

Printing Systems Division



Infoprint Manager: SAP R/3 Configuration and Printing Tasks

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Infoprint Manager: SAP R/3 Configuration and Printing Tasks

Note

Before using this information and the product it supports, be sure to read the information in "Notices" on page 159.

Fourth Edition (January 2003)

This edition applies to both IBM Infoprint Manager for AIX, Version 4 Release 1 Modification 0, and IBM Infoprint Manager for Windows, Version 2 Release 1 Modification 0, and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters. Be sure to use the correct edition for the level of the product.

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Chapter 1. Overview of the SAP R/3 print feature



Figure 1. SAP R/3 Product Logo

The following describes the benefits derived by business enterprises that use SAP R/3 and either Infoprint Manager for AIX Version 4 Release 1 or Infoprint Manager for Windows Version 2 Release 1 to manage their print environments.

Infoprint Manager and SAP R/3

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.

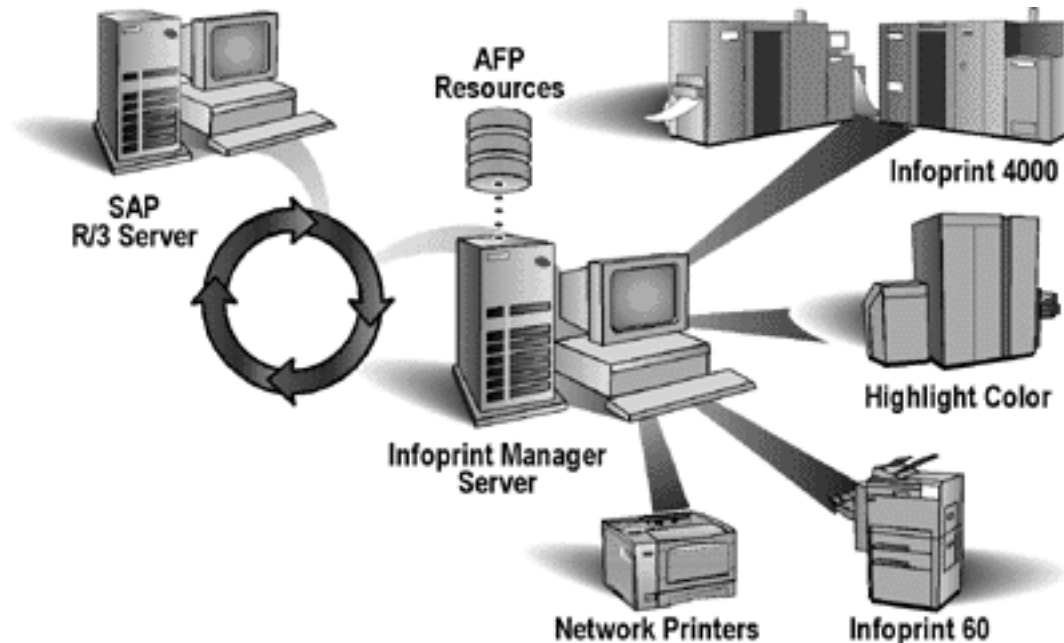


Figure 2. An Infoprint Manager SAP R/3 Configuration

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. IBM's four decades of experience in printing and data management translates into billions of pages printed annually in more than 130 countries, solidifying our leadership position in the enterprise printing environment. Integrate IBM's printing expertise with SAP's leading business application software for a winning combination.

Reliable Notification about job status to SAP users

SAP R/3 (Release 4 and above) provides support to closely integrate an external Output Management System (OMS) with a SAP system. Both Infoprint Manager for AIX and Infoprint Manager for Windows 2.1 (with PTF UR53740) provide SAP OMS support.

Using Infoprint Manager SAP OMS support, your SAP users can receive notifications on the jobs that they have submitted for printing. It also provides support to allow a SAP user to:

- Cancel one or more jobs
- Query the status of one or more jobs
- Query the status of an Infoprint printer and its jobs

Adding 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 (bitmap 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 in black and white, using the native Output Text Format (OTF) data stream in either one, four, or eight-bit pixel images: Infoprint Manager can handle it all. And Infoprint Manager's double-byte character set (DBCS) enablement allows support for the **Shift-JIS** Japanese language and the Korean language.

Even if you are printing on PCL and PPDS non-impact printers, the SAP Print feature provides benefit by allowing you to print bar codes without installing expensive bar code SIMMs on each printer. 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, 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 either *Infoprint Manager for AIX: Procedures* or *Infoprint Manager for Windows: Procedures*.

The Infoprint Manager SAP OMS support with PTF U48468 on Infoprint Manager for AIX or PTF UR53740 on Infoprint Manager for Windows also allows you to easily:

- Switch the Infoprint Manager system to which you are sending jobs
- Send jobs to multiple Infoprint Manager systems
- Failover to other Infoprint Manager servers in the same Infoprint Manager system

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, providing print integrity through built-in error recovery.

SAP clients and features

Infoprint Manager provides client support for SAP systems running on AIX, HP-UX, Sun Solaris, and Windows. By installing an Infoprint Manager SAP Client, you can always print PCL and PostScript jobs, but to gather the additional support cited in Table 1, you must install the SAP Print Feature on your Infoprint server. The Infoprint Manager for AIX and the Infoprint Manager for Windows SAP Print features contain both the the SAP Output Management support and the SAP transform that allows SAPGOF device type output to be transformed to AFP for printing on PCL and IPDS printers. The Infoprint Manager for AIX SAP Print feature also includes the SAPconnect fax support.

Table 1. SAP Print Feature functions and Operating Systems

Infoprint Manager Server Systems	OMS Support	SAPconnect Fax Support	SAPGOF device type (OTF and ABAP) Support
AIX	yes	yes	yes
Windows	yes	no	yes

Chapter 2. About this publication

This publication describes how a business enterprise that uses SAP R/3 can use either Infoprint Manager for AIX or Infoprint Manager for Windows to manage its print environment. This document is divided into four parts that you can use to plan, implement, and print to Infoprint Manager. Note that some of these topics repeat sections of installation procedures. You should determine whether you want to run an OMS or a non-OMS configuration, and then decide which topics best fit your installation's print needs. For a description of the benefits provided by and configuration tasks associated with an OMS configuration, see "An overview of SAP R/3 and OMS" on page 15.

Who should read this publication

This publication contains information for administrators who create and configure both the Infoprint environment and the SAP R/3 environment. IBM recommends that users possess a detailed knowledge of a SAP R/3 environment, as well as experience administering and maintaining either AIX or Windows operating systems. In addition to using this publication, you should also consult:

- SAP R/3 online documentation whenever appropriate
- *Infoprint Manager for AIX: Getting Started* for information about installing the Infoprint Manager for AIX 4.1 product
- *Infoprint Manager for Windows: Getting Started* for information about installing the Infoprint Manager for Windows 2.1 product

Once you have installed the appropriate components on both your Infoprint server(s) and your SAP server(s), see *Infoprint Manager: Reference* for information about the various Infoprint commands, utilities, and attributes available to you while maintaining the system.

Most recent information

The most recent product information (including updates of this manual and the related Infoprint Manager publications), is found on the World Wide Web at the IBM Printing Systems site (<http://www.ibm.com/printers>). From the Printing Systems homepage:

1. Under **Resources For**, click **Infoprint Manager**.
2. Under **Products** in the right hand navigation bar, click **Infoprint Manager for AIX** or **Infoprint Manager for Windows**.
3. Under **More Information**, click **Product Library**.
4. Click on the appropriate Infoprint Manager publication.

How to use this publication

To insure that your SAP application servers are correctly integrated with the Infoprint server, you must install the Infoprint Manager SAP client(s) wherever a Spool Work Process (SWP) resides that will make print requests to Infoprint Manager logical destinations. The Infoprint Manager SAP Clients include everything needed to be installed on the SAP application servers. In addition, you need to install the SAP Print feature on the Infoprint server or servers.

Note: At a minimum, on every AIX system on which you will be running the SAP (**sap2afp**) transform (on your Infoprint servers), you must have the following fileset installed:

`bos.loc.adt.iconv` (Language Converter Development Toolkit)

This document consists of the following four parts:

1. Part 1, "Introduction", on page 1.

This topic consists of this overview chapter, a review of the publications available for Infoprint Manager, and an overview of Infoprint Manager's SAP Print Feature that describes the benefits available to SAP R/3 users.

2. Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13.

This topic provides instructions for installing, configuring, and using Infoprint Manager when defined as an Output Management System (OMS) with SAP R/3, Release 4 and above. The Infoprint Manager Output Management System provides enhanced status reporting for SAP R/3 jobs. Your SAP systems can reside on either Sun Solaris, HP-UX, AIX, or Windows, and you can have either Infoprint Manager for AIX or Infoprint Manager for Windows (providing you have applied PTF UR53740 or higher).

3. Part 3, "Infoprint Manager non-Output Management Support", on page 67.

This topic provides instructions for installing, configuring, and printing to Infoprint Manager when not using Output Management System (OMS) support. Your SAP systems can reside on either Sun Solaris, HP-UX, AIX, or Windows; your Infoprint server can reside on either AIX or Windows. and SAP access method **L** is recommended. You can, however, use access method **U** when your SAP applications reside on non-AIX systems, or access method **C** if you are submitting jobs from a SAP Windows system to an Infoprint Windows server. For more information on these methods, see Appendix B, "Alternate access methods for submitting SAP jobs to Infoprint Manager", on page 153.

4. Part 4, "Customizing your print environment", on page 91

This topic provides additional configuration information that you can either choose or not choose to implement. Please note that the fax options are available only if you are using Infoprint Manager for AIX, while the Infoprint Manager SAP transform options apply whether you are using Infoprint Manager for AIX or Infoprint Manager for Windows.

Infoprint Manager provides two distinct methods for providing fax support to SAP users: either the **SAPcomm** interface or the **SAPconnect** interface, as described in Chapter 15, "Fax support in SAP R/3", on page 93. The **SAPcomm** interface applies to all SAP releases until SAP Web Server Release 6.10 and 6.20, providing you the ability to send faxes (fax-out) and works with the OMS support. The **SAPconnect** interface supports future releases of SAP R/3 and provides you with the capability to both send (fax-out) and receive (fax-in) faxes from your SAP user interface, using your Infoprint Manager AIX server, but is independent of the OMS support"

You can use the collection of procedures for customizing the Infoprint Manager SAP data stream transform (**sap2afp**) and related SAP R/3 print options that are described in both Chapter 16, "Print support that applies to both Infoprint AIX and Infoprint Manager Windows servers", on page 123 and Chapter 17, "Using bar codes with SAP R/3", on page 145. These procedures apply for both Infoprint Manager AIX servers and Infoprint Manager Windows servers.

SAP R/3 GUI keyboard short cuts

Table 2 provides a list of keyboard short cuts that can be used while performing some of the procedures described in this book. Because this is an Infoprint Manager manual, these short cuts are not a complete list of all options available on the SAP R/3 GUI for all releases. The **SAP R/3 GUI window where applicable** column lists particular windows in the SAP R/3 GUI where these short cuts work, but does not imply that the short cut is exclusive for a particular panel or task. In addition, the SAP R/3 GUI may change keyboard short cuts from release to release. IBM recommends that you consult the SAP R/3 online documentation that comes with the product to verify keyboard short cuts for your particular SAP R/3 release.

Table 2. SAP R/3 keyboard short cuts

Short Cut Key or Combination	Task	SAP R/3 GUI window(s) where applicable
F2	Choose (checkmark with a clock) icon	Spool Administration windows
F2	Change (pencil) icon	SAPconnect: Administration (view) windows
F5	Events icon	Status Description window
F6	Extended Admin.:	Spool Administration windows
F7	View a Node	SAPconnect: Administration (view) windows
F8	Change (red pencil) icon	Spool Administration windows
F8	Query icon	Status Description pop-up window (derived from Spool Output Requests for Spool Request XXXXXX)
F8	Test RFC connection	RFC Destination <i>dest_name</i> window
F8	View jobs	SAPconnect: Administration (view) windows
F11	Save	RFC Destination <i>dest_name</i> window
Ctrl + S	Save (open folder) icon	SAP R/3 GUI
Ctrl + F1	Extended config. (photo film with two cards superimposed on top) icon	Spool Administration windows
Ctrl + F5	Create (piece of paper) icon	SAPconnect: Administration (view) windows
Ctrl + F7	Start the send process to test sending faxes out	SAPconnect: Administration (view) windows
Ctrl + F10	SAPconnect Test routes	SAPconnect: Administration (view) windows
shift + F2	Trash can icon	Spool Output Requests for Spool Request XXXXXX
shift + F5	Transport (truck) icon	Spool Admin.: Real Output Management System

Table 2. SAP R/3 keyboard short cuts (continued)

shift + F6	Transport all (truck) icon	Spool Admin.: Real Output Management System
shift + F6	Spool Requests icon	Spool Administration: List of Output Deviceswindow

The Infoprint publication library

For the most current information, please go to the IBM Printing Systems website at <http://www.ibm.com/printers>.

Infoprint Manager for AIX publication library

Infoprint Manager for AIX provides publications in PDF format on a CD-ROM supplied with the product. You can download PDF versions of these publications or order printed copies of these publications from IBM at the following website:

<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US>

Notes:

1. There is a fee for the printed manuals.
2. You can use the form number specified for a publication to download a PDF version or order a printed version.

Here is the list of publications for Infoprint Manager for AIX:

- *IBM Infoprint Manager for AIX: Introduction and Planning Guide*, G544-5833. This publication gives an overview of Infoprint Manager for AIX, introduces its concepts, and helps you prepare to use it. It addresses migration from previous versions of the product. Finally, this publication explains the differences between the AIX and Windows versions of Infoprint.
- *IBM Infoprint Manager for AIX: Getting Started*, G544-5817. This publication helps you install and configure IBM Infoprint Manager for AIX. It focuses primarily on server and client system software configuration.
- *Guidelines for Installing Infoprint Manager for AIX 4.1 in an HACMP Configuration*, G544-5818. This publication helps you install and configure HACMP with IBM Infoprint Manager for AIX. It also tells you how to use HACMP with IBM Infoprint Manager for AIX.
- *IBM Infoprint Manager for AIX: Procedures*, G544-5815. This publication describes the primary tasks necessary for setting up an Infoprint environment, submitting print jobs, scheduling jobs, and managing the print environment. This publication contains all the IBM Infoprint Manager for AIX procedures that are available as topics on the web in book format, including an index and table of contents for ease of retrievability.
- *IBM Infoprint Manager: Reference*, S544-5475. For print administrators, operators, and application programmers with the need to perform command-line functions, this publication describes the commands, utilities, transforms, attributes, and attribute values associated with Infoprint.
- *PSF Direct Network Configuration Guide for System/370*, S544-5486. For system administrators or network specialists responsible for configuring a system for Print Services Facility (PSF) Direct. PSF Direct is a function of IBM Infoprint Manager for AIX that allows a PSF program (PSF/390, PSF/400, PSF/MVS, PSF/VM, or PSF/VSE) to print remotely, using the SNA LU 6.2 protocol, on printers supported by Infoprint. The PSF program sends the print data stream directly to the Infoprint printer.

- *IBM PSF for AIX: AFP Upload Configuration Guide Using SNA Server/6000*, S544-5422. For system administrators, this publication describes how to configure AFP Upload on both AIX (client) and MVS (server) to send files to the JES spool on the MVS server, using a SNA LU 6.2 protocol.
- *IBM PSF for AIX: AFP Upload Configuration Guide Using TCP/IP*, S544-5423. For system administrators, this publication describes how to configure AFP Upload on both AIX (client) and MVS (server) to send files to the JES spool on the MVS server, using a TCP/IP protocol.

For information on the use of SAP R/3 with Infoprint Manager for AIX, visit the Product Library page for Infoprint Manager for AIX at:

<http://www.printers.ibm.com/R5PSC.NSF/Web/ipmrefinfo41>.

Infoprint Manager for Windows publication library

Infoprint Manager for Windows provides publications in PDF format on a CD-ROM supplied with the product. You can download PDF versions of these publications or order printed copies of these publications from IBM at the following website:

<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US>

Notes:

1. There is a fee for the printed manuals.
2. You can use the form number specified for a publication to download a PDF version or order a printed version.

