IBM InfoPrint Manager 3.1 for AIX

# Documentation from the Internet

# Printing from SAP R/3

## Contents

# What's New in Version 3.1.0

# InfoPrint Manager and SAP R/3

COMPLEMENTARY SOFTWARE

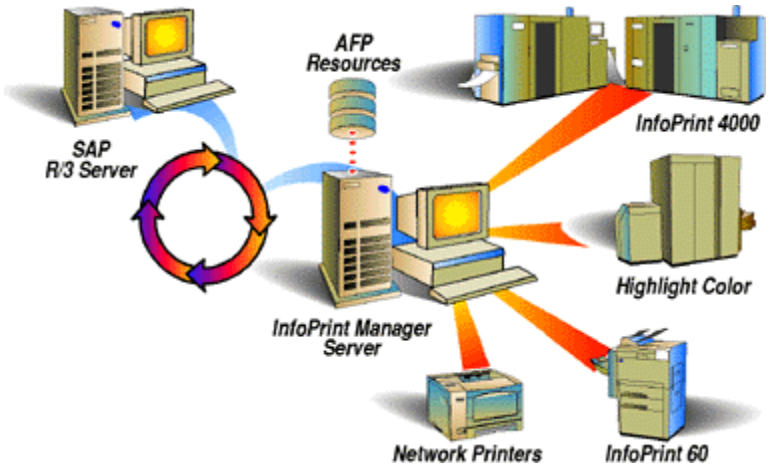
SAP

BAPI CERTIFIED

***Distributed mission-critical printing across an enterprise***

## Highlights

- **Robust integration of SAP R/3 with InfoPrint Manager**
- **Reliable notification about job status to SAP R/3 Users**
- **Add electronic forms, logos, and electronic signatures to your text documents**
- **Reliable management of the print environment**




A large international corporation is committed to a SAP R/3 enterprise to manage their data processing across all departments. They especially appreciate the SAP R/3 option provided by InfoPrint Manager. InfoPrint Manager and SAP R/3 combine to provide a robust solution that manages all printing the way SAP R/3 manages and keeps track of their entire business, from external documents sent to customers, to reports created for internal distribution and printed at the desktop. Because InfoPrint Manager can manage both the high-end production printers and the low-end desktop (network) printers, it meets their needs as no other print application on the market today.

## Robust Integration of SAP R/3 with InfoPrint Manager

SAP R/3 has become a popular choice for medium to large-sized companies that require an integrated software product to provide basic business automation. The R/3 client/server application provides business a series of integrated modules that span the major functions of finance, manufacturing, sales distribution, and human resources.

You can add InfoPrint Manager servers to your SAP R/3 print enterprise without modifying your existing SAP configuration. Simply install an AIX client on your SAP server system, and InfoPrint Manager will recognize your existing **lpr**-based print and query commands. To use this support, configure Access Method **L**.

You can add InfoPrint Manager servers to your SAP R/3 Version 3 print enterprise to print both the native Output Text Format (OTF) data stream and the native Advanced Business Programming Application (ABAP) line data stream as Advanced Function Presentation (AFP) output on production printers. To use this support, configure Access Method **Z**.

You can add InfoPrint Manager servers to your SAP R/3 Version 4 print enterprise to print all data streams and receive enhanced job status from the SAP R/3 system. To use this support, configure Access Method **E** and define InfoPrint Manager as an Output Management System for your SAP R/3 Version 4 enterprise.

IBM InfoPrint Manager provides support for the latest levels of SAP R/3, using a variety of Access Methods:

| Data Stream from SAP R/3 | Access Method | SAP R/3 Release |
|---|---|---|
| Printing either PostScript or PCL files | **L** | SAP Version 3 |
| Printing either OTF or ABAP files | **Z** | SAP Version 3 |
| Printing either PostScript, PCL, OTF, or ABAP files | **E** | SAP Version 4.0 |

**Note:** If you are viewing this information from an internet browser, click on each letter to find out more information about the Access Method.

## Reliable Notification about Job Status to SAP Users

Until SAP R/3 Release 4, the SAP R/3 spool process provided little feedback to users about jobs sent to print. When a job disappeared off the queue, the SAP spool process considered it complete, regardless of whether it printed or not!

With SAP R/3 Release 4 and InfoPrint Manager Release 3.1, you can define InfoPrint Manager as an Output Management System and receive input on the jobs that you have submitted for printing. InfoPrint Manager allows a SAP user to:

- receive notification of a job's processing status
- cancel one or more jobs
- query the status of one or more jobs
- query the status of an InfoPrint printer and its jobs

## Add Electronic Forms, Logos, and Electronic Signatures to Text Documents

The Advanced Function Presentation (AFP) data stream that emerges from the InfoPrint SAP transform contains text records that you can enhance through the addition of electronic forms, logos, and electronic signatures. In addition to the AFP resources, the InfoPrint Manager SAP transform has been enhanced to support both raw image data (bitmaps images)and box shading. The expanded support for different levels of box shading and the print images that SAP R/3 users have come to expect and appreciate provides a strong, industry standard for printing from SAP R/3. Print SAP color images using the native Output Text Format (OTF) data stream in either one, four, or eight-bit pixel images: InfoPrint Manager can handle it all!

Customers using SAP R/3 Version 4 with the Generic Output Format (SAPGOF) generated data streams that contain Version 2 of both ABAP and OTF data, will also appreciate the double byte character set (DBCS) enablement. InfoPrint Manager 3.1 now supports the **Shift-Jis** Japanese PC language. InfoPrint Manager allows a world-class set of business application modules designed for a client-server environment the ability to achieve world-class printing.

## Reliable Management of the Print Environment

With InfoPrint Manager's InfoPrint AIX server, you can manage printers and devices from a single point of control. You can track and manage jobs across your enterprise from job submission to printed output. When output does not print, operators no longer have to determine whether or not a spool request was generated. Instead of having to walk over to the printer, they can use the InfoPrint Manager graphical user interface (GUI) to pinpoint where in the process the job is delayed and determine the appropriate action to resolve the problem. InfoPrint Manager provides automatic workload balancing among printers that you have defined with the same characteristics. For more information about how to configure printers and monitor printing across an installation, see *IBM InfoPrint Manager: Administrator Guide*.

## Scalability of Printing across an Enterprise

InfoPrint Manager allows SAP R/3 customers to access the full range of IBM InfoPrint printers (low-speed to high-speed. simplex or duplex,continuous forms or cut sheet) as well as other printers, such as Hewlett-Packard and Lexmark. You can leverage your investment in printers by sharing your InfoPrint-managed printers with other host, and LAN-based applications. InfoPrint Manager provides the SAP R/3 enterprise with comprehensive print management across an enterprise of any size.

## Prerequisites

The initial software requirement for a SAP R/3 system using InfoPrint Manager Version 3 Release 1 to manage its printing capabilities:

- a SAP R/3 system Version 3 and higher (or Version 4 for DBCS and job notification)
- an AIX operating system Version 4.2.1 on either a uniprocessor or a symmetric multiprocessor (SMP)
- the SAP Print Feature selected from the InfoPrint Installer for Version 3 Release 1
- an InfoPrint Manager Version 3 Release 1 AIX client installed on the SAP R/3 system

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# InfoPrint Manager Installation

The following procedures help you install the latest level of InfoPrint Manager:

Installing InfoPrint Manager Control on Your AIX System

Installing Optional Features

Performing Optional Configuration

Installing Applications on Client Systems

Applying Service Updates

Getting up and running in no time with IBM installation services

This page last updated on December 16, 1998.

# Installing Optional Features

The following procedures help you install InfoPrint Manager Options:

Installing the SAP R/3 Print Feature

Installing the InfoPrint Fax Option

Configuring Email

Installing and Configuring InfoPrint Library

Installing the PPFA Feature

Installing Kanji Fonts

Adding the Tivoli Plus Module

This page last updated on December 16, 1998.

# Installing the SAP R/3 Print Feature

With few changes, you can configure SAP R/3 Release 3 to send both PS and PCL output data directly to InfoPrint Manager. Also, you can configure SAP R/3 to transform SAP output into AFP output to take advantage of all the features of AFP printing.

If you are running SAP R/3 Release 4, you can configure the system to use the SAP certified Output Management System (OMS) interface to send all data streams to InfoPrint Manager and receive event notification for print jobs back to the R/3 system.

The following procedures help you install the SAP R/3 option so that you can print using InfoPrint Manager for AIX, Version 3.1.

Printing PCL and PostScript with SAP R/3 Version 3

Printing ABAP and OTF with SAP R/3 Version 3

Printing with SAP R/3 Version 4 (Enhanced Status)

This page last updated on December 16, 1998.

# Printing PCL and PostScript with SAP R/3 Version 3

Because the standard SAP host spool print command is a typical **lpr** or **lp** command, you can integrate your SAP R/3 Version 3 system with InfoPrint Manager Version 3.1 by configuring the host printer name of your R/3 devices to be an InfoPrint Manager logical destination.

If your SAP R/3 system is running on AIX, the InfoPrint Manager AIX client includes the InfoPrint Manager command line and the gateway for the standard UNIX print commands. This feature needs to be installed wherever a Spool Work Process resides that will make print requests for InfoPrint Manager logical printers.

To install the AIX client, you must install the AIX Client feature, using the InfoPrint Installer.

To integrate your SAP R/3 Version 3 system with InfoPrint Manager 3.1, use the procedure for Devices that Use InfoPrint Manager and SAP R/3 with Access Method L.

If your SAP R/3 system is running on HP-UX, you can use Access Method U to forward **lpr** requests to the InfoPrint AIX server.

Once you have defined the appropriate output devices, you must edit the profile of the application server where the spool work process runs by doing the following on the SAP R.3 graphical user interface:

1. Enter `RZ10` in the OK-Code field.
2. From the **Instance Profile Management for Experts** window, select the appropriate profile and click on the **Choose** push-button.
3. From the SAP R/3 window, use the scroll bar to go to the end of the file and add one of the options described in SAP Print Command Options at the bottom of the window.
4. Once you have notified other SAP R/3 application users, click on the **Save** folder and restart the R/3 application.

## SAP Print Command Options

There are two potential print commands that SAP R/3 installations using InfoPrint Manager might want to use for submitting print commands. The following topic presents both commands, with their relative strengths and weaknesses.

### Using the AIX qprt Command

The AIX **qprt** Command is the standard SAP R/3 print command. Using this option allows you to send jobs to both standard AIX printers and InfoPrint Manager printers. This print option is limited because you cannot use the InfoPrint Manager Fax option, provide box shading values to OTF jobs, or have the userid of the job creator available on job status reports or separator pages sent with a print job.

To use this print command, specify these three lines at the bottom of the **Instance Profile Management for Experts (Change)** window:

```
# sap2afp Spool Exit Parameter. 23.10.98

rspo/host_spool/print=qprt -dp -P&P -Bnn -N&C -r -R14 -X850 &F

rspo/host_spool/query=lpq -l -P&P
```

### Using the InfoPrint ipm_print Command

The InfoPrint Manager **ipm_print** Command allows you to provide box shading values to OTF jobs and have the userid of the job creator available on job status reports or separator pages sent with a print job. Also, you do not have to specify a value in the **printer.tab** configuration file and need to perform less maintenance. For example, you can modify this print command on the InfoPrint AIX server and not have to modify anything on the SAP application server.

To use this print command, specify these three lines at the bottom of the **Instance Profile Management for Experts (Change)** window:

```
# sap2afp Spool Exit Parameter. 23.10.98

rspo/host_spool/print=ipm_print -P &P -F &F -O '&O' -o '&o' -R
'&R' -f '&f' -C &C -Y '&Y' -T '&T' -D '&D' -t '&t'

rspo/host_spool/query=lpq -l -P&P
```

Once you have completed these procedures, you can print either PostScript or PCL from your SAP R/3 Version 3 system, using InfoPrint Manager to drive the printer(s).

This page last updated on December 16, 1998.

# Printing ABAP and OTF with SAP Version 3

To print the ABAP and OTF data streams as AFP output, you must install the following:

- The SAP R/3 Print Feature from the InfoPrint Installer. Note that this option needs to be installed on your AIX InfoPrint server, as well as on your SAP R/3 Application server.

- The AIX Client from the InfoPrint Installer. Note that this feature needs to be installed wherever a Spool Work Process resides that will make print requests for InfoPrint Manager logical printers.

Once these options have been correctly installed, you can configure your SAP R.3 application server to print both ABAP and OTF data by completing the following tasks in the order listed:

- Activating Access Method Z

- Defining an Output Device Type

## Activating Access Method Z

SAP Access Methods are the means the SAP spool system uses to pass output to the host spool system. They tell the Spool Work Process what is to be done with the final output data stream. Access Method **Z** is a spool exit that allows you to output ABAP and OTF data for the InfoPrint SAP (**sap2afp**) transform.

To activate Access Method **Z** when the R/3 spool exit, use the following procedure:

1. From the R/3 main menu, access the **Reporting** pull-down menu by selecting the Tools main menu and then selecting the **System**-- **Services**--**Reporting** path or typing /nSA38 in the **ok-Code** field.

2. From the **ABAP/4: Execute Program** window, specify **RSPO0049** for the **Program** field and press the **EXECUTE** button once.

   This process makes Access Method **Z** available on R/3.

3. Once Access Method **Z** is available on R/3, you must edit the profile of the application server where the spool work process runs by:

   1. From R/3, enter **RZ10** in the ok-Code field. This choice produces a list of all profiles on your R/3 system.

   2. From the **Instance Profile Management for Experts** window, select the appropriate profile and click on the **Choose** push-button.

   3. From the SAP R/3 window, use the scroll bar to go to the end of the file and add one of the options described in SAP Print Command Options at the bottom of the window.

   4. Once you have notified other SAP R/3 application users, click on the **Save** folder and restart the R/3 application.

## SAP Print Command Options

There are three potential print commands that SAP R/3 installations using InfoPrint Manager might want to use for submitting print commands. The following topic presents each command, with its relative strengths and weaknesses.

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The AIX **qprt** Command is the standard SAP R/3 print command. Using this option allows you to send jobs to both standard AIX printers and InfoPrint Manager printers. This print option is limited because you cannot use the InfoPrint Manager Fax option, provide box shading values to OTF jobs, or have the userid of the job creator available on job status reports or separator pages sent with a print job.

To use this print command, specify these three lines at the bottom of the **Instance Profile Management for Experts (Change)** window:

```
# sap2afp Spool Exit Parameter. 23.10.98

rspo/host_spool/custom_print=qprt -dp -P&P -Bnn -N&C -r -R14 -X850 &F

rspo/host_spool/custom_query=lpq -l -P&P
```

Once you have completed this task, return to step 3 of the Activating Access Method Z procedure.

#### Using the InfoPrint sap2afp Command

The InfoPrint Manager **sap2afp** Command invokes the transform. Using this option allows you to provide box shading values to OTF jobs and have the userid of the job creator available on job status reports or separator pages sent with a print job. In addition, you can specify more than a single **defcp.tab** configuration file (the default conversion table for converting ASCII characters into EBCDIC characters) for printing ABAP jobs by installing different instances of the transform on different SAP application servers. For example, you could specify one code page on an application server where English data is printed and another code page on an application server where German data is printed.

This print option does require you to specify a value in the **printer.tab** configuration file and requires more maintenance of all the configuration files. For example, you must update the printer.tab file every time you either add or delete an R/3 AFP printer.

