when you define the print command while Activating Access Method Z. Just add the **-g** option to the end of the line. For more information on the **BX** command values required to specify box shading, refer to your SAP R/3 documentation.

TIP: If you specify this option to an Infoprint logical printer that is not enabled for GOCA, the file will print a presentation text object content architecture (PTOCA) box or boxes and the following message sequence for each box:

```
0420-535: ERROR: One or more graphics objects were encountered. The
printer does not support this type of object.
```

```
:
```

```
:
```

```
0420-879: Infoprint continues processing the print job: The STOP
when errors found in IMAGE and GRAPHICS data field on the
Infoprint SMIT Error Handling Options panel is set to no.
```

Part V: Submitting Faxes from SAP R/3

Submitting Faxes from SAP R/3

Faxing jobs from SAP R/3 to Infoprint Manager is similar to printing jobs from SAP R/3 to Infoprint Manager: you must define a SAP device that is connected to an Infoprint Manager destination. However, you must define a SAP device so that a fax number can be passed to Infoprint Manager.

You can submit faxes from both SAP R/3 Release 3 and SAP R/3 Release 4 systems, providing that you have installed the [Infoprint Fax option](#) on the Infoprint AIX server. If you are running on a SAP R/3 Release 3 system, you must have configured [Access Method L to use the ipm_print command](#). If you are running on a SAP R/3 Version 4 system, you must have installed and configured [Infoprint Manager as an Output Management System \(OMS\)](#).

Once you have verified that the prerequisites cited above have been applied, use the following two procedures to implement sending faxes from SAP R/3.

Creating an R/3 Fax Device

The following procedure describes how you can create a SAP R/3 fax device for submitting jobs to an Infoprint AIX server.

1. Ensure that you have defined a logical destination in Infoprint Manager that will send jobs to the fax destination.
2. From the SAP R/3 graphical user interface, specify the `spad` (**Tools->Administration, Spool->Spool Administration**) transaction.
3. From the **Spool Administration: Initial Screen** window, click the **Output Devices** button, click the **Change** (red pencil **f8** key) icon, and push the **Output Devices** push-button.
4. From the **Spool Administration: List of Output Devices** window, click the **Create** (white paper image to the right of the trash can) icon.

- From the **Spool Administration: Create Output Device** window displayed below, fill in the following pieces of information:

Field	Examples
Output device: Type a name for the device.	<i>FAX</i>
Device class: Select a device class for Fax.	<i>F</i>
Host printer: Type the Infoprint Manager logical destination (printer) name that will send the job to the Infoprint fax destination.	<i>ip01-sam</i>
Access method to host spool: Ensure that you specify the appropriate Access Method for your SAP release.	<i>L (Release 3)</i> <i>E (Release 4)</i>
LOMS: If you are running on a SAP R/3 Release 4 system, specify the LOMS to which this device should be assigned. You specified this value on the Spool Admin.: Logical Output Management System window under Define the Infoprint Manager OMS to SAP R/3.	<i>IPM001</i>
Spool server: Choose an applicable spool server from the entries list on the field.	<i>ibmbtt15_BTF_15</i>

- Save your device definition, by specifying **Output Device --> Save** from the menu options.
- Specify the `scon` (**Tools->Communication->Configuration**) transaction.
- From the **SAPcomm: Configuration** window, select the **Location** option from the **Destination** pane and click on the **Change** push-button.
- Click on the check box to close the pop-up message window that displays information about the table's client independent status.
- From the **SAPcomm: "destination location": Overview** window, click on the **New entries** push button and specify the Output Device that you created in step 4 above.

Note: Specify the appropriate country code in the **Ctry** column. For example, specify "US" for an installation in the United States.

11. From the **New Entries: Details of Created Entries** window, click on the **save** folder icon (or specify the **Ctrl + S** keys) to save your changes.
12. From the **SAPcomm: Configuration** window, select the **Selection** option from the **Destination** pane and click on the **Change** push-button.
13. Click on the check box to close the pop-up message window that displays information about the table's client independent status.
14. From the **SAPcomm: "destination selection"** window, click on the **New Entries** field.
15. From the **New Entries: Details of Created Entries** window, fill in the following values on the **Selection** pane:

Field	Examples
Service: Specify the type of service.	TELEFAX
Cntry: Specify the country code that you specified in step 9 above.	US

Note that the **Key**, **Type**, **Area Served**, and **Device group** fields should all be left blank.

16. Under the **Destination** pane, specify the output device that you created in step 4:

Field	Examples
Output device: Specify the short name for the device you created in step 4 above.	FAX

Note that the **Country of location** field should be left blank.

17. Save your fax definition, by clicking the **Save folder** icon (or using the **Ctrl + S** keys).

Once you have completed this procedure, you are ready [to submit a fax request from SAP R/3 to Infoprint Manager](#).

Submitting a Fax from SAP R/3 to Infoprint Manager

The following procedure describes how you can submit a fax from your SAP R/3 system to the Infoprint AIX server. Note that you must have already [created an R/3 fax device](#) before using the following procedure:

1. From the SAP R/3 graphical user interface, create a spool request for a document that you want to fax.

Note: Ensure that the **Print immediate** push button is not selected.

2. Enter sp01 in the OK-Code field.
3. From the **Spool Requests** window, select the spool request that you specified in step 1 and click on the **Printer** icon.
4. From the **Spool: Output Request** window, specify the relevant fields in the **Print parameters** and **Title page** pane, then click on the **Fax** icon button.
5. From the **Spool: Query FAX Number** pop-up window, specify the number to which you are sending the fax in the **Recipient number** field and the appropriate country key in the **Country key** field.
6. Click on the **Fax** button.

Your fax job will be sent to the Infoprint Manager fax destination and be faxed. You can also fax from SAP applications by providing the fax number and selecting the Fax device.