Here is the list of publications for Infoprint Manager for Windows:

- *IBM Infoprint Manager for Windows: Introduction and Planning Guide*, G544-5716. This publication gives an overview of Infoprint Manager for Windows, introduces its concepts, and helps you prepare to use it. It describes features of this product and compares its functions to those of IBM Print Services Facility for OS/2 (PSF for OS/2). It addresses migration from PSF for OS/2 at a high level. Finally, this publication explains the differences between the AIX and Windows versions of Infoprint.
- *IBM Infoprint Manager for Windows: Getting Started*, G544-5717. This publication helps you install and configure Infoprint Manager for Windows. It focuses primarily on server and client system software configuration, but it also includes information for the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card.
- *IBM Infoprint Manager for Windows: Procedures*, G544-5814. This publication contains all the Infoprint Manager for Windows procedures that are available as topics on the web in book format, including an index and table of contents for ease of retrievability.
- *IBM Infoprint Manager: Reference*, S544-5475. For print administrators, operators, and application programmers with the need to perform command-line functions, this publication describes the commands, utilities, transforms, attributes, and attribute values associated with Infoprint.

For information on the use of either PSF Direct or SAP R/3 with Infoprint Manager for Windows, visit the Product Library page for Infoprint Manager for Windows at <http://www.printers.ibm.com/R5PSC.NSF/Web/ipmntref21>.

Part 2. Installing and Configuring Infoprint Manager's Output Management (OMS) Support

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Chapter 3. Infoprint Manager's OMS support

SAP R/3 Release 4 and above provides support to closely integrate an external Output Management System (OMS) with a SAP system. Both Infoprint Manager for AIX and Infoprint Manager for Windows (with PTF UR53740 or higher) are SAP OMSs that provide synchronous functions for submitting jobs, canceling jobs, querying jobs, and querying devices, as well as asynchronous event information. The Infoprint Manager SAP Callback daemon (on AIX) or process (on Windows) collects and delivers these events to the R/3 system.

Notes:

1. This support is not currently available on an SAP R/3 Release 3 system. If you are either using an SAP R/3 Release 3 system or do not want to use the OMS support, see Part 3, "Infoprint Manager non-Output Management Support", on page 67.
2. Support for SAP R/3 Release 3.1h is still available. For more information, contact your IBM Printing Systems representative.

An overview of SAP R/3 and OMS

The Infoprint Manager SAP OMS support consists of a command-line interface and either a SAP callback daemon (on AIX) or a SAP callback process (on Windows) that logs onto a SAP system and delivers Infoprint Manager notifications back to SAP R/3 by making RFCs (remote function calls). As print, cancel job, query job, and device query requests are made by SAP users, the SAP Spool Work Process (SWP) invokes the Infoprint Manager commands. As the job progresses through the Infoprint Manager system, notifications are sent back to SAP through the Infoprint Manager SAP Callback daemon (**sapcbd**) or the SAP Callback process (**sapcbd.exe**). Only one SAP Callback daemon or process needs to be started for each SAP system, regardless of how many application servers make up that system. The SAP Callback daemon or process runs on the same server where Infoprint Manager is running.

In Infoprint Manager for AIX 4.1 and Infoprint Manager for Windows 2.1, the Infoprint Manager SAP Print Feature contains:

- Command-line interface
- SAP Callback daemon (**sapcbd**) on AIX and the SAP Callback process (**sapcbd.exe**) on Windows
- SAPconnect daemon (**sapconnectd**), which is available on AIX only
- SAP (**sap2afp**) transform

The Infoprint Manager SAP Clients contain the command-line interface.

To allow either the **sapcbd** daemon or the **sapcbd.exe** process to deliver Infoprint Manager notifications to a SAP system, you must install the SAP Print Feature on at least one system where the Infoprint Manager servers are running. To allow SAPGOF device type output (both OTF and ABAP data streams) to be transformed and processed by Infoprint Manager, you must install the SAP Print Feature on every system where Infoprint Manager actual destinations are going to transform SAP data.

To install the SAP Print feature on an Infoprint server, see Chapter 4, “Installing the SAP print feature on the Infoprint server”, on page 17.

To allow SAP to issue the Infoprint Manager commands, you must install a Infoprint Manager SAP Client on every SAP server where an SAP application server will issue the commands. This includes every application server with an SWP managing R/3 devices that have been configured to use the Infoprint Manager OMS. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

To install and configure Infoprint Manager as a SAP R/3 OMS when SAP:

- runs on other HP-UX or Sun Solaris servers, follow the procedures described in Chapter 5, “Installing the Infoprint Manager OMS support when SAP runs on HP-UX or Sun Solaris”, on page 21.
- runs on an AIX operating system, follow the procedures described in Chapter 6, “Installing the Infoprint Manager OMS support when SAP runs on AIX”, on page 25.
- runs on a Windows operating system, follow the procedures described in Chapter 7, “Installing the Infoprint Manager OMS support when SAP runs on Windows”, on page 27.

Notes:

1. The SAP Print Feature is available on both Infoprint Manager for AIX and Infoprint Manager for Windows as a separately-priced feature that can be installed from the **Infoprint Manager: SAP Print Feature**, LCD4-1921.
2. The AIX and Windows SAP clients are available to install from the **IBM Infoprint Manager: Common Clients**, LCD4-1917.

The SAP clients for HP-UX and SUN Solaris systems are available on the SAP Feature and are specific to either Infoprint Manager for AIX servers or Infoprint Manager for Windows servers.

Note: If you are using an Infoprint Windows server, ensure that you FTP the files to the HP-UX or SUN Solaris system before editing the files as described in “Configuring the SAP System Server(s)” on page 23. If you edit the files on a Windows system, the format will not be correct for either the HP-UX or the SUN Solaris system.

3. These procedures presume that you have already installed and configured Infoprint Manager on either a separate AIX or Windows server.
4. An SAP OMS interface restriction requires that your Infoprint server (**pdserver**) name be no longer than nine characters.

Chapter 4. Installing the SAP print feature on the Infoprint server

To run either an Infoprint Manager for AIX SAP Callback daemon or an Infoprint Manager for Windows SAP Callback process, you must install the SAP Print Feature on at least one of your Infoprint servers, if you have not already done so.

If you are printing either Output Text Format (OTF) or Advanced Business Application Programming (ABAP) data, ensure that you have installed the **sap2afp** transform and the fonts necessary for printing. To install the transform, you must install the SAP Print Feature on each Infoprint Manager AIX server or Infoprint Manager Windows server with actual destinations that will be transforming data.

Note: At a minimum, on every AIX system on which you will be running the SAP (**sap2afp**) transform (on your Infoprint servers), you must have the following fileset installed:

`bos.loc.adt.iconv` (Language Converter Development Toolkit)

To install the Infoprint Manager for AIX SAP Print feature on your AIX server, see "Starting the Infoprint Installer for Version 4.1" in the *Infoprint Manager for AIX: Getting Started* manual.

To install the SAP Print Feature on your Infoprint Manager Windows server, follow the directions under the "Installing Infoprint Manager server software" topic in the *Infoprint Manager for Windows: Getting Started* manual. The install program will guide you through installing **Infoprint Manager: SAP Print Feature**, LCD4-1921.

To install the necessary fonts and configure the SAP transform on both the Infoprint Manager AIX server and the Infoprint Manager Windows server, see the rest of this chapter.

Installing Infoprint fonts for printing with the SAP transform on an Infoprint Manager AIX server

To print output from the **sap2afp** transform, you must install the Gothic fonts that are specified in the **fonts.tab** configuration file in the `/usr/lpp/psf/bin` directory, as well as the required code pages. You can obtain these font resources from the product 5648-B45: **IBM AFP Font Collection for AIX, OS/400 and OS/2** (LK2T-9269). For more information about purchasing this product, see either your IBM sales representative or access the AFP Font Collection homepage (<http://www.printers.ibm.com/R5PSC.NSF/Web/AFPFontHome>) on the World Wide Web.

Note: If you are printing double-byte fonts, you may require the following AFP Font Collection CD-ROMs:

- *Japanese Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9276)
- *Korean Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9278)

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 AIX 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 the following two commands in sequence:
 - a. `mount /cdrom`
 - b. `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:
 - a. **afpfonts.bookmstr**
 - b. **afpfonts.compat**
 - c. **afpfonts.codepage**
 - d. **afpfonts.ocr**
12. To install the fonts, press **Enter**.
These fonts should take approximately 43 MB on your AIX server.
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 two commands in sequence:
 - a. `cd /cdrom`
 - b. `umount /cdrom`
16. Then you can remove the CD-ROM from your CD-ROM drive.