To use this print command:

1. Specify these three lines at the bottom of the **Instance Profile Management for Experts (Change)** window:

```
# sap2afp Spool Exit Parameter. 23.10.98

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

rspo/host_spool/custom_query=/usr/lpp/psf/bin/sap2afp -d &S –q
```

2. Map the R/3 output device to an IBM InfoPrint Manager logical printer through the **/usr/lpp/psf/sap2afp/printer.tab** configuration file.

   Because SAP R/3 Version 3 restricts the names of Output Devcies to four characters, the printer.tab configuration file allows you to map R/3 Output Devices to more meaningfully named devices.

   The **printer.tab** file uses the following keyword-value pairs:

   **Dest**

   Specifies the four-character R/3 Output Device.

   **System**

   Specifies the operating system from which **sap2afp** output is printed. You can specify either AIX or AIX system.

   **Queue**

   Specifies the name of the IBM InfoPrint Manager logical printer; the value is ignored for AIX systems.

   **Node**

   Specifies the IP address of the target operating system. The content (a maximum of 15 bytes) is not verified.

   You must specify a value for **Node**, but it is used only when **System=OS/2**.

   The following provides a sample **printer.tab** configuration file. Note that you can include comments in lines preceded by two slashes (//):

```
// Printer table

// Format: DEST=SPRT System=AIX Queue=pcl4039 Node=192.9.200.220

// Note: The Node parameter is not used for entries where the

// System field is AIX or MVS, but you must still enter a value.

Dest=MVSP System=MVS Queue=pcl4039 Node=192.9.200.220

Dest=AIX1 System=AIX Queue=pcl4029 Node=192.9.200.116

Dest=AIX2 System=AIX Queue=PSF4039 Node=192.9.200.220

Dest=OS2P System=OS2 Queue=OS2AFP Node=192.9.201.66

Dest=OS2 System=OS2 Queue=OS2AFP Node=192.9.201.66
```

If you have defined an R/3 AFP printer called AFPT, you could map this printer to the IBM InfoPrint Manager logical printer psf3116 by adding the following line to the **printer.tab** configuration file.

```
Dest=AFPT System=AIX Queue=psf3116 Node=0.0.0.0
```

3. Once you have completed this task, return to step 3 of the Activating Access Method Z procedure.

**Using the InfoPrint ipm_print Command**

The InfoPrint Manager **ipm_print** Command allows you to provide box shading values to OTF jobs and have the userid of the job creator available on job status reports or separator pages sent with a print job. Also, you do not have to specify a value in the **printer.tab** configuration file and need to perform less maintenance. For example, you can modify this print command on the InfoPrint AIX server and not have to modify anything on the SAP application server.

However, you can specify only one **defcp.tab** configuration file (the default conversion table for converting ASCII characters into EBCDIC characters) for printing ABAP jobs, no matter how many SAP application servers you use.

To use this print command:

1. Specify these three lines at the bottom of the **Instance Profile Management for Experts (Change)** window:

```
# sap2afp Spool Exit Parameter. 23.10.98

rspo/host_spool/custom_print=ipm_print -P &P -F &F -O '&O' -o '&o'
-R '&R' -f '&f' -C &C -Y '&Y' -T '&T' -D '&D' -t '&t'

rspo/host_spool/custom_query=lpq -l -P&P
```

2. Once you have completed this task, return to step 3 of the Activating Access Method Z procedure.

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# Installing the SAP R/3 Transform

To install the **sap2afp** transform, you must install the SAP Print Feature, using the InfoPrint Installer. Follow the directions provided with the Using the InfoPrint Installer. Remember to select the **SAP Print Feature** on the InfoPrint Installer.

The SAP Transform includes two types of files:

- An executable named **sap2afp**, which converts Output Text Format (OTF) data into MO:DCA-P output data and Advanced Business Application Programming (ABAP) list format data into line data. This file is installed in the **/usr/lpp/psf/bin** directory.
- Installation configuration files that are installed in the **/usr/lpp/psf/sap2afp** directory.

| Configuration File | Purpose | Use |
|---|---|---|
| **barcode.tab** | Provides list of valid SAP bar codes. | OTF data only |
| **Xxxxyyyy.tab** | Maps ASCII code pages to EBCDIC code pages. | OTF data only |
| **fonts.tab** | Provides a list of raster fonts with the appropriate character set and code page. | OTF data only |
| **image.tab** | Defines the dither matrix for half-tone color print jobs. | OTF data only |
| **pagedef.tab** | Defines the form definition (PAPER TYPE) used, as well as the page definition and fonts for jobs that go through ACIF. | ABAP/OTF |
| **printer.tab** | Maps four-character SAP printer name to an InfoPrint logical printer. | ABAP/OTF |
| **defcp.tab** | Converts ASCII into EBCDIC characters. | ABAP data only |

For information about bar codes and fonts used by the SAP transform, click on the highlighted words.

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# Bar Codes Supported by the InfoPrint SAP Transform

Some SAP R/3 applications require that data is printed as a bar code. All the bar codes that can be specified in SAP R/3 are printable in AFP output. If OTF specifies bar code data, the **sap2afp** transform converts it into Bar Code Object Content Architecture (BCOCA) data, which is understood directly bar codes by the control unit of the AFP printer.

BCOCA is supported by the following printers:

- IBM 3112 Page Printer
- IBM 3116 Page Printer
- IBM 3130 Advanced Function Printer
- IBM 3160 Advanced Function Printer
- IBM InfoPrint 60 Printer
- IBM 3812 Page Printer
- IBM 3816 Page Printer
- IBM 3900-OW1 Advanced Function Printer
- IBM 3900-OW3 Advanced Function Printer
- IBM 3900 Advanced Function Duplex Printing System, Models D01, D02
- IBM 3900 Advanced Function Wide Duplex Printing System, Models DW1, DW2
- IBM 3912 Page Printer
- IBM 3916 Page Printer
- IBM 3930 Page Printer
- IBM 3935 Advanced Function Printer
- IBM InfoPrint 4000 Printer
- IBM LaserPrinter 4028
- Network Printer 12 (NP 12)
- Network Printer 17 (NP 17)
- Network Printer 24 (NP 24)
- Any printers that accept the Printer Control Language (PCL) PCL4, PCL5, or PCL5c data streams

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# Installing InfoPrint Fonts for Printing with the SAP Transform

To print output from the **sap2afp** transform, you must install the Gothic fonts that are specified in the **fonts.tab** configuration file of the **/usr/lpp/psf/bin** directory, as well as the required code pages. You can obtain these resources from the AFP Font Collection CD-ROM that is provided with InfoPrint Manager.

To load the fonts that are required to transform OTF or ABAP data from SAP R/3 on an InfoPrint Manager system, use the following procedure:

1. Load the CD-ROM for the AFP Font Collection into the CD-ROM drive on your RS/6000 server.
2. Create a mount point from which to add fonts from this CD-ROM by typing `smitty cdrfs` from the AIX command line and taking the following path: **CDROM File Systems -- Add a CDROM File System**.
3. Select **F4** to set the **DEVICE name** field to the system-generated name (usually **cd0**).
4. For the **MOUNT POINT** field, specify `/cdrom`.
5. Press the **F10** key to exit SMIT.
6. From the AIX command line, mount the CD-ROM to your RS/6000 by specifying:

   ```
   mount /cdrom

   cd /cdrom
   ```

7. From the AIX command line, specify `smitty install_latest`.
8. For the **INPUT device /directory for software** field, specify `/cdrom/aix`
9. To ensure that you install the correct fonts without over writing any existing resources on your system, specify no for the **COMMIT software updates?** field and yes for the **SAVE replaced files?** field.
10. Specify the **F4** key to list all font options.
11. Use the **F7** key to select the following four options:

    - **afpfonts.bookmstr**
    - **afpfonts.compats**
    - **afpfonts.codepage**
    - **afpfonts.ocr**

12. To install the fonts, press **Enter**.

    **Note:** These fonts should take approximately 43 MB on your RS/6000.

13. Verify that the fonts cited in your **fonts.tab** configuration file have been installed.

14. InfoPrint Manager installs these fonts in the **/usr/lpp/afpfonts** directory.

15. To remove the IBM AFP Font Collection CD-ROM, specify the following at the AIX command line:

    ```
    unmount /cdrom
    ```

    Then you can remove the CD-ROM from your CD-ROM drive.

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# Printing with SAP R/3 Version 4 (Enhanced Status)

SAP R/3 Release 4 provides support to more closely integrate an external Output Management System (OMS). InfoPrint Manager is a SAP-certified OMS that provides synchronous functions for submitting jobs, canceling jobs, querying jobs, and querying devices, as well as asynchronous event information. The InfoPrint SAP Callback daemon collects and delivers these events to the R/3 system

Note that while you can use Access Method **L** to print PCL and PostScript output from SAP R/3 Version 4, you will not have access to the enhanced status reporting that is made available by defining InfoPrint Manager as an Output Management System through Access Method **E**. Also, Access Method **Z** is available, but not supported in SAP R.3 Version 4.

If you are printing Output Text Format (OTF) data, ensure that you have installed the SAP R/3 Transform and the fonts necessary for printing.

To install and configure InfoPrint Manager as a SAP R/3 OMS, use the following procedures in sequence:

1. Install the AIX Client and the SAP Feature
2. Configure the SAP Print Feature
3. Define a SAP User for the OMS Callback Daemon
4. Define the InfoPrint Manager OMS to SAP R/3

## Install the AIX Client and the SAP Feature

Use the InfoPrint Installer to install the SAP Print feature and the AIX client on every AIX server where any SAP application server will issue OMS commands. If you have configured your SAP R/3 installation to use alternate servers, you must repeat these installation tasks on the alternate servers.

## Configure the SAP Print Feature

Each SAP R/3 system using the InfoPrint Manager Callback support needs to have one callback daemon running. Identify the SAP application server where you want to run this process and perform the following additional configuration tasks.

If you are using the DCE version of InfoPrint Manager, note that before running the **sapcfg.ksh** script on your SAP R/3 application server, you must have previously installed the DCE client code. If you are using the non-DCE version of InfoPrint Manager, set up the SAP application server to run as a secondary server.

To configure SAP OMS to work with the DCE version of InfoPrint Manager, do the following:

1. From the InfoPrint AIX server, open a **dtterm** window.
2. Enter the following command: `/usr/lpp/InfoPrint/install/bin/sapcfg.ksh -d`
3. Answer the questions as prompted.

To configure SAP OMS to work with the non-DCE version of InfoPrint Manager, enter the same command without the **-d** flag. This configuration requires that you have set up this server as an InfoPrint Manager secondary server.

## Define a User for the OMS Callback Daemon

Because the OMS callback daemon must logon to the SAP system and its external management interface (XMI) to make RFC requests, you must define a user for it. You will need this user information when you Define the InfoPrint Manager OMS to SAP R/3.

To define a user for the InfoPrint Manager Callback daemon, choose the following path on the SAP R/3 graphical user interface:

**Tools > Administration > User maintenance > Users**

The user should be a CPIC type and requires `XOMI` permissions to log into the CCMS system management XOM application programming interface. These authorizations can be provided in the `S_XMI_XOM_A` profile. For assistance, see your SAP Systems Administrator. Remember to record the user, password, and client for later use.

Note that if you ever change or modify this SAP user, remember to make the changes to the **SAP configuration** pane on the **Spool Admn.: Real Output Management (Change)** window, and the **rc.iprsap** file in the **/etc** directory.

## Define the InfoPrint Manager OMS to SAP R/3

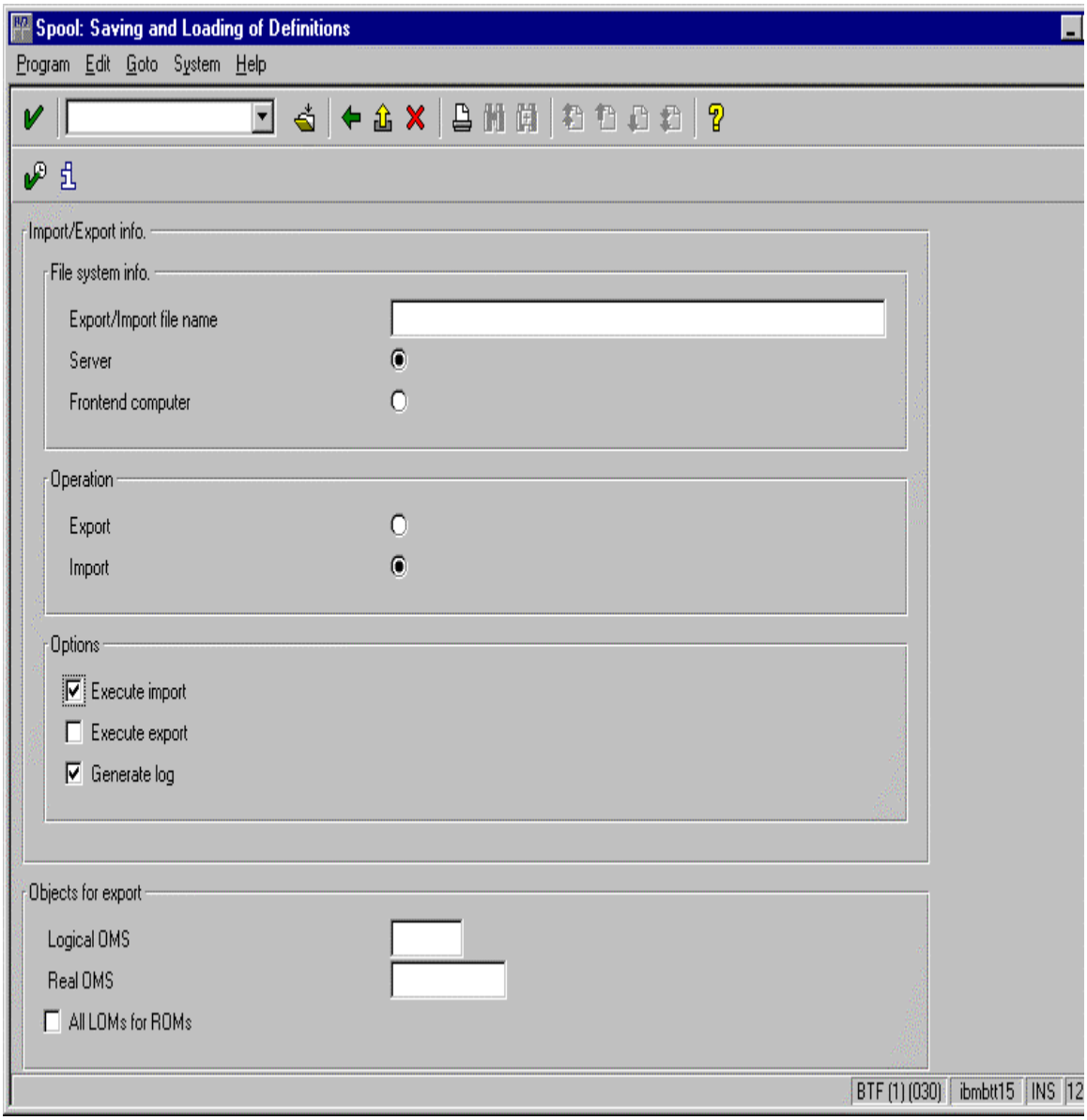
InfoPrint Manager provides a configuration file to assist in defining InfoPrint Manager as an OMS on your R/3 system. This procedure will define InfoPrint Manager as the Real Output Management System (ROMS) for your SAP R/3 installation, as well as defining a Logical Output Management System (LOMS) so you can define Access Method **E** devices in SAP R/3.