Installing Infoprint fonts for printing with the SAP transform on an Infoprint Manager Windows server

To print output from the **sap2afp** transform, you must install the Gothic fonts that are specified in the **fonts.tab** configuration file in the `install_path\sap2afp` directory, as well as the required code pages. You can obtain these resources from the product 5648-B45: **IBM AFP Font Collection for AIX, OS/400 and OS/2** (LK2T-9269). For more information about purchasing this product, see either your IBM sales representative or access the AFP Font Collection homepage (<http://www.printers.ibm.com/R5PSC.NSF/Web/AFPFontHome>) on the World Wide Web.

Note: If you are printing double-byte fonts, you may require the following AFP Font Collection CD-ROMs:

- *Japanese Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9276)
- *Korean Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9278)

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. Insert the CD-ROM for the AFP Font Collection into the CD-ROM drive on your Infoprint Manager Windows server.
2. If autorun does not start the install, double-click on the **My Computer** icon on your desktop.
3. From the **My Computer** window, double-click on your CD-ROM drive and then double-click on the **NT** folder icon.
4. From the **NT** folder window, double-click on the **setup.exe** executable to begin the install.
5. Select the drive where you have installed Infoprint Manager to install these fonts. For example, if Infoprint is installed on the **D** drive, the fonts should be installed in the `D:\afpfonts` path.
6. While Infoprint recommends that you use the **full installation** option, if you select a customized install, you should be certain to choose the following four options:
 - **BookMaster Fonts**
 - **Compatibility Fonts**
 - **OCR Fonts**
 - **Symbols Fonts**
7. To install the fonts, press **Next**.
When the fonts finish loading, you will see a Font Collection pop-up dialog with the message:
Installation of Font Collection 2.1.0.1 is complete.
8. Verify that the fonts cited in your **fonts.tab** configuration file (which is installed in the `install_path\sap2afp` directory).
You can use a **Notepad** editor to both view and change this file.
9. Infoprint Manager installs these fonts in the `install_path\afpfonts` directory.
10. Remove the CD-ROM from your CD-ROM drive.

Configuring the SAP R/3 transform

Depending upon the types of data you are printing, you may need to configure some of the files that are provided with the SAP transform. For example:

- If you want to use form definitions that are mapped to SAP Formats (Paper Types), you must configure the **pagedef.tab** file as described in “Changing document print orientation” on page 126.
- If you have created a new font in a SAP R/3 document, you must configure the **fonts.tab** file as described in “Setting up your SAP R/3 system to support new OTF user fonts” on page 140.
- If you want to expand or shorten the width of a barcode for printing, you must configure the **barcode.tab** file as described in “Bar codes and printing from SAP R/3 through Infoprint Manager” on page 147.

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. On an Infoprint Manager AIX server, this file is installed in the **/usr/lpp/psf/bin** directory. On an Infoprint Manager Windows server, this file is installed in the *install_path\bin* path.
- Table 3 shows the configuration files that are installed in either the **/usr/lpp/psf/sap2afp** directory on an Infoprint Manager AIX server or the *install_path\sap2afp* path on an Infoprint Manager Windows server.

Table 3. SAP (**sap2afp**) transform configuration files for AIX

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
6400fonts.tab	Provides a list of raster fonts that apply exclusively to the IBM 6400 printer, 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 (SAP PAPER TYPE) used, as well as the page definition and fonts for jobs that go through ACIF.	ABAP/OTF
defcp.tab	Converts ASCII into EBCDIC characters.	ABAP data only

Chapter 5. Installing the Infoprint Manager OMS support when SAP runs on HP-UX or Sun Solaris

SAP R/3 installations that run on HP-UX or Sun Solaris systems work with Infoprint Manager when these installations are configured to invoke commands remotely on the Infoprint server.

To use the OMS support of the SAP Print feature with a SAP R/3 system running on a non-AIX UNIX system, you must install the SAP feature on the Infoprint server and perform the following tasks:

1. "Configuring the Infoprint Manager Server"
2. "Configuring the SAP System Server(s)" on page 23

Configuring the Infoprint Manager Server

Follow the appropriate procedure depending on which version of Infoprint Manager you are using:

- "Configuring the Infoprint Manager Windows server"
- "Configuring the Infoprint Manager AIX server" on page 22

Configuring the Infoprint Manager Windows server

Note: The **rshd** and **rexecd** services are prerequisites for HP-UX and Sun Solaris SAP client support.

Use the following procedure to configure the Windows server that has already installed Infoprint Manager Version 2 Release 1 with the SAP Print Feature:

1. Install both an **rshd** and **rexecd** service on your Infoprint Manager Windows server .

While Windows NT and Windows 2000 systems natively support both **rcp** and **rexec** commands as a client, you just add these services to ensure that these command requests are honored by the Infoprint Manager Windows server. One company which sells software that provides **rshd** and **rexecd** services for Windows NT and Windows 2000 is Denicomp Systems (<http://www.denicomp.com>).

Note: During the installation of these services, ensure that remote users are defined users on the Infoprint Manager for Windows 2.1 system so that it is possible to write to this server from the Windows SAP client system.

2. From the **Start** menu, access the **Programs** → **Administrative Tools** → **User Manager** path.
3. Create a new user named **sapuser**.

Note: This user does not have to be part of any special groups.

4. Authorize the **sapuser** userid to issue remote commands by adding the following entry to the **.rhosts** or equivalent file: **+sapuser**.
5. Authorize all remote servers running the SAP R/3 applications to specify remote commands on the Infoprint Manager Windows server by specifying: *fully_qualified_server_name* +

where *fully_qualified_server_name* is either the IP address (in dotted decimal format) or the host name of the server.

Notes:

- a. If you use a host name, TCP/IP must be able to resolve that name through either the security file or through a Domain Name Server (DNS).
- b. If a DNS is not being used, but the host name is specified in the **hosts** file, specify the fully-qualified name in the **.rhosts** or equivalent file.
- c. If a DNS is not being used, and the host name is not specified in the hosts file, you must specify an IP address in the **.rhosts** or equivalent file (for example, 172.16.8.10 +).

For added accountability among SAP systems and print jobs, you can create separate NT users for each SAP system or SAP R/3 application server. Repeat steps two through five below to create new userids that you can map to each SAP application server from which you plan to use Infoprint Manager to print.

Configuring the Infoprint Manager AIX server

Use the following procedure to configure the AIX server that has already installed Infoprint Manager Version 4 Release 1 with the SAP Print Feature:

1. Add a user called **sapuser**.

Note that this user does not have to be part of any special groups.

2. Authorize the **sapuser** userid to issue remote commands by adding the following entry to the **/etc/hosts.equiv** file:

```
+ sapuser
```

3. Authorize all remote servers running the SAP R/3 application to specify remote commands on the Infoprint Manager AIX server as **sapuser** by performing the following procedure:

- a. Add an **.rhosts** file with permissions of 600 to the **/home/sapuser** directory.
- b. Edit the **.rhosts** file and add a line for each non-AIX server running a SAP R/3 application with a plus (+) sign appended to it.

If a Domain Name Server is being used, specify the fully-qualified name to the **.rhosts** file as shown below:

```
/home/sapuser/.rhosts:          sol.penn.boulder.ibm.com +
```

If a Domain Name Server is not being used, you must also add the host name and its IP address to the **/etc/hosts** file as show below:

```
/home/sapuser/.rhosts:          sol.penn.boulder.ibm.com +
```

```
/etc/hosts:                      172.16.8.10 sol.penn.boulder.ibm.com +
```

For added accountability among SAP systems and print jobs, you can create separate AIX users for each SAP system or SAP R/3 application server. Follow the three steps specified in this topic to create additional users (like **sapuser**) that are mapped to each application server from which you will be using Infoprint Manager to print.

For more information about using the **rsh** and **rcp** commands to connect to the Infoprint Manager AIX server and send files between servers, refer to your AIX Operating System documentation.

Configuring the SAP System Server(s)

To allow SAP on either HP-UX or Sun Solaris to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP Client on every SAP server where an SAP application server will issue the commands. This includes every application server with a spool work process (SWP) managing R/3 devices that have been configured to use the Infoprint Manager OMS. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

Use the following procedure to configure remote server(s) (HP-UX or Sun) running the SAP R/3 application so you can print with Infoprint Manager:

1. Obtain access to each HP-UX or Sun Solaris server running SAP R/3 and log on.

2. Verify that you can ping the Infoprint Manager server by hostname:

```
ping -c 3 hostname
```

where *hostname* is the unqualified name for the Infoprint Manager server, such as *nwser*.

If the response shows that a good communication path exists, you will see the following:

```
----tcpip_addr PING Statistics----
packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 7/7/7 ms
```

3. If you cannot ping the Infoprint Manager server by hostname, edit the **/etc/hosts** file and add the hostname and IP address of the Infoprint Manager server:

```
/etc/hosts:          9.99.11.109 nwser
```

4. Create a small directory named **/usr/lpp/pd/bin**:

```
mkdir /usr/lpp/pd/bin
```

5. Use the file transfer protocol (FTP) of your choice to copy either the **/usr/lpp/pd/bin/ipm.omsdsc** file from the Infoprint Manager AIX server or the *install_path\bin\ipm.omsdsc* from the Infoprint Manager Windows server to at least one of the SAP R/3 servers running the SAP R/3 application.

This file contains the Infoprint Manager Output Management System (OMS) definition that is loaded into the SAP R/3 System. Ensure that the file is readable by the *sysadmin* (where *sys* is the three-character SAP system name) on the SAP R/3 application system.

6. Use the FTP of your choice to copy the following four files from the Infoprint Manager server to an SAP R/3 application server in your configuration. If you are using an Infoprint Manager AIX server, these files reside in the **/usr/lpp/pd/bin** directory. If you are using an Infoprint Manager for Windows server, these files reside in the *install_path\bin* folder:

- a. **ipm_submit.sys**
- b. **ipm_job_cancel.sys**
- c. **ipm_job_query.sys**
- d. **ipm_dev_query.sys**

For the secondary qualifier (*sys*), specify the name of the system where your SAP applications are running, either **sun** for Sun Solaris or **hp** for HP-UX.

7. Ensure that each file copied in step 6 is executable.

8. On the SAP application server in your installation, edit the four files so they specify the name of the user (**sapuser**) and hostname where Infoprint Manager is running.
9. Copy the four edited SAP command files to any other SAP application servers in your installation that use the Infoprint Manager server.
10. To complete the configuration, complete the procedures in Chapter 8, "Configuring and using the OMS support", on page 31.

Chapter 6. Installing the Infoprint Manager OMS support when SAP runs on AIX

To allow SAP on AIX to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP Client on every SAP server where an SAP application server will issue the commands. This includes every application server with an SWP managing R/3 devices that have been configured to use the Infoprint Manager OMS. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

The SAP Client package installs the necessary filesets on the SAP application server on AIX. The SAP Client package requires the following prerequisites:

1. bos.rte 4.2.1.0
2. bos.rte.printers 4.2.1.8

To install the SAP Client for AIX on your SAP application servers, use the following procedure:

1. Log into the AIX system as **root**.
2. Insert the **Infoprint Manager Common Client**, LCD4-1917, into the CD-ROM reader.
3. Open a terminal window.

If you are using the Common Desktop Environment (CDE), you may open a terminal window by clicking on the terminal icon contained in the front panel. (The front panel is the task bar that appears at the bottom of the screen.) By default, the terminal icon is contained in a pop-up menu above the text editor icon that appears on the front panel.

4. The first time you run the Installer, follow this procedure:
 - a. Type the following on the command line:

```
smit cdrfs
```
 - b. Select **Add a CDROM File System** from the list of choices presented.
 - c. Click the List button and select your CD-ROM device name (cd0, for example).
 - d. Type the following in the **MOUNT POINT** field:

```
/cdrom
```
 - e. Click **OK**. The running person will raise his arms to indicate success. If he instead falls down and you see `crfs: 0506-909 /cdrom file system already exists`, do not interpret this as a failure. (The existing **/cdrom** file system should be usable.)
 - f. Press the **F12** key to exit **SMIT**.
5. Type the following on the command line:

```
mount /cdrom
```
6. The SAP Client package (**ipr.sapclient**) is installed at the command line by specifying `setup -x`.

During the course of the install, you are prompted to specify values for both **PDHOST** and **PD_SOCKET**.

These environment variables become effective the next time you reboot the system. If you want to start using the OMS support without rebooting, edit the following four files that are found in the **/usr/lpp/pd/bin** directory:

- **ipm_submit**
- **ipm_job_query**
- **ipm_job_cancel**
- **ipm_dev_query**

Locate and uncomment the lines:

```
#export PDHOST  
#export PD_SOCKET
```

Specify the same values that you specified during the install.

For another way to specify or change the Infoprint Manager host and socket information to point to another Infoprint Manager system or server, see “Switching Infoprint Manager servers” on page 60. You can also provide a failover connection to another Infoprint Manager server in the same Infoprint Manager system (see “Failing over to other servers in the same Infoprint Manager system” on page 62) and how to send jobs to more than one Infoprint Manager system at the same time (see “Supporting multiple Infoprint Manager systems” on page 55).

Note: Note that the SAP Client package cannot be installed if other ipr* filesets reside on a SAP application server.

To complete the configuration, complete the procedures described in Chapter 8, “Configuring and using the OMS support”, on page 31.

Chapter 7. Installing the Infoprint Manager OMS support when SAP runs on Windows

To allow SAP on Windows to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP Client on every SAP server where an SAP application server will issue the commands. This includes every application server with an SWP managing R/3 devices that have been configured to use the Infoprint Manager OMS. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

To install the Infoprint Manager SAP Client for Windows on your Windows SAP system, use the following procedure:

1. Log in as the Administrator user.
2. Insert the **IBM Infoprint Manager: Common Clients**, LCD4-1917, into your CD-ROM drive.
3. From the **IBM Infoprint Manager: Common Clients** window, click on **Install Infoprint Manager Products**.
4. Click on **Infoprint Manager SAP Clients**.
5. Select a location for installing the clients (the default is *install_path* \Infoprint Manager SAP Clients\).
6. From the **IPM Server Settings** pop-up dialog (see Figure 3 on page 28), specify either the fully-qualified hostname or the IP address of the Infoprint Manager server to which you will be sending jobs. The **IPM Hostname** field defaults to showing the loop back address and must be changed.

The **IPM Server Port Number** field defaults to 6874, which you do not need to change.

For another way to specify or change the Infoprint Manager host and socket information to point to another Infoprint Manager system or server, see “Switching Infoprint Manager servers” on page 60. You can also provide a failover connection to another Infoprint Manager server in the same Infoprint Manager system (see “Failing over to other servers in the same Infoprint Manager system” on page 62) and how to send jobs to more than one Infoprint Manager system at the same time (see “Supporting multiple Infoprint Manager systems” on page 55).

Note: Do not check the **IPM Debug Mode** checkbox unless instructed to do so by IBM support.

Once you have set the appropriate values, click **OK** to close this dialog.

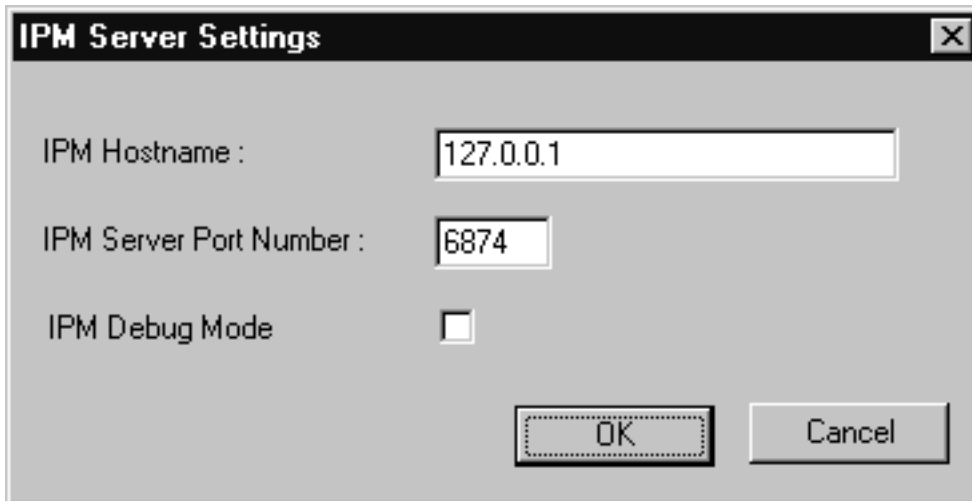


Figure 3. IPM Server Settings dialog

7. When the SAP client has been installed, click the **Finish** button shown in Figure 4.



Figure 4. InstallShield Wizard Complete screen after installing SAP Clients on Windows

January 27, 2003

8. To exit the install process, click the **Back** button, and then the **Exit** button on the next screen.
9. To complete the OMS configuration, complete the tasks in Chapter 8, "Configuring and using the OMS support", on page 31.