### Defining a Real Output Management System

Use the following procedure to define a Real Output Management System for SAP R/3:

1. Log onto your SAP R/3 Version 4 system.
2. Import the configuration file by entering transaction `SA38`.
3. From the **ABAP: Execute Program** window, specify `RSPOXOMS` in the **Program** field and click on the **execute** (checkmark) icon.
4. From the **Spool: Saving and Loading of Definitions** window shown below, specify `/usr/lpp/pd/bin/ipm.omsdesc` in the **Export/Import file name** field, ensure that the **Operation** pane is set to *Import*, the **File system info** pane is set to *Server*, and check both the **Execute import** and **Generate log** options in the **Options** pane.

   Once you have set these options, click on the **Execute** (checkmark with a clock) icon.




5. Running the report displays a list of the ROMS and LOMS that have been imported into the system.

6. To complete the necessary definitions, specify the spad transaction.

7. From the **Spool Administration: 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 SAP application server.

   You should now see `IBM IPM` listed.

8. From the **Spool Admin.: List of Real Output Management Systems** window, select the `IBM IPM` ROM and click on the **Choose** (checkmark with a clock or **f2** key) icon.

9. From the **Spool Admin.: Real Output Management (Display)** window, click the **Change** (red pencil **f8** key) icon.

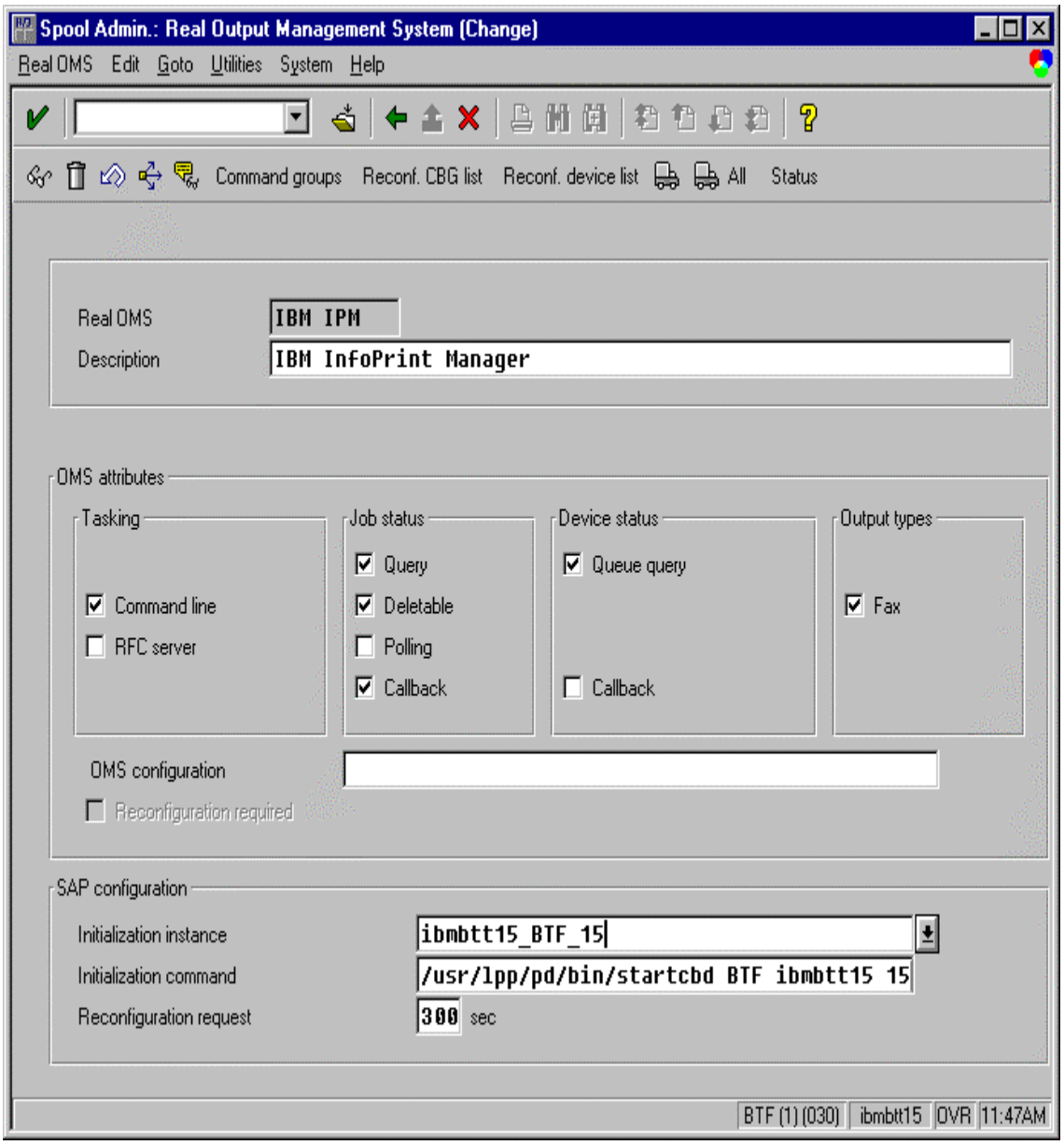
10. From the **Spool Admin.: Real Output Management System (Change)** window displayed below, complete the ROMS definition by selecting filling in the Initialization instance and filling in the parameters for the Initialization command. The initialization instance is the instance that starts the callback daemon, which you identified in Configure the SAP Print Feature.

    Please note that all variables are examples that apply to the screen captures presented on this page and will differ from the values that you specify.

| Command to Start the Callback Daemon | |
|---|---|
| **Field** | **Variable** |
| fully-qualified path for the command | */usr/lpd/pd/bin/startcbd*<br>**Note:** This value is hard-coded and may not be modified. |

| SAP R/3 Instance Where Callback Daemon Logs On | |
|---|---|
| **Field** | **Variable** |
| <SystemName><br>Three-character system name | *BTF* |
| <Host Name> | *ibmbtt15* |
| <InstanceID> | *15* |

| User ID Information | |
|---|---|
| **Field** | **Variable** |
| <User> | *ibm*<br>**Note:** This value and the two that follow were originally defined when you created a SAP userid. |
| <Client> | *030* |
| <Password> | *newname* |
| <Language> | *En* |




**Note:** Do not change any of the attributes specified in the **OMS attributes** pane above.

11. Save this information by clicking on the folder icon (or specifying the **Ctrl** + **S** keys).

12. From the AIX command line on the host identified in the initialization instance, access the **rc.iprsap** file in the **/etc** directory.

    This file was created when you configured the SAP Print Feature.

13. Edit the file and copy the commented **startcbd** command at the top of the file (`/usr/lpp/pd/bin/startcbd <SystemName> <Host Name> <InstanceID> <User> <Client> <Password> <Language>`)and specify the same values that you entered

for the initialization command on the **Spool Admin.: Real Output Management System (Change)** window.

14. Save and exit the file.

## Defining a Logical Output Management System

Use the following procedure to define a Logical Output Management System for SAP R/3:

1. From the SAP R/3 graphical user interface, complete 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.

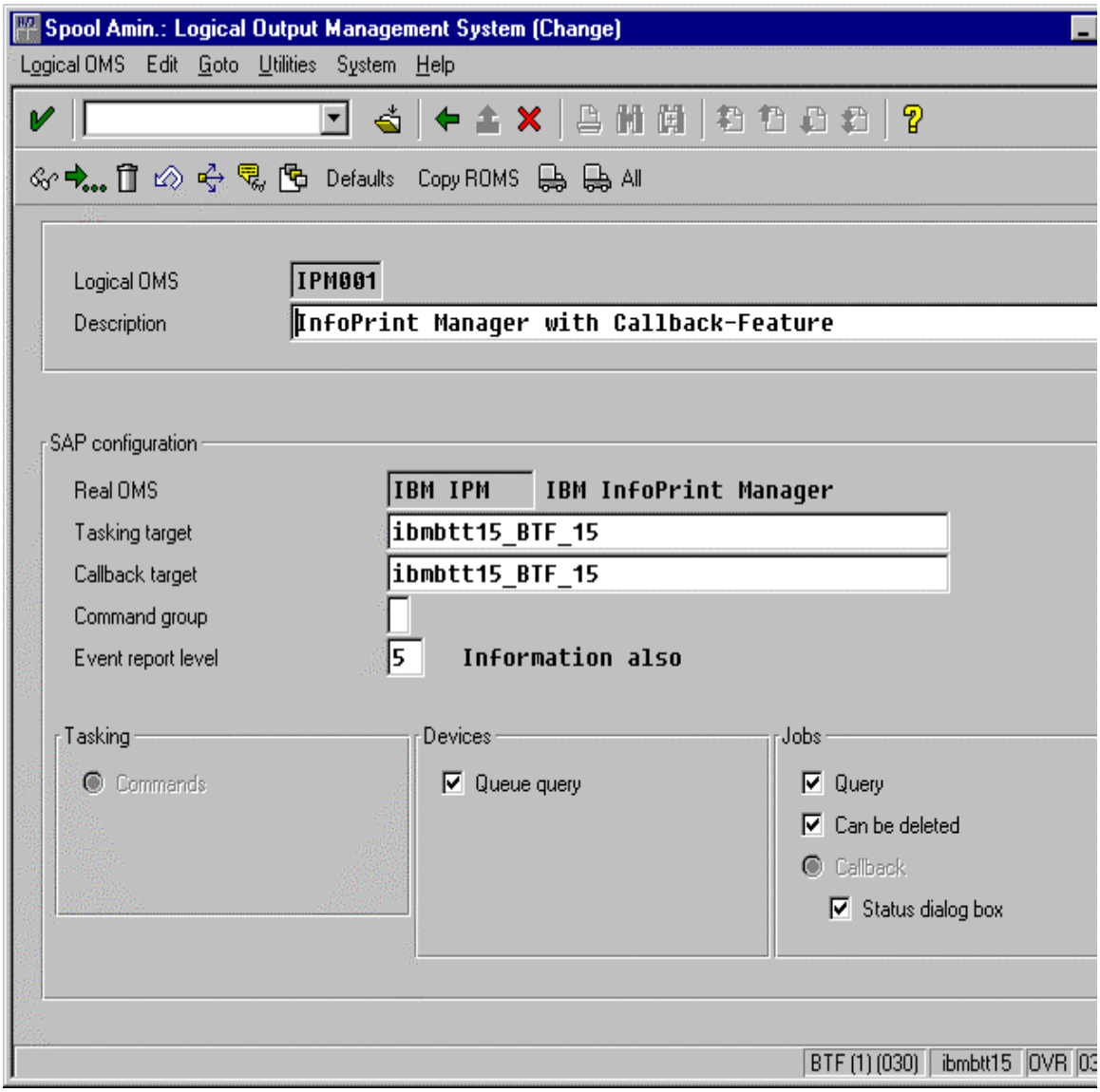
3. From the **Spool Admin.: List of Logical Output Management Systems** window, select the `IPM001` LOMS and click on the **Choose** (checkmark with a clock or **f2** key) icon.

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 (Change)** window displayed below, specify a value from the list of all active SAP application servers for both the **Tasking target** field and the **Callback target** field in the format: *hostname_systemname_instanceID*, such as `ibmbtt15_BTF_15`.

   The **Tasking target** field, specifies where the commands are invoked, while the **Callback target** field specifies where the asynchronous callbacks are delivered.

   In addition, you should 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).

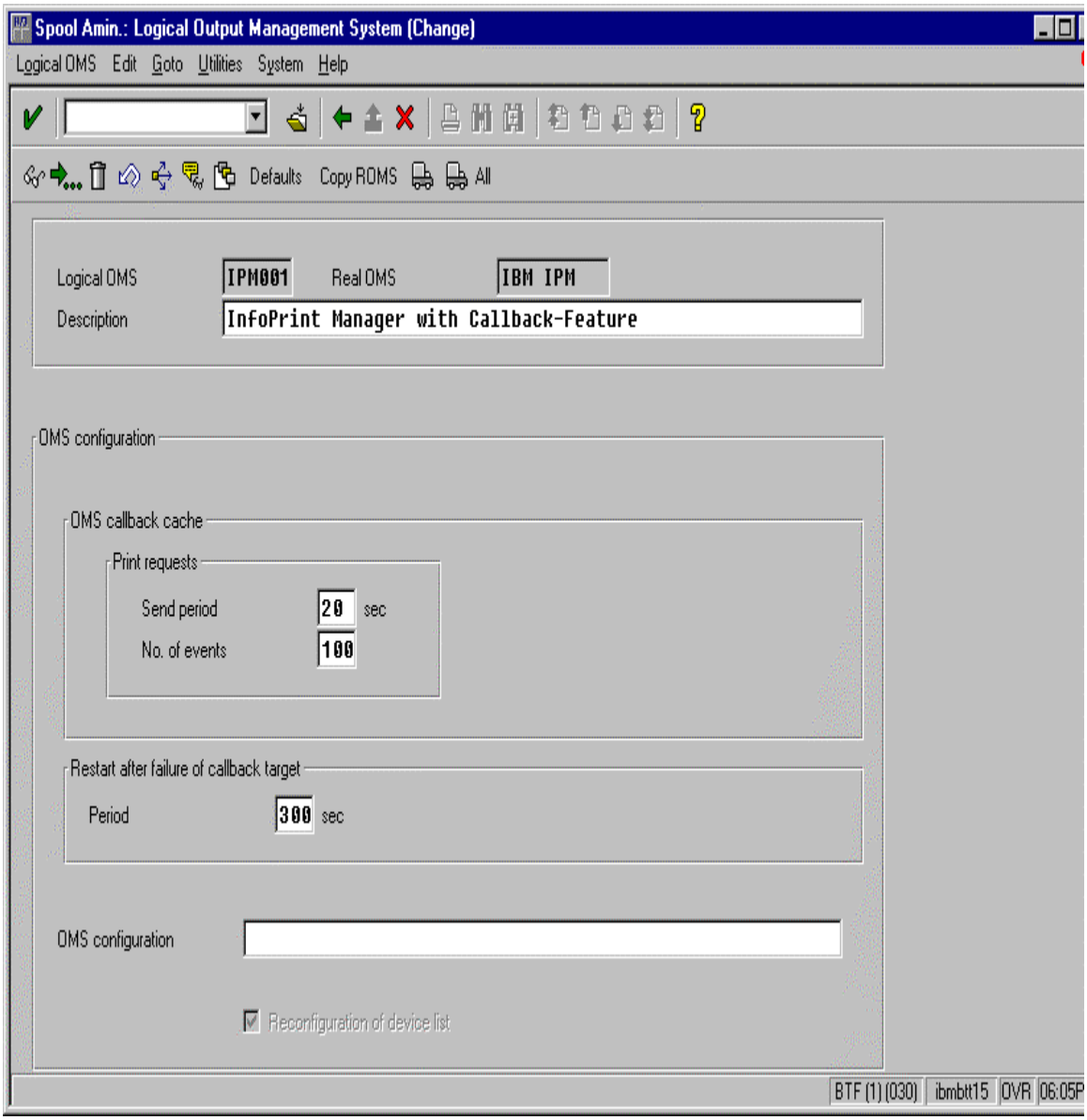



6. To ensure that users on your SAP R/3 system receive pop-up windows for both error and problem notification messages about a job's status, check the **Status dialog box** field in the **Jobs** pane.

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

8. From the top of the window, click on the **Next screen** (right-facing green arrow) icon, or specifying the **f5** key.

9. From this panel (displayed below), you can specify how often (**Send period** field) in seconds or how many (**No. of events** field) notification events the InfoPrint Manager callback daemon should collect before delivery to the SAP R/3 system. In other words, the callback daemon will only deliver events for jobs on printers associated with this LOMS if it has collected x number, or x seconds have passed since the last delivery.