Chapter 8. Configuring and using the OMS support

The following topics describe how you can configure, customize, and use your SAP R/3 Infoprint Manager environment to report enhanced job status that meet the particular criteria of your installation.

The first set of topics (“Required configuration tasks”) must be performed on both the SAP application servers and the Infoprint Manager servers in order for enhanced status reporting to work correctly. The second set of topics (“Using OMS support tasks” on page 46) describes how to use the OMS to get more information about your print jobs, including obtaining job status, device status, and the capability to cancel jobs. The third set of topics (“Optional OMS configuration tasks” on page 51) cover a variety of useful administration functions, including:

- “Activating end-user pop-ups” on page 51
- “Selecting event report levels” on page 53
- “Organizing OMS output devices into LOMs” on page 54
- “Moving OMS definitions among SAP systems” on page 59
- “Switching Infoprint Manager servers” on page 60
- “Failing over to other servers in the same Infoprint Manager system” on page 62
- Shutting down the SAP Callback process or daemon on page 64

Use these topics in conjunction with relevant SAP R/3 online product documentation.

Required configuration tasks

This section consists of the required configuration tasks that you must perform in order to receive OMS callback reports.

When you finish defining the Infoprint Manager OMS to your SAP R/3 system, you can define devices so you can print or fax from SAP R/3 with Infoprint Manager as described in “Defining devices for Infoprint Manager that use the Infoprint OMS” on page 44.

Defining the Infoprint Manager OMS to SAP R/3 on the SAP system server

Infoprint Manager provides a configuration file (`ipm.omsdesc`) to assist in defining Infoprint Manager as an OMS on your R/3 system. The following two procedures are performed on your SAP application server to:

- Define Infoprint Manager as a Real Output Management System (ROMS) for your SAP R/3 installation.
- Define your first 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 Release 4 or above system.

2. Import the Infoprint Manager OMS configuration file by entering transaction SA38.
3. From the **ABAP: Execute Program** window, specify RSP0XOMS in the **Program** field and click on the **Execute** (checkmark with a clock) icon.
4. From the **Spool: Saving and Loading of Definitions** window, perform one of the following tasks:
 - If configuring for SAP on UNIX, make the following changes to the **Spool: Saving and Loading of Definitions** window:
 - Specify `/usr/lpp/pd/bin/ipm.omsdesc` in the **Export/Import file name** field
 - Set the **File system info** pane to Server
 - Set the **Operation** pane to Import
 - 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, as shown in Figure 5 on page 33.

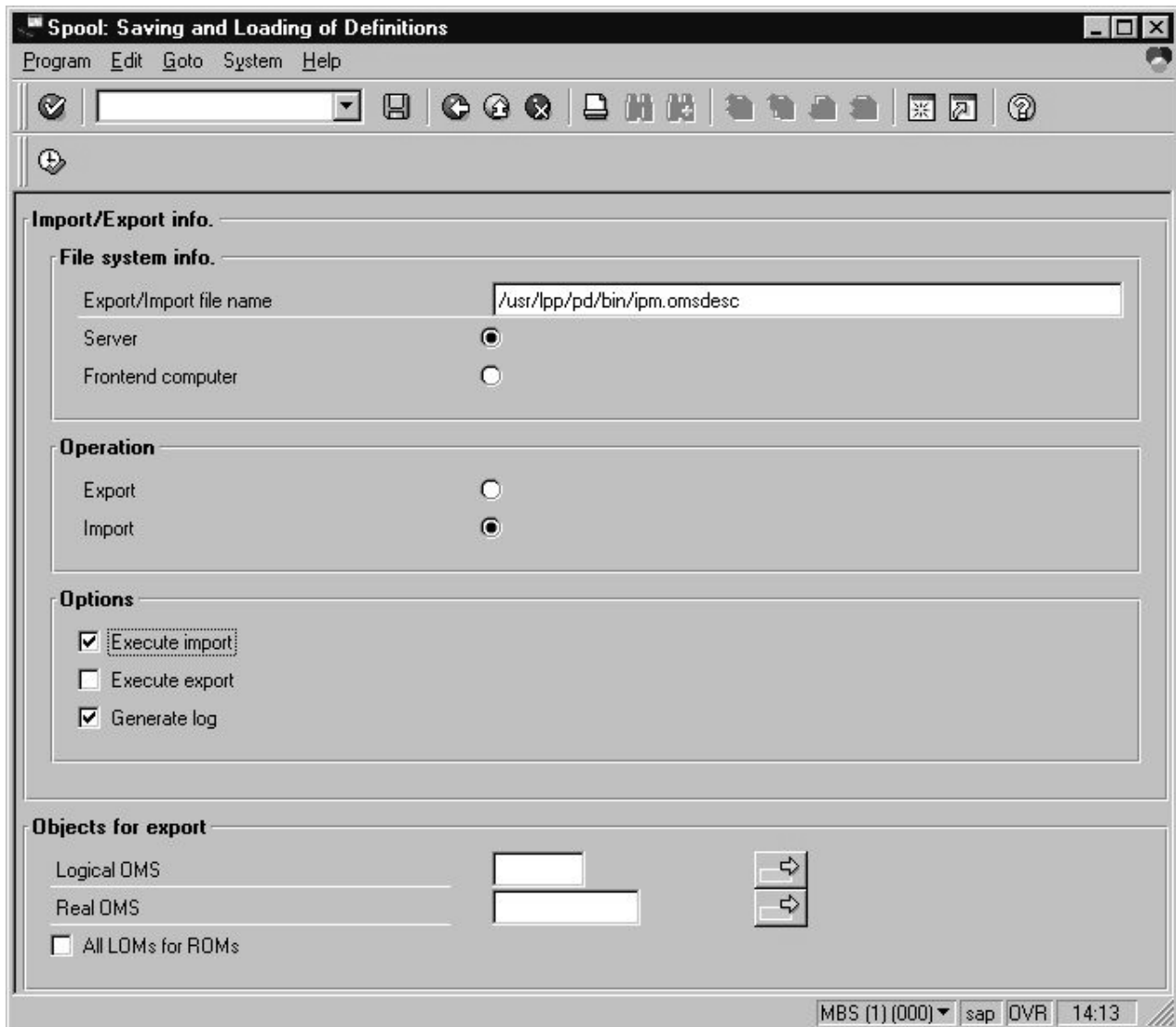


Figure 5. Real Output Management System window for Infoprint Manager AIX server

- If configuring for SAP on Windows, make the following changes to the **Spool: Saving and Loading of Definitions** window:
 - Ensure that the **Operation** pane is set to Import
 - Specify C:\Program Files\IBM\Infoprint Manager SAP Clients\ipm.omdesc in the **Export/Import file name** field
 - Ensure that the **File system info** pane is set to Frontend computer
 - 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, as shown in Figure 6 on page 34.

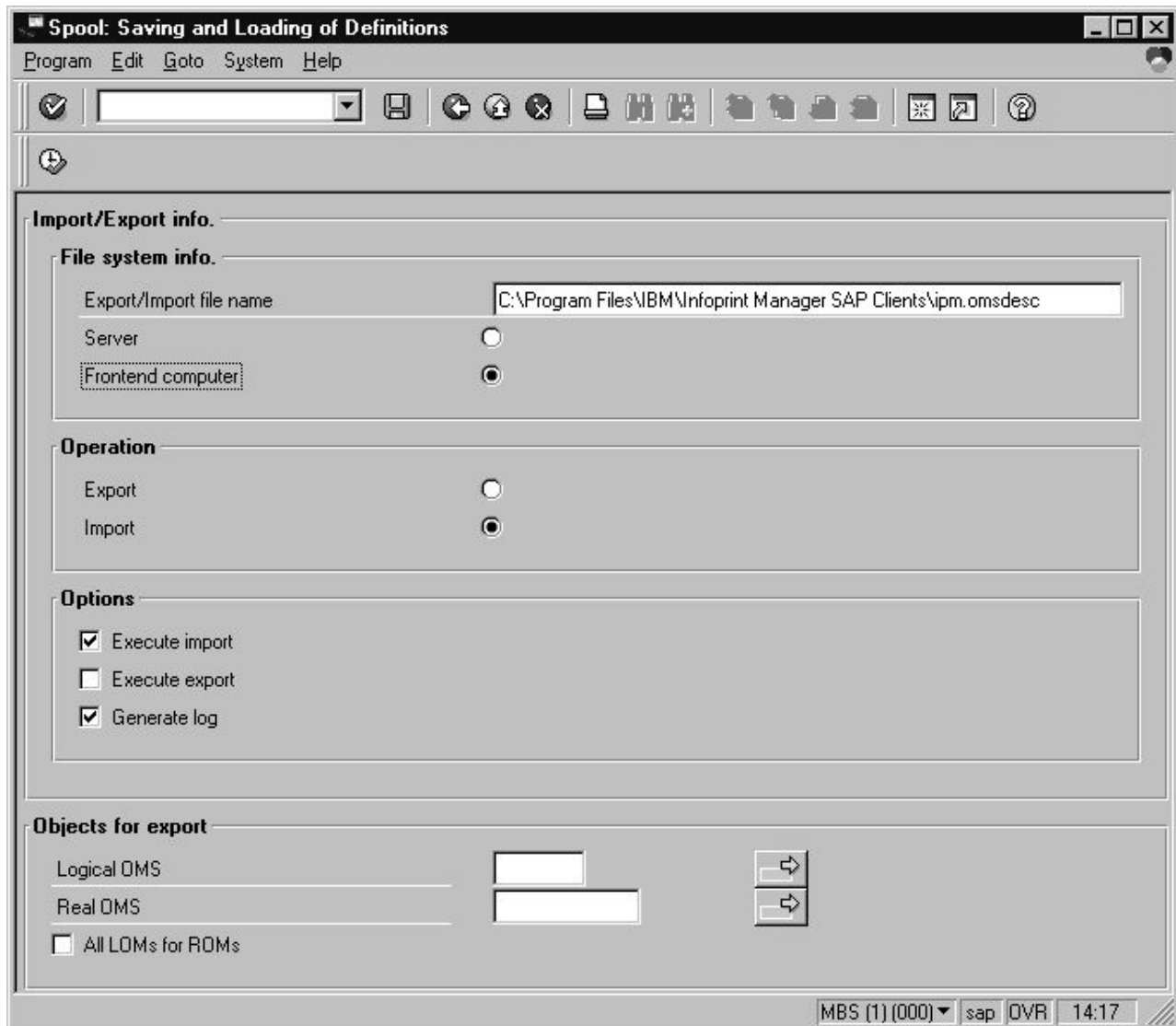


Figure 6. Real Output Management System window for Infoprint Manager Windows server

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

Defining a Logical Output Management system

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

- From the SAP R/3 graphical user interface, complete the Logical Output Management System (LOMS) definitions by specifying the spad transaction.
- From the **Spool Administration: Initial Screen** window, click on the **Extended admin** push-button and select the **Logical OMS** push-button from the **Output management systems** pane (as shown in Figure 7 on page 35) to obtain a list of the Logical Output Management Systems (LOMS) available on your installation.

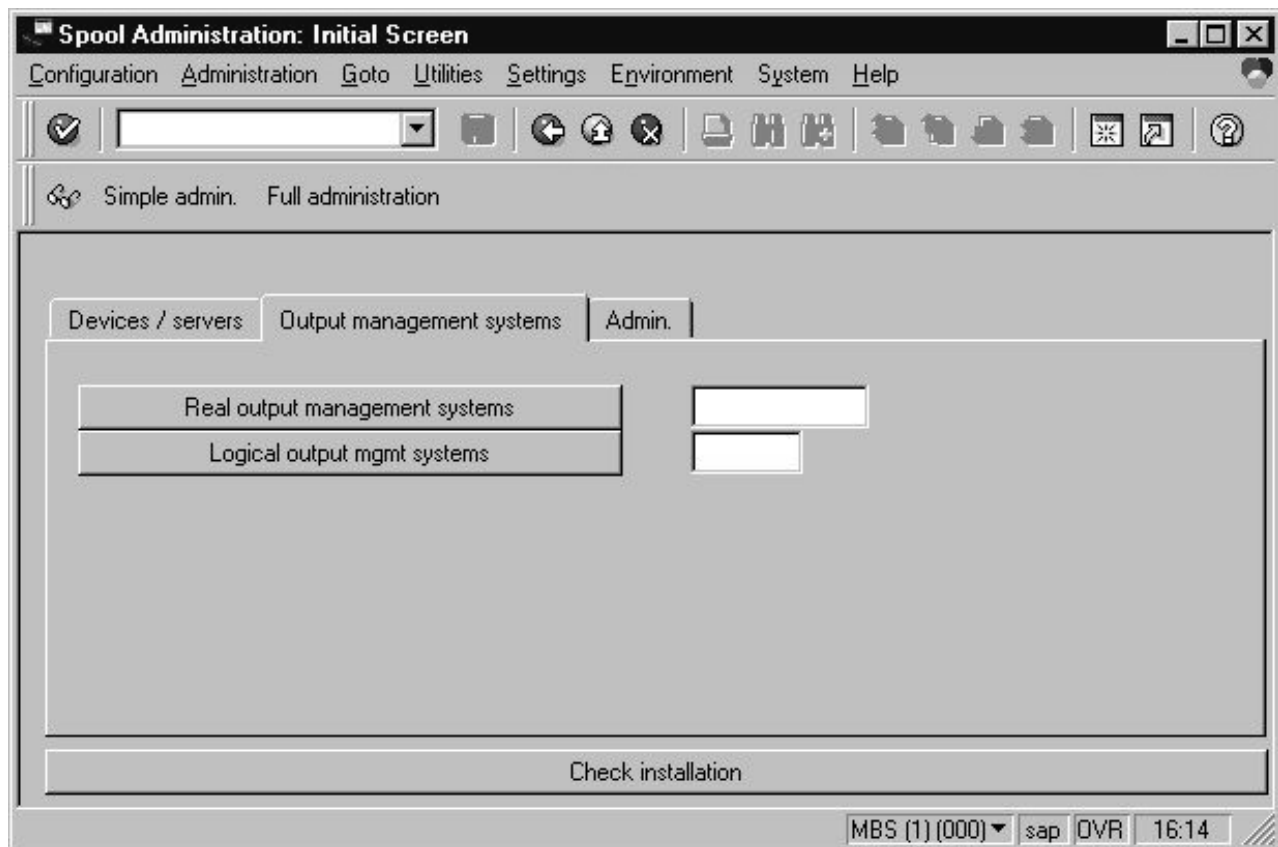


Figure 7. Spool Administration: Initial Screen – Output management systems view

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) icon.
4. From the **Spool Admin.: Logical Output Management (Display)** window, click the **Change** (red pencil) icon.
5. From the **Spool Admin.: Logical Output Management (Change)** window on the **SAP Configuration** tab (see Figure 8 on page 36),
 - Select a value from the pulldown list of all SAP application servers for both the **Tasking target** field and the **Callback target** field in the format: `hostname_systemname_instanceID`, such as `sap12_MBS_00`.
The **Tasking target** field, specifies where the commands are invoked, while the **Callback target** field specifies where the asynchronous callbacks are delivered.
 - Click on the **Extended config.** (photo film with two cards superimposed on top) icon (seventh from left on the second toolbar line in Figure 8 on page 36) and specify a value for the **Event report level** field in the **SAP configuration** pane (see Figure 10 on page 38).