10. To start the callback daemon, you can either restart the SAP R/3 initialization instance or run **/etc/rc.iprsap** file from the AIX command line on the initialization instance to start the callback daemon.

Once you have finished defining the InfoPrint Manager OMS to your SAP R/3 Version 4 system, you can begin to define devices so you can print from SAP R/3 with InfoPrint Manager.

This page last updated on December 16, 1998.

# Procedures

Printing from SAP R/3

Submitting Fax Jobs

Submitting Email Jobs

Using AFP Upload to Print MVS Data

Using InfoPrint Library

This page last updated on December 16, 1998

# Printing from SAP R/3



This page last updated on December 16, 1998.

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

Before you can use a device type for printing from SAP R/3, you must create a new output device. The following topics describe how to perform this task: Defining Devices to InfoPrint Manager 3.1 on SAP R/3 Version 3.

To enable this support, 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 **Output devices** option and select the **Change** push-button.

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

| Field | Value |
|---|---|
| **Output Device** | *Prt1*<br>Specify the case-sensitive name that R/3 users will need to access the printer. Note that the system generates the short name, which is used internally by the spool system. |
| **Device type** | *IBMAFP*<br>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. |
| **Spool server** | *us01d2_P40_41*<br>Specifies the name of the R/3 application server which will be the spool server. This spool server can transfer output across a network link. |
| **Host printer** | *prt1-lp*<br>Specifies the name of the InfoPrint Manager logical printer. |
| **Device class** | Enter a space so that this field accepts the default value of printer. |
| **Access method in host spool** | *Z*<br>Specifies the method that the spool work process uses to pass data to the host spool system. |

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

## Defining the Data Type for Printing ABAP

To ensure that the InfoPrint printer recognizes the correct data type, you must open an AIX window on the InfoPrint AIX server and specify the following at the command line:

`pdset -xdoc-formats-sup+=sap-abap` *printername*

where *printername* indicates the InfoPrint Manager physical destination (printer).

Note that this change cannot be added through the printer notebook on the InfoPrint Manager graphical user interface. If you do not make this change, ABAP input data will not print.

This page last updated on December 16, 1998.

# Defining Output Devices for Printing PCL and PostScript on SAP R/3 Version 3



This page last updated on December 16, 1998.

# Defining Devices that Use InfoPrint Manager for Access Method L

Before you can use a device type for printing from SAP R/3, you must create a new output device. The following topic describes how to perform this task for printing PCL and PostScript data locally to InfoPrint Manager 3.1 on SAP R/3 Version 3.

To enable this support, 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 **Output devices** option and select the **Change** push-button.

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

| Field | Value |
|---|---|
| **Output Device** | *Prt1*<br><br>Specify the case-sensitive name that R/3 users will need to access the printer. Note that the system generates the short name, which is used internally by the spool system. |
| **Device type** | *POSTSCPT*<br><br>Specify 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** | *us01d2_P40_41*<br><br>Specifies the name of the R/3 application server which will be the spool server. When possible, you should specify a spool server that is running in the host system to which the priner is attached. |
| **Host printer** | *prt1-lp*<br><br>Specifies the name of the InfoPrint Manager logical printer. |
| **Device class** | Enter a space so that this field accepts the default value of printer. |
| **Access method in host spool** | *L*<br><br>Specifies the method that the spool work process uses to pass data to the host spool system. |

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

This page last updated on December 16, 1998.

# Defining Devices that Use InfoPrint Manager for Access Method U

Before you can use a device type for printing from SAP R/3, you must create a new output device. The following topic describes how to perform this task for printing through a remote host, such as an Hewlett-Packard system, to InfoPrint Manager 3.1 on SAP R/3 Version 3.

To enable this support, 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 sSelecting 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 **Output devices** option and select the **Change** push-button.

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

| Field | Value |
|---|---|
| **Output Device** | *Printer1*<br><br>Specify the case-sensitive name that R/3 users will need to access the printer. Note that the system generates the short name, which is used internally by the spool system. |
| **Device type** | *POSTSCPT*<br><br>Specify 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** | *us01d2_P40_41*<br><br>Specifies the name of the R/3 application server which will be the spool server. This spool server can transfer output across a network link. |
| **Host printer** | *prt1-lp*<br><br>Specifies the name of the InfoPrint Manager logical printer. |
| **Device class** | Enter a space so that this field accepts the default value of printer. |
| **Access method in host spool** | *U*<br><br>Specifies the method that the spool work process uses to pass data to the host spool system. |

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

# Printing from SAP R/3 Version 4 (Enhanced Status)



This page last updated on December 16, 1998.

# Defining Devices that Use InfoPrint Manager 3.1

Use the following procedure to define devices to SAP R/3 Version 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.

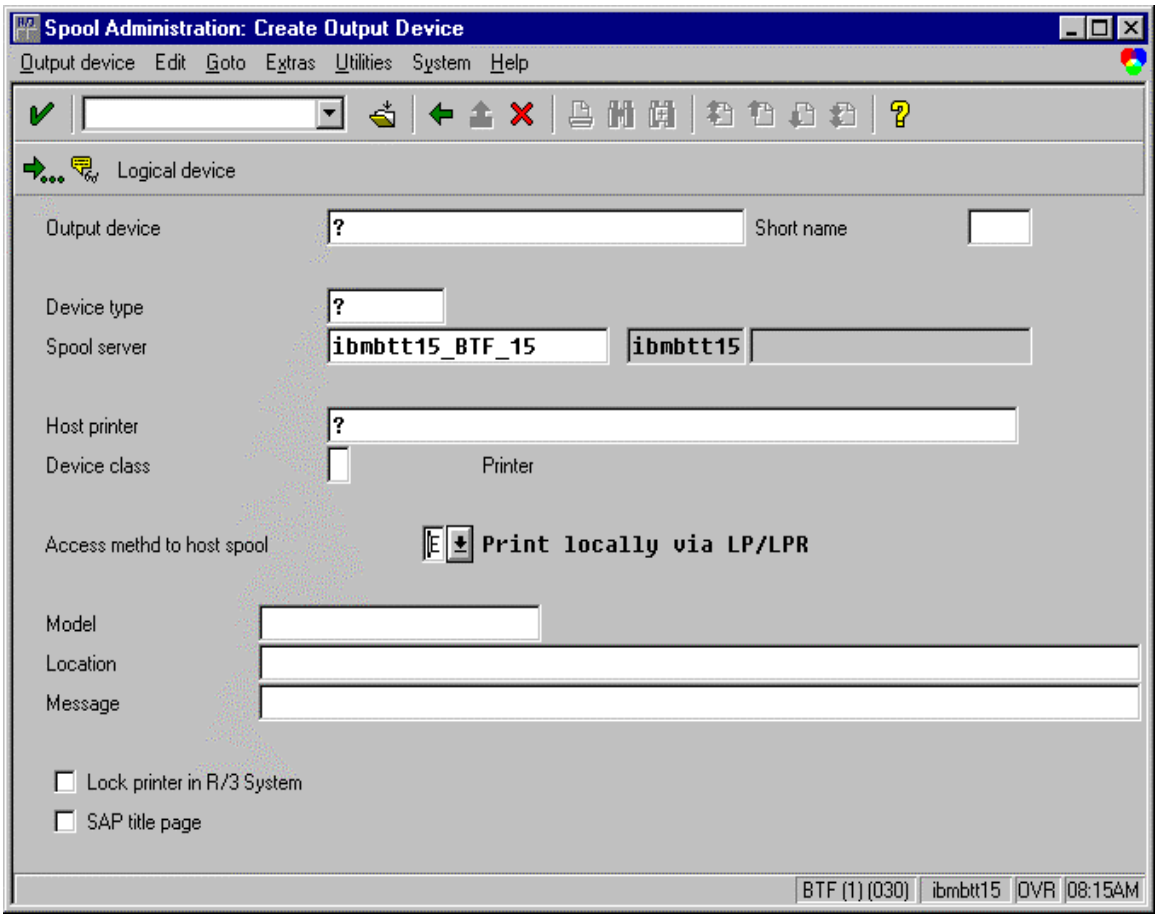
2. From the SAP R/3 graphical user interface, specify the spad transaction.

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:

| 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**: Specify 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* |




6. 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, Cancel a Job, and Shut Down the SAP Callback Daemon.

This page last updated on December 16, 1998.

# Activating End-User Pop-Ups

InfoPrint Manager Version 3.1 allows you to obtain information from the spooler about output requests (print jobs) as they complete processing. To activate this support, ensure that you have done the following while installing and configuring InfoPrint Manager with SAP R/3 Version 4 for enhanced status reporting.

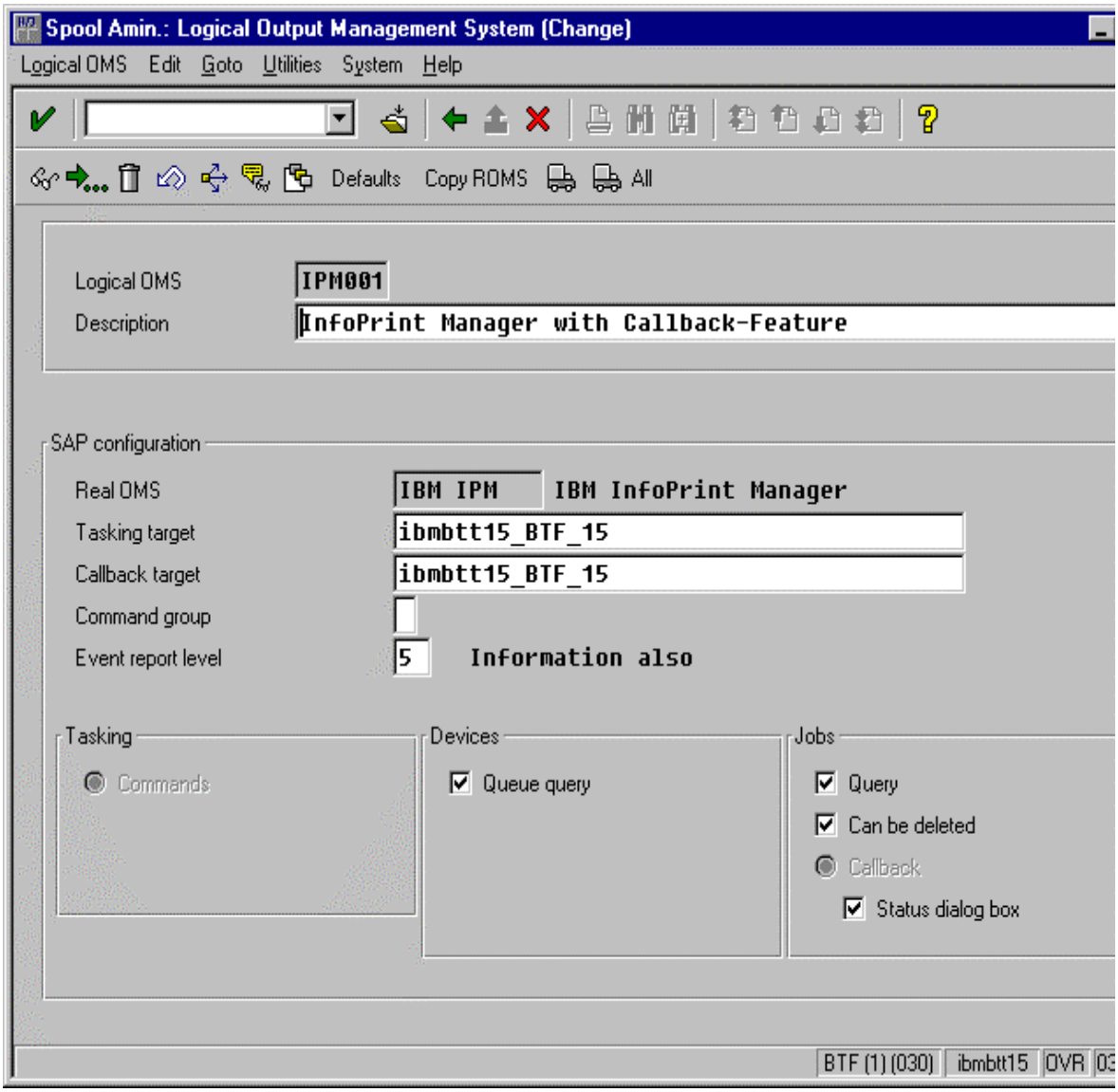
1. From the SAP R/3 graphical user interface, complete the Logical Output Management System (LOMS) definitions by specifying the spad transaction.

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.

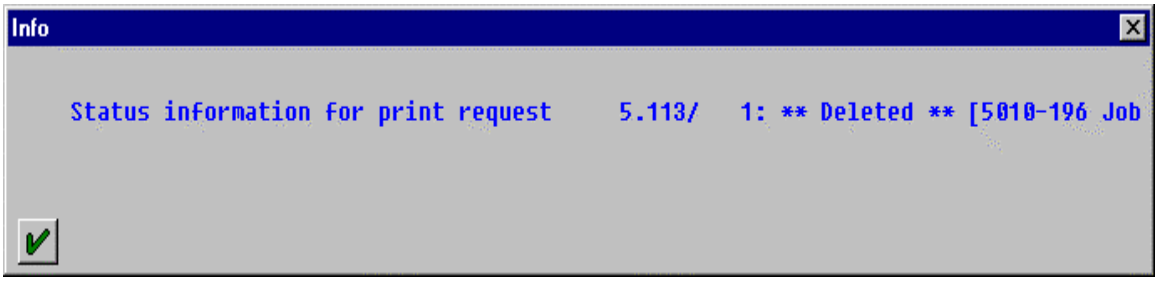
3. From the **Spool Admin.: List of Logical Output Management Systems** window, select the `Ipm001` LOMS and click on the **Choose** (checkmark with a clock or **f2** key) icon.

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** window that is displayed below, check the **Status dialog box** field in the **Jobs** pane.



6. Once you have specified this setting, information from the InfoPrint Manager spooler is sent back to your SAP R/3 application server in the form of a pop-up window. For example, if you have deleted an output request that has already finished processing at the printer, InfoPrint Manager sends back a pop-up **Information** window (displayed below) to inform you of the output requests' status.




This page last updated on December 16, 1998.

# Organizing OMS Output Devices into LOMSs

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:

- Using separate command groups
- Using different OMS services
- Distributing the callback workload

## 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, based upon the printer. For example, you may want the InfoPrint Manager callback daemon to provide status only for printers that accept ABAP and OTF input data streams. For print jobs submitted to PCL and PostScript printers, you might only require polling of data. By defining a separate LOMS for each group, you can ensure that you have activated the callback support (refer to Activating End-User Pop-Ups).

## 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 Version 4 system, as well as Moving OMS Definitions Between Systems and Shutting Down the SAP Callback Daemon.

This page last updated on December 16, 1998.

# 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 Version 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.

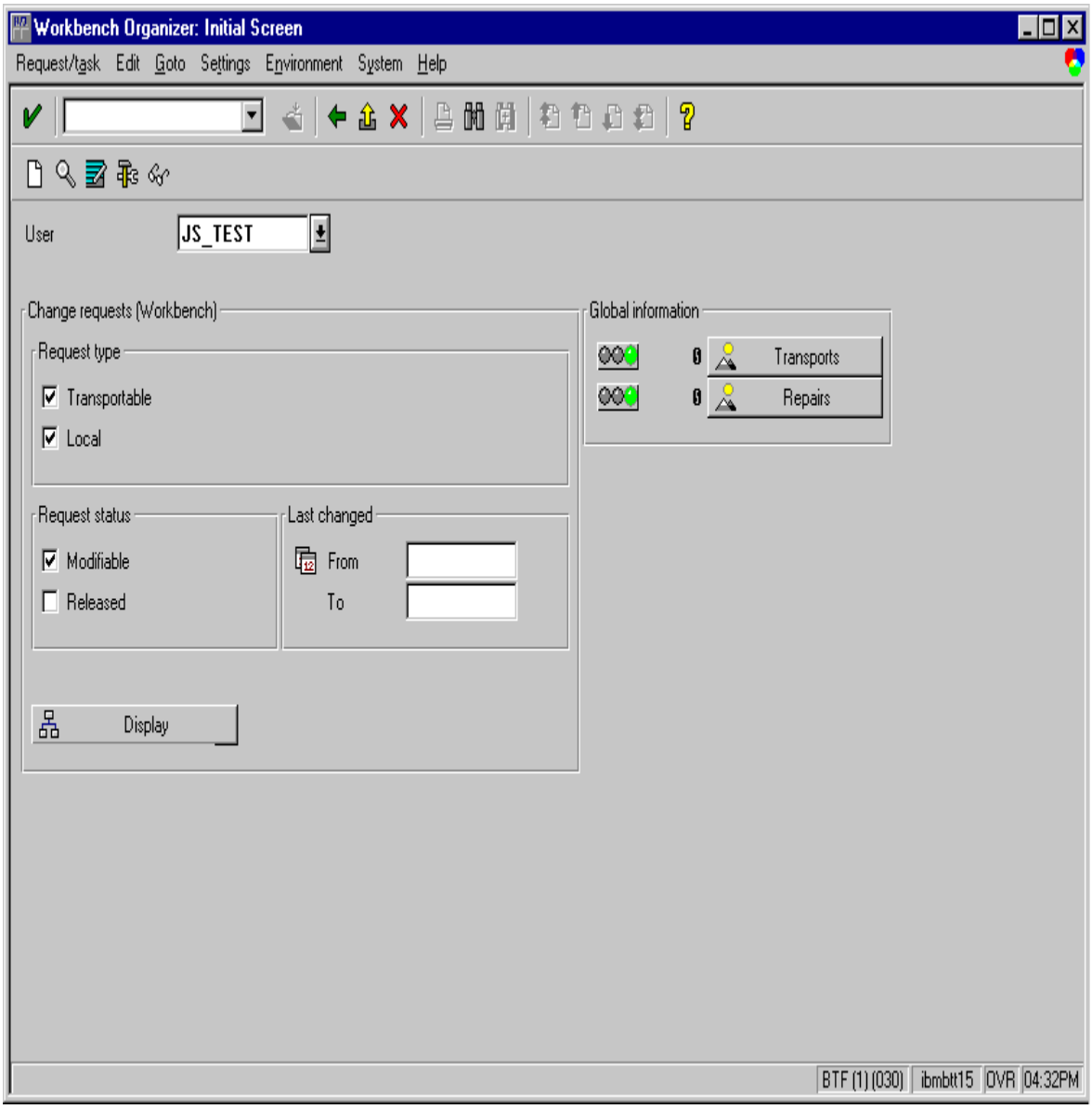
3. From the **Spool Admin.: List of Real Output Management Systems** window, select the **Change mode** push-button from the ROMS list and double-click on the ROMS definition that you want to transport.

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.

5. 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.

This page last updated on December 16, 1998.

# Selecting Event Report Levels

The following procedure describes how you can specify the level of Events that the callback daemon reports for jobs submitted thorugh InfoPrint Manager.

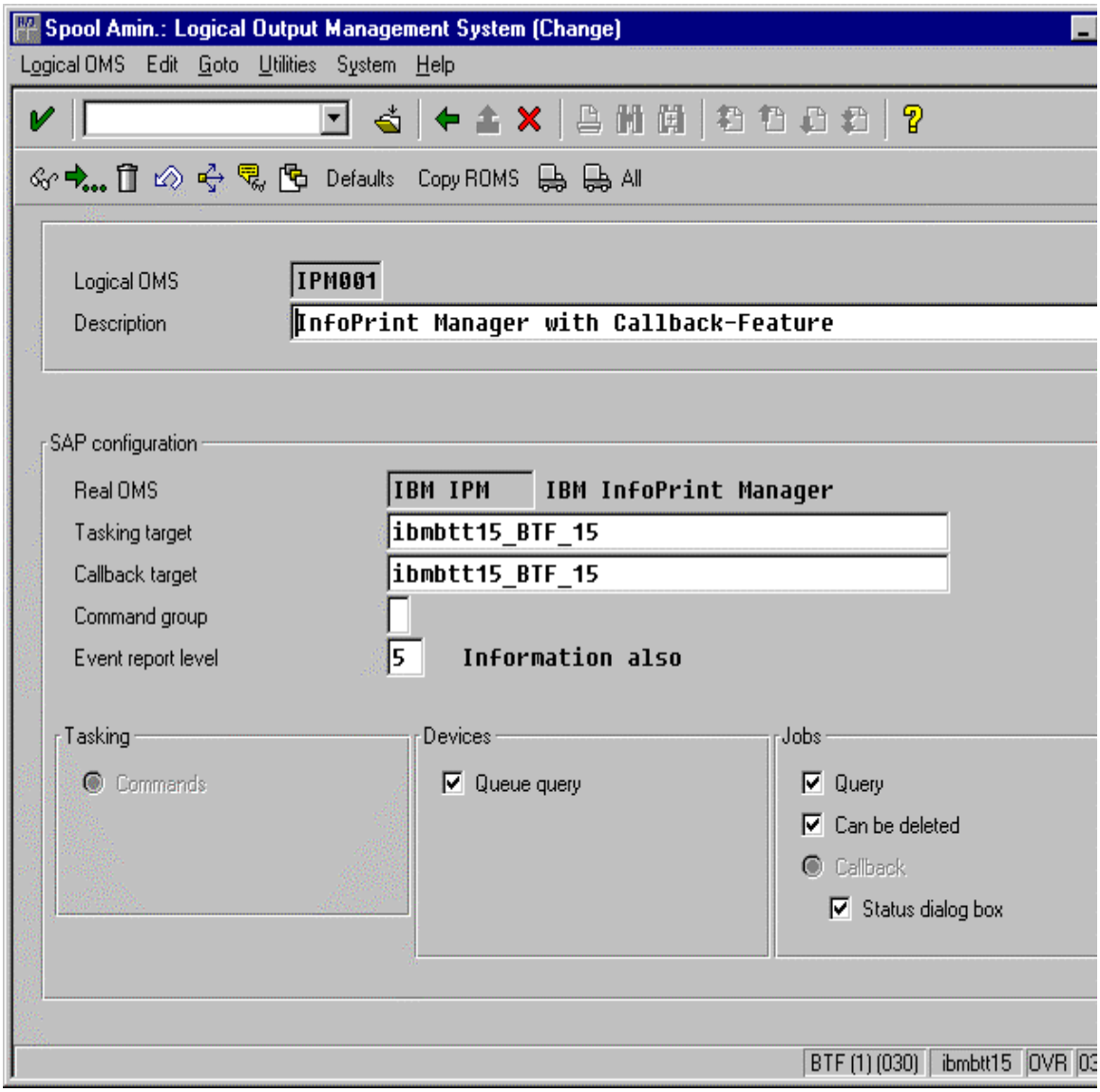
1. From the SAP R/3 graphical user interface, complete the Logical Output Management System (LOMS) definitions by specifying the spad transaction.

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 (Change)** window displayed below, 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).




This page last updated on December 16, 1998.

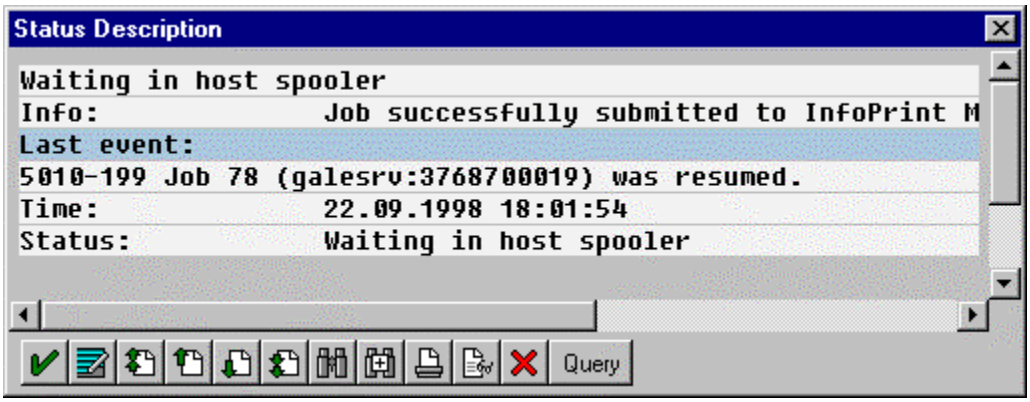
# Viewing Enhanced Job Status, Job Events, and Querying Jobs

The following procedure describes Output Management System (OMS) support for obtaining information about a print job sent with 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 Version 4 graphical user interface:

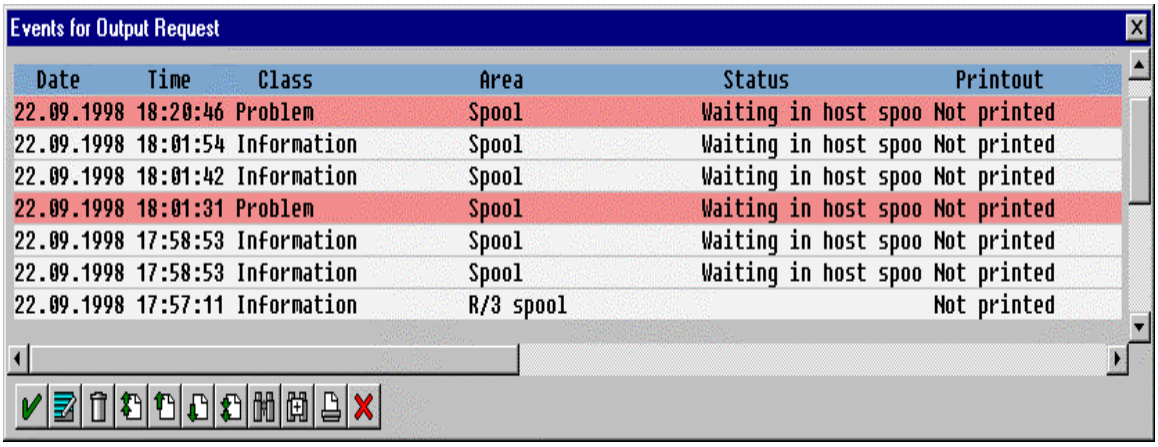
1. From the **Output Requests for Spool Request** *XXX* window (where *XXX* is the name of the printer that you selected), double-click on the output request you want to view in the **Description** column on the far right.

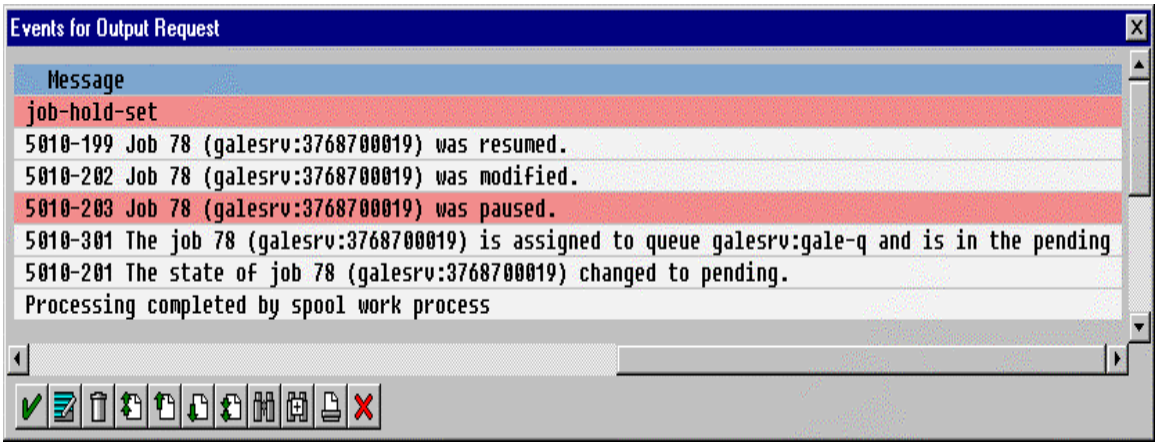
2. From the **Status Description** pop-up window (example displayed below), click on the Events (**f5** key) button. You can see current information about the job, including the last event received:



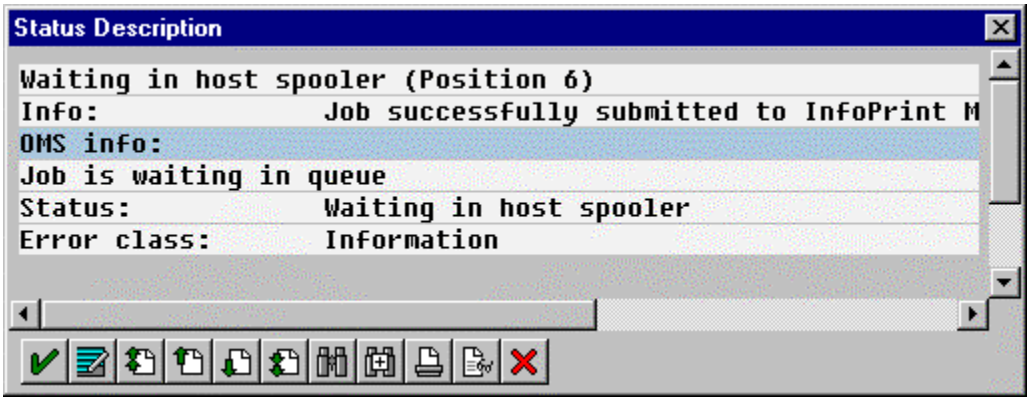
3. From the **Events for Output Requests** pop-up window (displayed below), you can view all the events concerning this job.

   **Note:** This **Events for Output Requests** pop-up window is displayed three times to show (1) the date, time, and current status of the job; (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 receive a query with 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.

This page last updated on December 16, 1998.

# Displaying Device Status

To display the status 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.

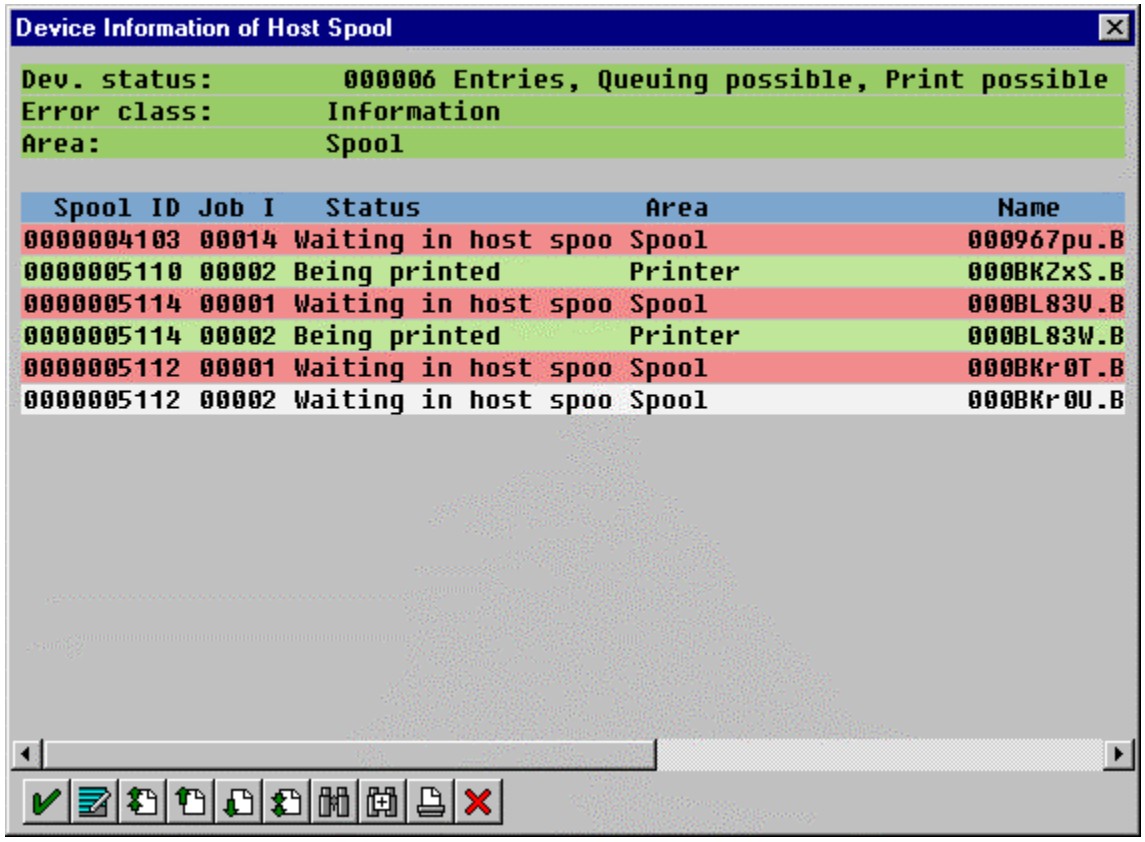
   2. Press the **Output device** pull-down menu and select the **Choose** option (or specify the **f2** key).

4. From the **Spool Administration: Change Output Device (Display)** window, click on the **External jobs** button.

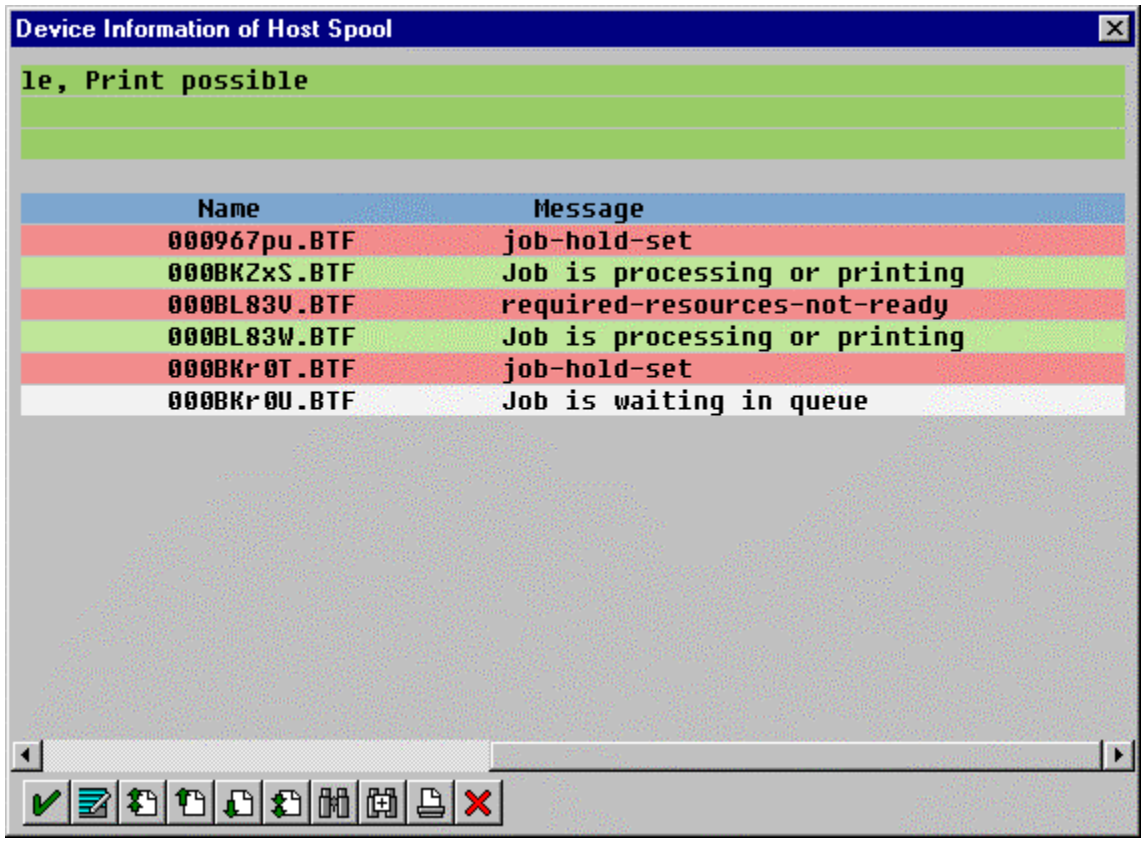
5. The **Device Information of Host Spool** pop-up window displays the status of this device.

   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 queue which could be printed:



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




This page last updated on December 16, 1998.

# Canceling Jobs on a SAP R/3 Version 4 System

The following procedure describes how you can cancel SAP print jobs that you have sent to the InfoPrint Manager through the SAP R/3 spool work process. Use the following procedure from the SAP R/3 Version 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:

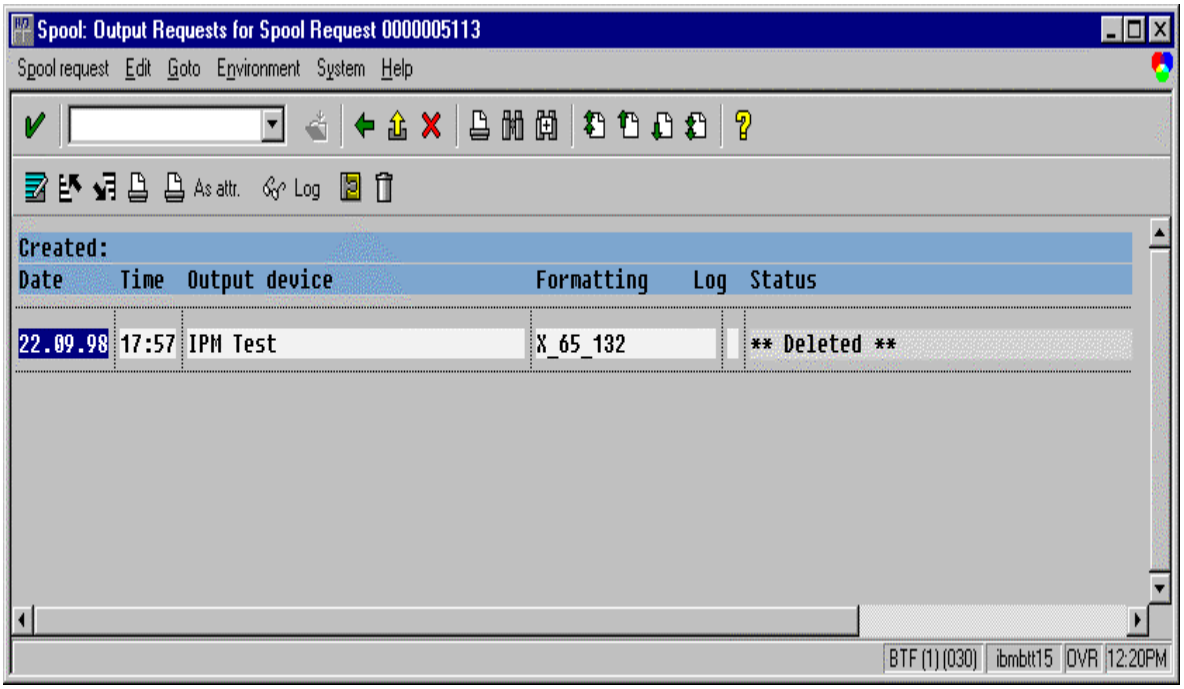
    1. Highlight the your InfoPrint printer from the **Devices** column.

    2. Press the **Spool Requests** (**shift** + **f6** key) button.

4. From the **Spool Requests for Device** *XXX* (where *XXX* is the name of the printer that you selected), double-click on the spool request 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 the system.




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 to another instance of your SAP R/3 application server, or another SAP R/3 application server.

From an AIX command line on the application server where the SAP callback daemon is currently running,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 or instance to another.

This page last updated on December 16, 1998.

# Using AFP Printing (sap2afp transform) Procedures



This page last updated on December 16, 1998.

# 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 loose 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.

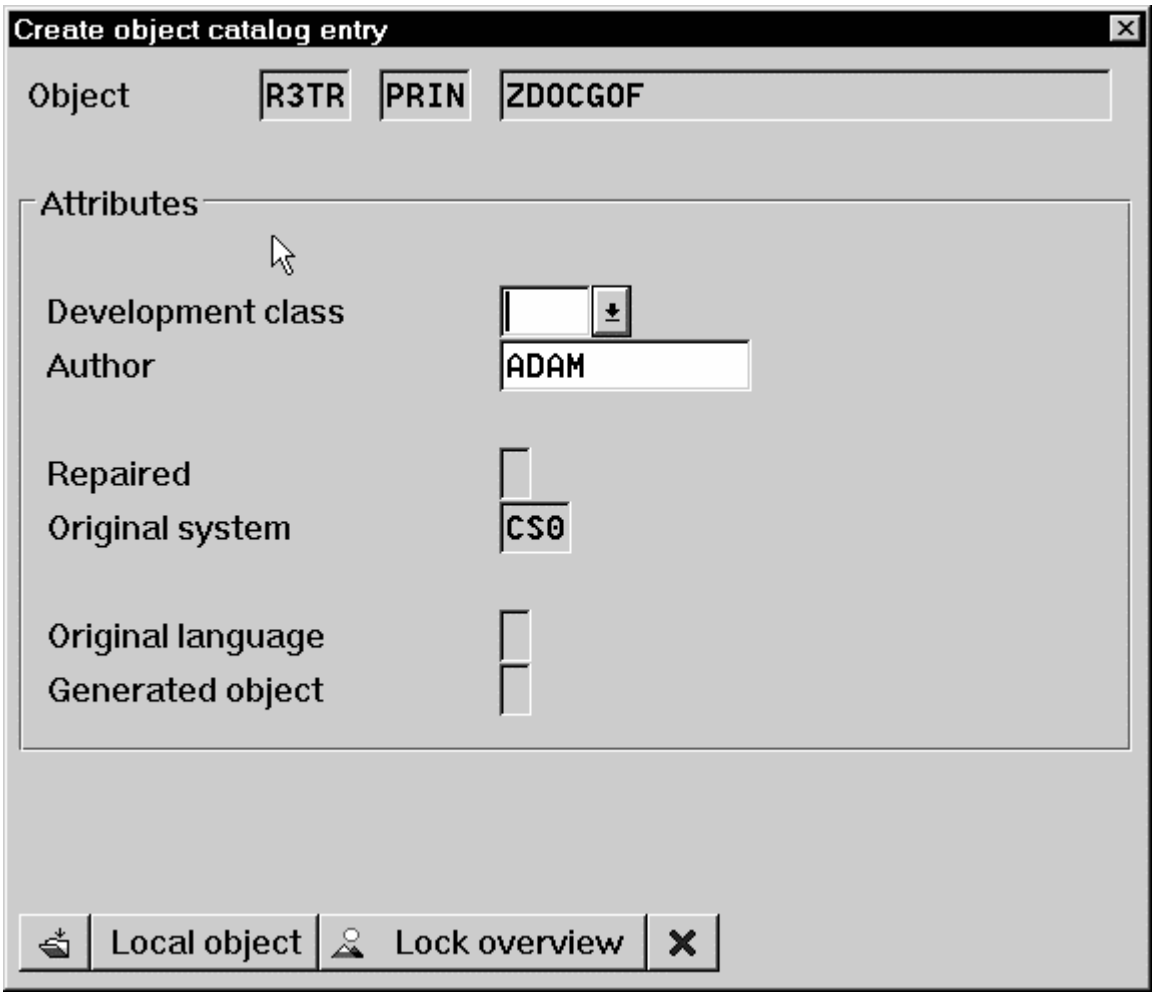
3. From the **Copy Device Type** window, specify the device type you want to customize (in this case, *SAPGOF*) in the **Copy device type** field and provide a name for your customized Device Type (in this case, *ZDOCGOF*) in the **to device type** field.

   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:




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.

This page last updated on December 16, 1998.

# Defining New Formats

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 **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**).

The following describes how to specify media orientation through media maps:

- For an Entire Document
- For Each Page of a Document

## Supporting Media Map Selection for an Entire Document

By mapping a SAP Format to a form definition in the **pagedef.tab** file, the first media map within the form definition defines 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. The SAPscript editor, the formatter used for the Output Text Format (OTF) data stream that is native to SAP, can invoke a media map on a page-by-page basis if you have defined paper resources for pages within Layout Sets.

Each resource name that is passed on in the OTF **PAGE** command defines a media map. The AFP data that the **sap2afp** transform produces contains Invoke Media Map (IMM) commands, which specify a media map within a form definition. A media mapping remains in effect for a job until another media mapping is invoked. By default, the **sap2afp** transform uses **F1SAP** (link here), 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 definitons, which are documented in the *IBM InfoPrint Manager Commands Reference*.

The remainder of this topic describes how you can define a customized form definition for specific jobs that you print regularly. Depending upon your installation, 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 that contain varying media styles on different pages, 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.

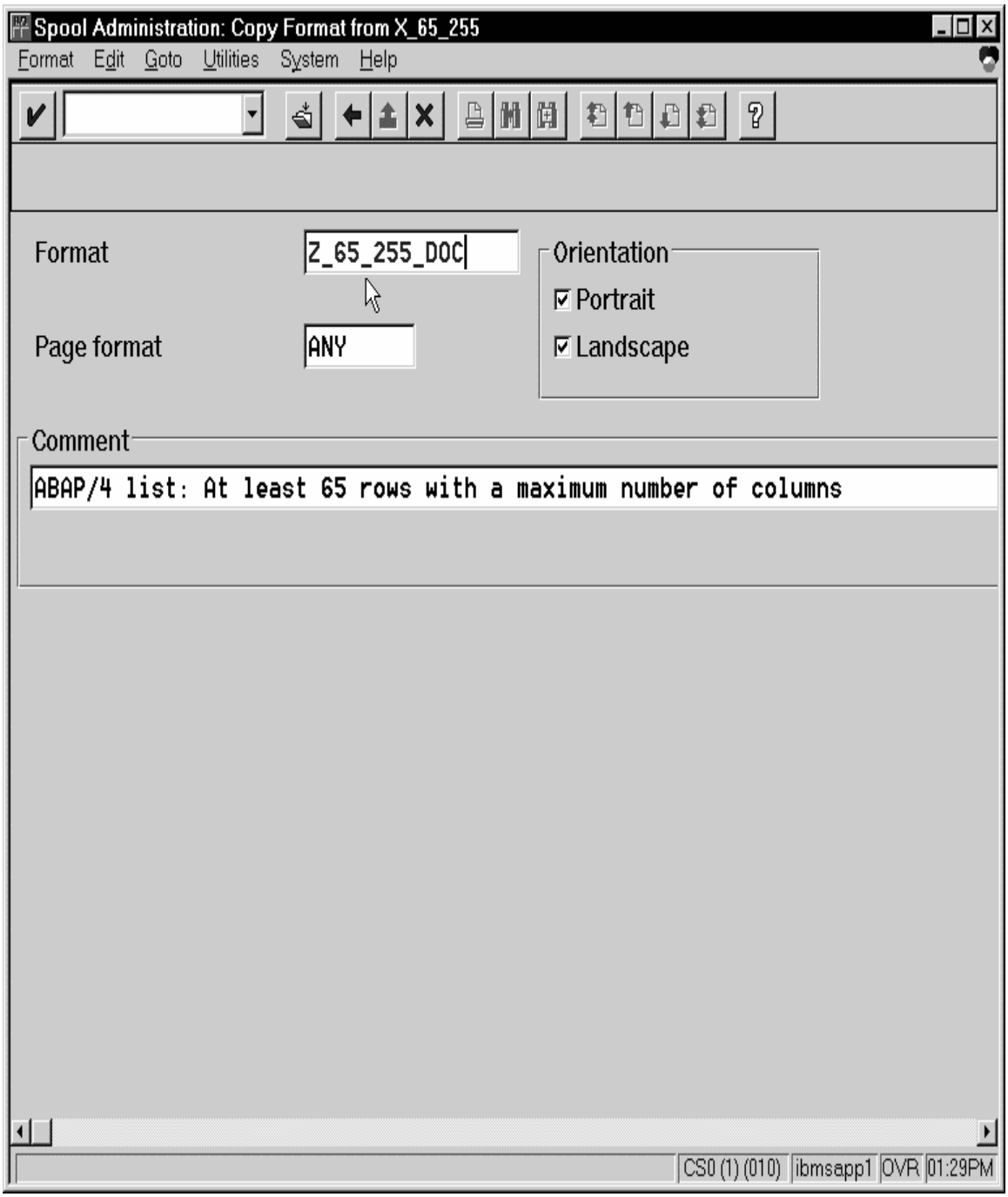
   or typing /nSPAD in the **ok-Code** field.

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 format.

## Defining a New OTF Format

If you are printing Output Text Format (OTF) jobs that contain varying media styles on different pages, 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, ZLETDOC).

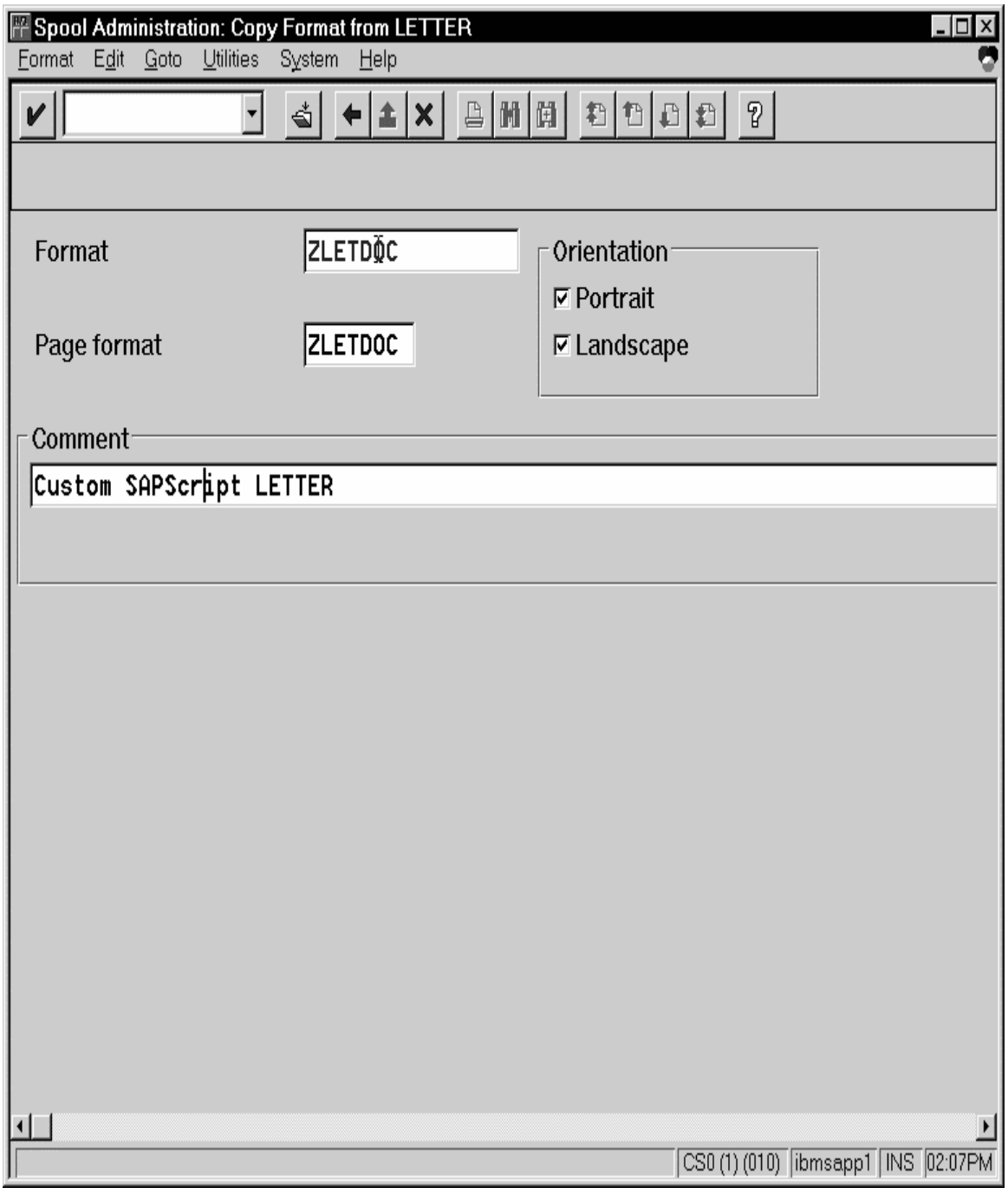
5. Select the back icon (the left-pointing arrow) and the system prompts you to save the new page format.

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, ZLETDOC), and select the **copy from** push-button.

9. From the **Spool Administration: Copy Format from LETTER** window, fill in the values as displayed below:

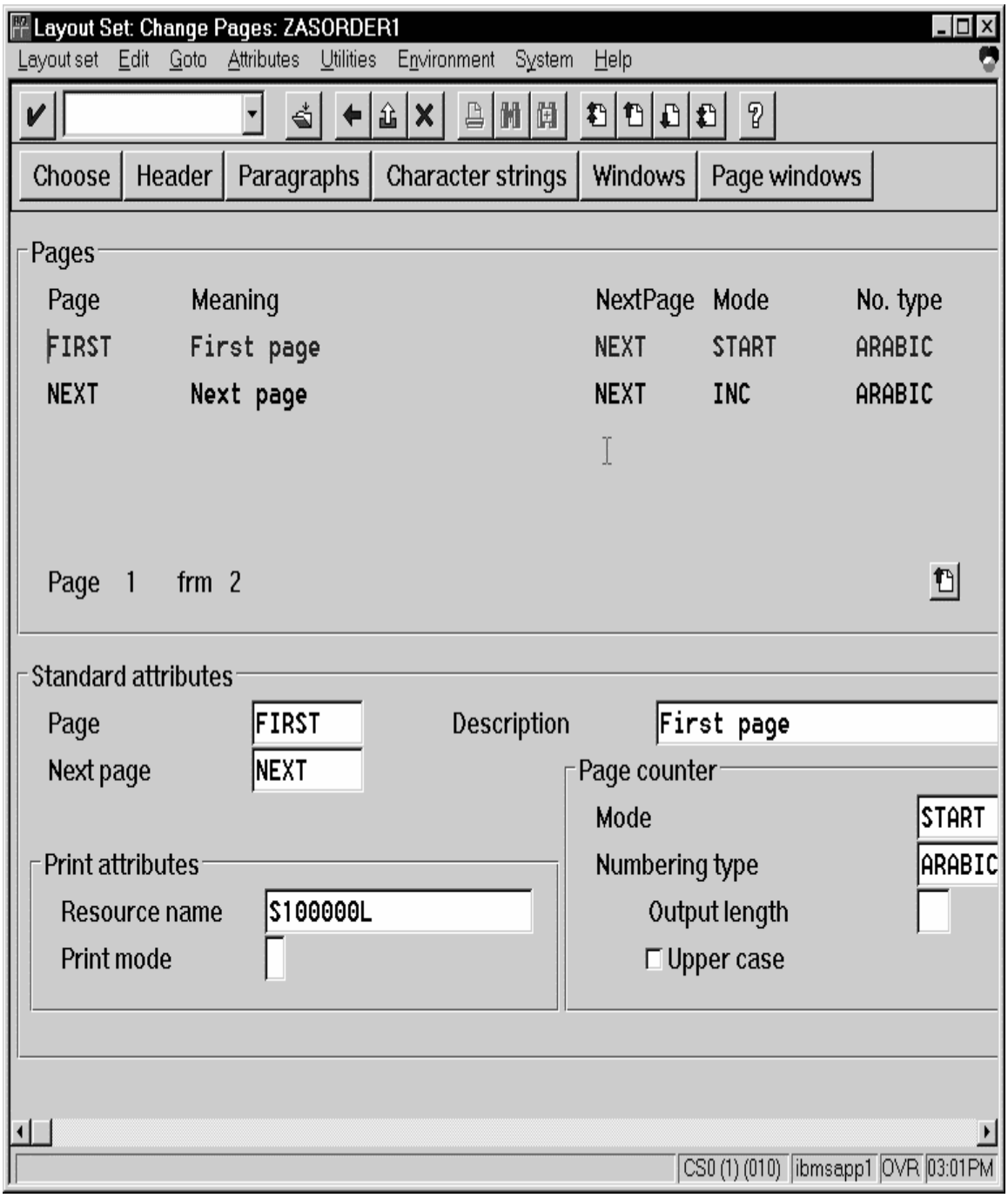



10. Select the back **icon** (the left-pointing arrow) and the system prompts you to save the new OTF format.

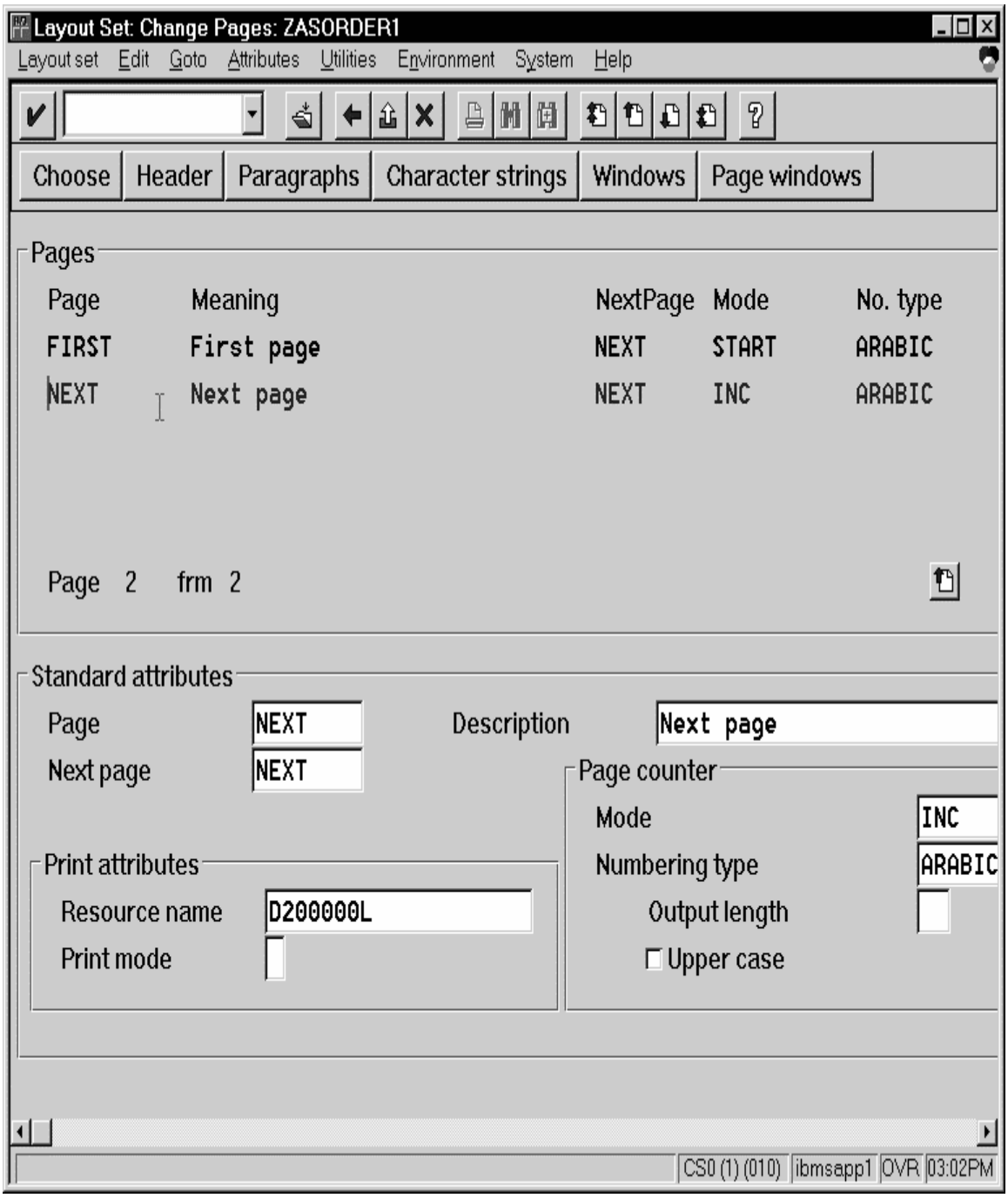
## Supporting Page-by-Page Media Map Selection

The following procedure shows how you can define a name for each defined page within an existing Layout Set. 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.

1. From the first page of the job, double-click so that it is highlighted and fill in the **Resource Name** field as shown below:



2. 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:




3. Continue with the same procedure on any page where you want to specify a new media style.

This page last updated on December 16, 1998.

# Connecting a New Format to a Device Type

If you are printing Advanced Business Application Programming (ABAP) jobs that contain varying media styles on different pages, 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.

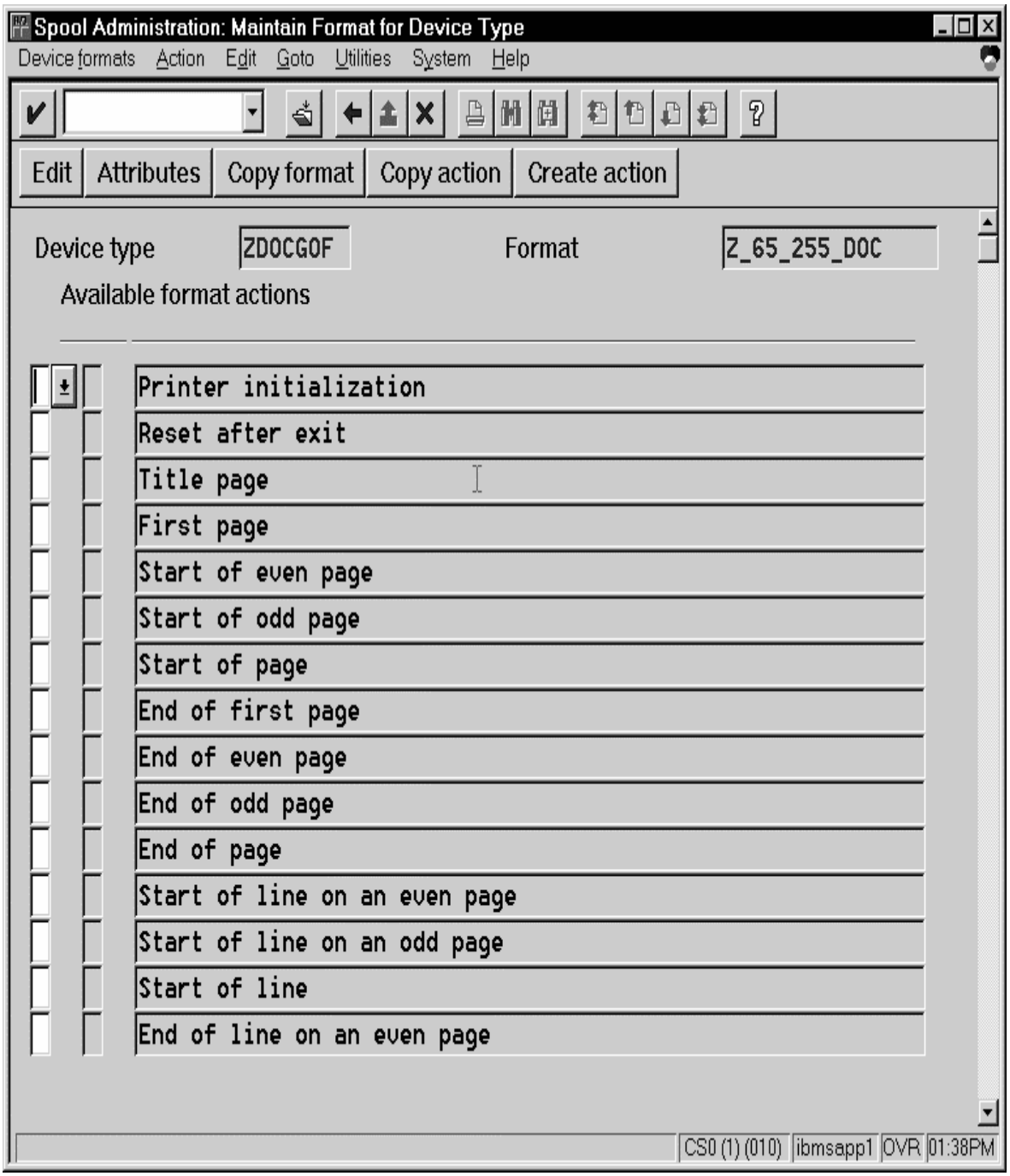
2. From the **Spool Administration: initial screen** window, select the **Device formats** option and click the **Change** push-button.

3. From the **Spool Administration: Choose Format for Device Type** window, specify the Device Type (in this case, ZDOCGOF) and your customized Format name (in this case, Z_65_255_DOC) 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.*

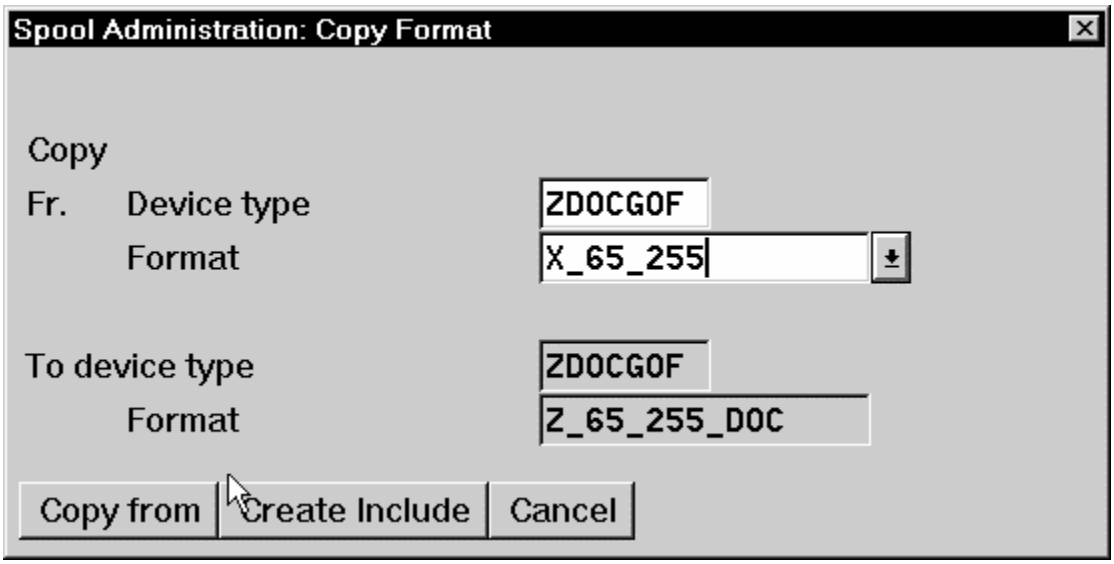
4. Select the Execute icon.

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.

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# 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 compatable) 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***.

2. Create a backup copy of the current **/usr/lpp/psf/sap2afp/defcp.tab** file.

3. Copy the **/usr/lpp/psf/sap2afp/defcp.tab.japan** file to the **/usr/lpp/psf/sap2afp/defcp.tab** file.

4. Create a backup copy of the current **/usr/lpp/psf/sap2afp/pagedef.tab** file.

5. Copy the **/usr/lpp/psf/sap2afp/pagedef.tab.japan** to the **/usr/lpp/psf/sap2afp/pagedef.tab** file.

6. Obtain the fonts needed for printing.

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

This page last updated on December 16, 1998.

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

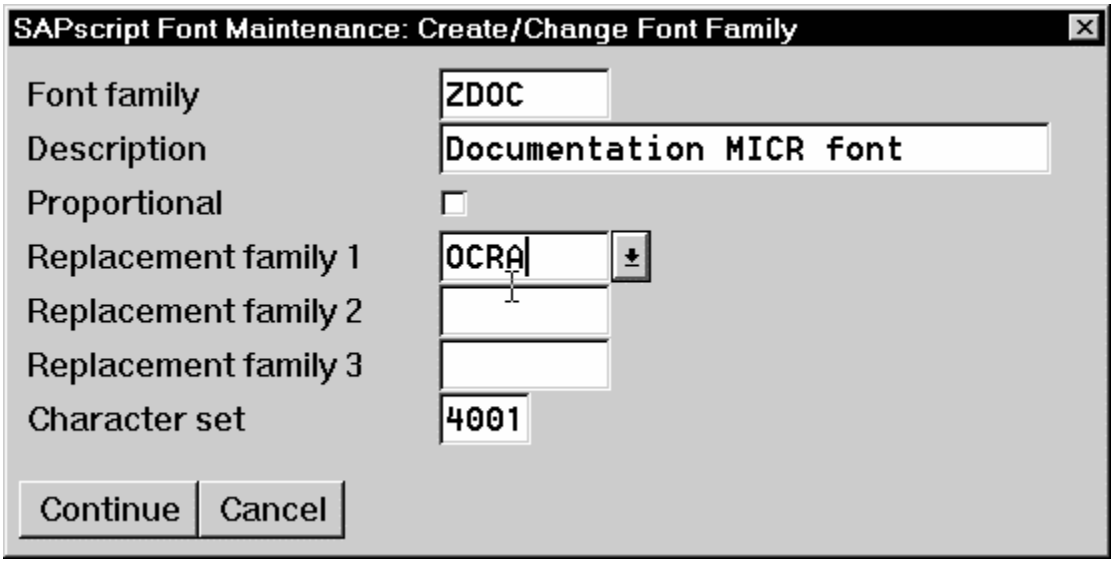
Use the following procedure when using the **sap2afp** data stream transform to print with a new font that you have created for the job:

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:

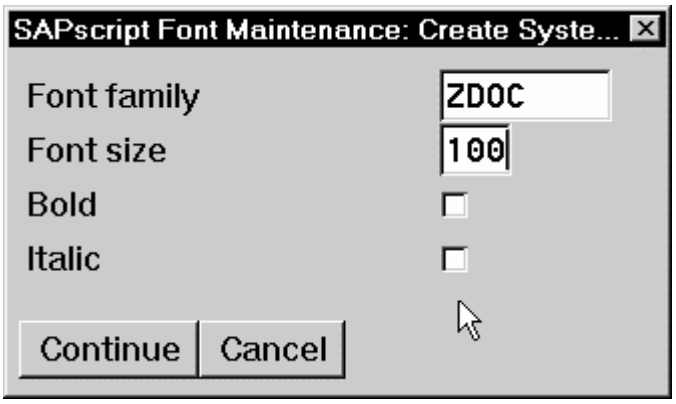



4. Select the **Continue** push-button.

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:

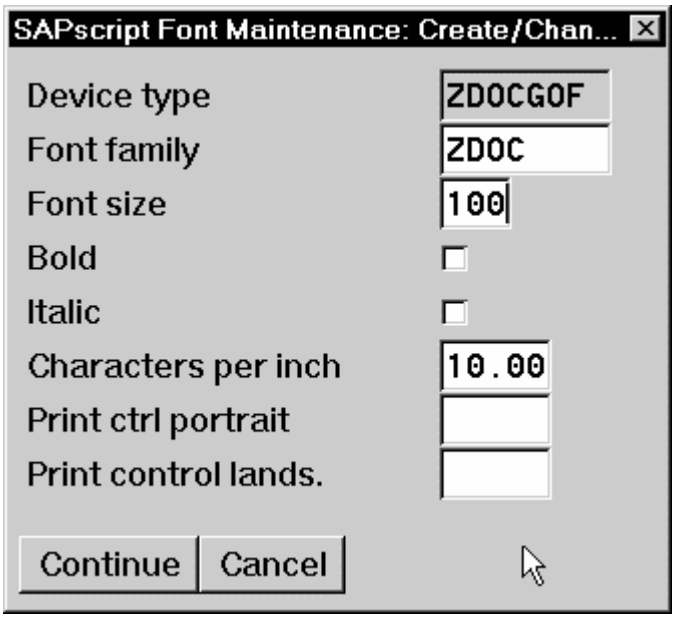



8. Select the **Continue** push-button.

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 (ZDOCOGF) and fill in the remaining information:




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.

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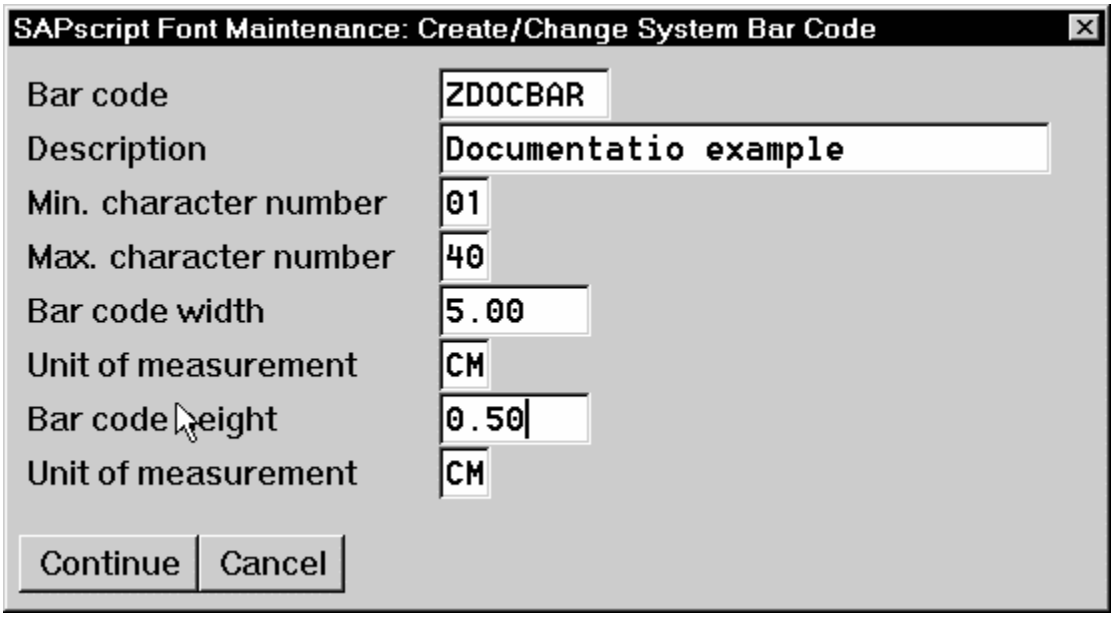
# Setting Up Your SAP R/3 System to Support New OTF User Bar Codes

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:

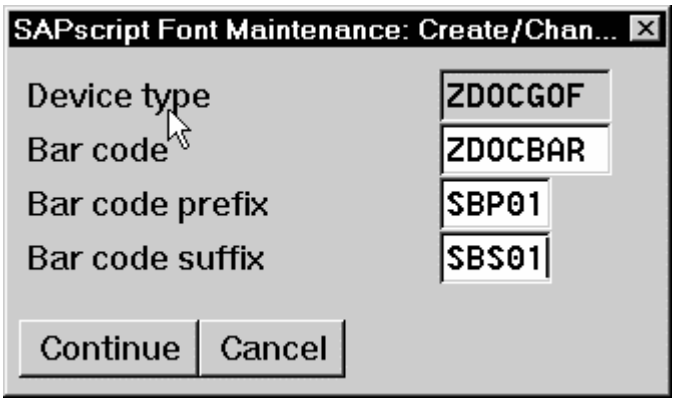



4. Select the **Continue** push-button.

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:




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), click here.

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# 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. |
| 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-0E00 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 |

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# Adding Box Shading Values to Printed Output

InfoPrint Manager for AIX supports both Output Text Format (OTF) shading values and border thicknesses. 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:

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

:

:

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

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# 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 the SAP device so that a fax number can be passed to InfoPrint Manager.

You can submit faxes from both SAP R/3 Version 3 and SAP R/3 Version 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 Version 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

Submitting a Fax from SAP R/3 to InfoPrint Manager

This page last updated on December 16, 1998.

# 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. From the SAP R/3 graphical user interface, specify the spad (**Tools->Administration,Spool->Spool Administration**) transaction.

2. 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.

3. From the **Spool Administration: List of Output Devices** window, click the **Create** (white paper image to the right of the trash can) icon

4. 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 a short name, or allow the system to generate a short name. | IPMFAX<br>FAX |
| **Device class**: Specifies the device class for Fax. | *F* |
| **Host printer**: Specify the InfoPrint Manager logical destination (printer) name that will send the job to the InfoPrint fax destination. | *ip01-sam* |
| **Access method to host spool**: Ensure you specify this Access Method. | *L* (for SAP R/3 V3)<br>*E (for SAP R/3 V4)* |
| **LOMS:** If you are running on a SAP R/3 Version 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. | *IPM001* |
| **Spool server**: Choose an applicable spool server from the entries list on the field. | *ibmbtt15_BTF_15* |

5. Save your device definition, by specifying **Output Device --> Save** from the menu options.

6. Specify the scon (**Tools->Communication->Configuration**)transaction.

7. From the **SAPcomm: Configuration** window, select the **Location** option from the **Destination** pane and click on the **Change** push-button.

8. Click on the check box to close the pop-up message window that displays information about the table's client independent status.

9. 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.

10. 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.

11. From the **SAPcomm: Configuration** window, select the **Selection** option from the **Destination** pane and click on the **Change** push-button.

12. Click on the check box to close the pop-up message window that displays information about the table's client independent status.

13. From the **SAPcomm: "destination selection"** window, click on the **New Entries** field.

14. 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.

15. 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.

16. 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.

1. **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.

This page last updated on December 16, 1998.