Note: Once you click on the **Extended config.** icon, it disappears from the view and the Event report level field is always displayed (see Figure 9 on page 37).

You must select one of the following values:

- **Final messages**
- **Also problems**

- Also warnings
- Also status changes
- Also information
- All information options

In earlier versions of the SAP GUI, the **Event report level** field consists of numeric message levels. For the earlier SAP GUI, use the down arrow to determine the message level you want (1 is the least and 5 is the most).

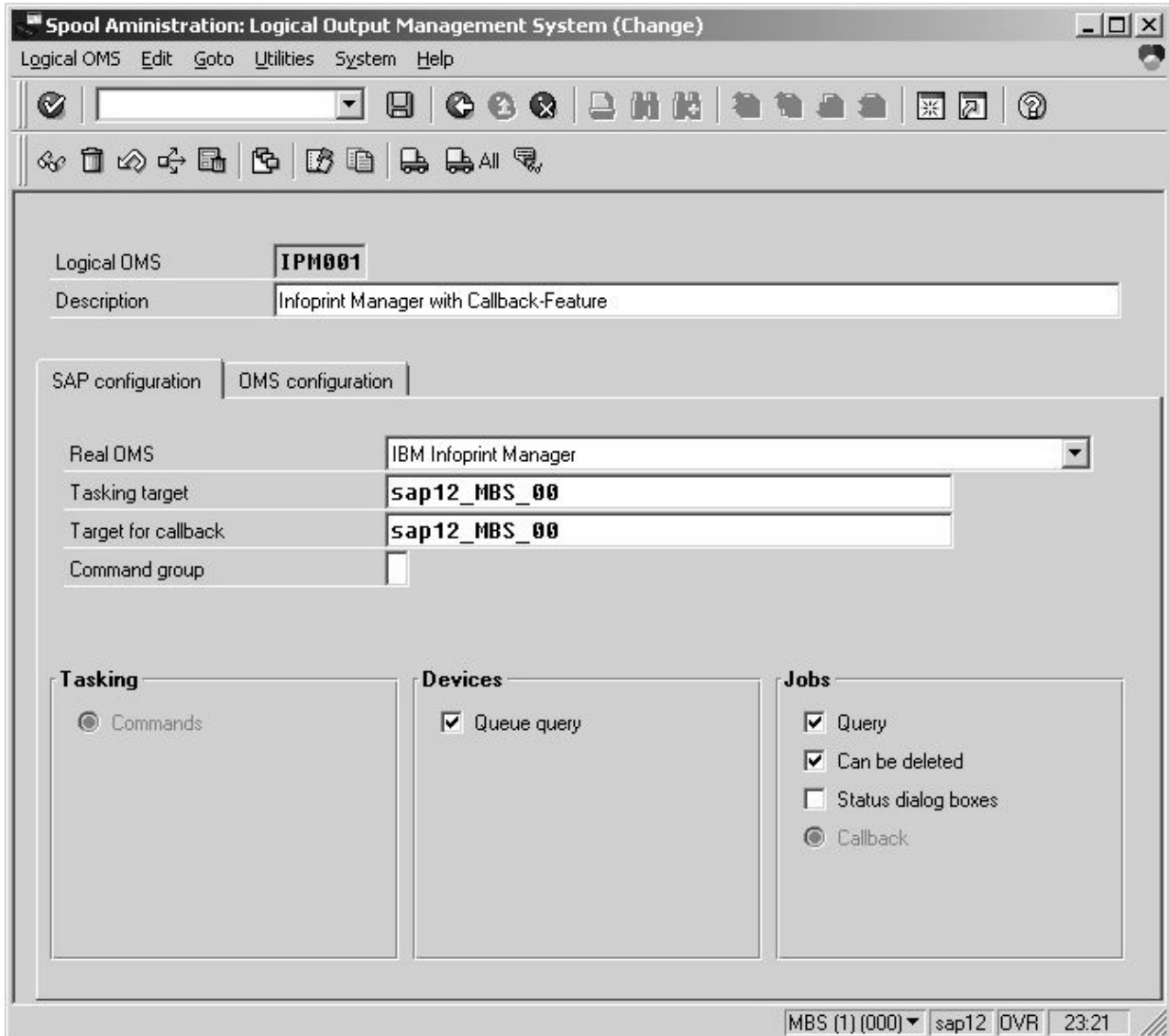


Figure 8. LOMS (Change) window: Setting Tasking Target and the Callback Target

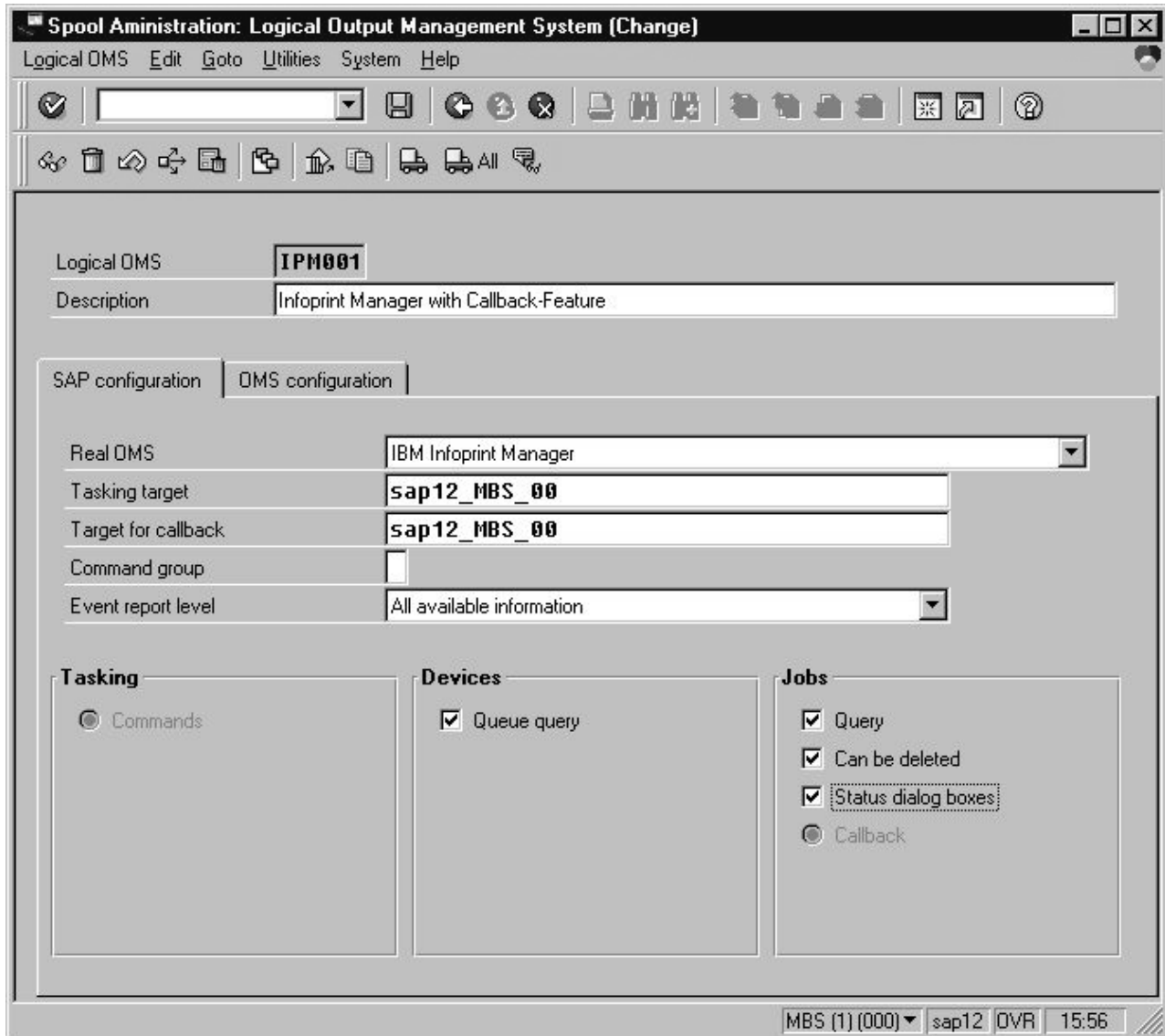


Figure 9. LOMS (Change) window with Event Report Level field

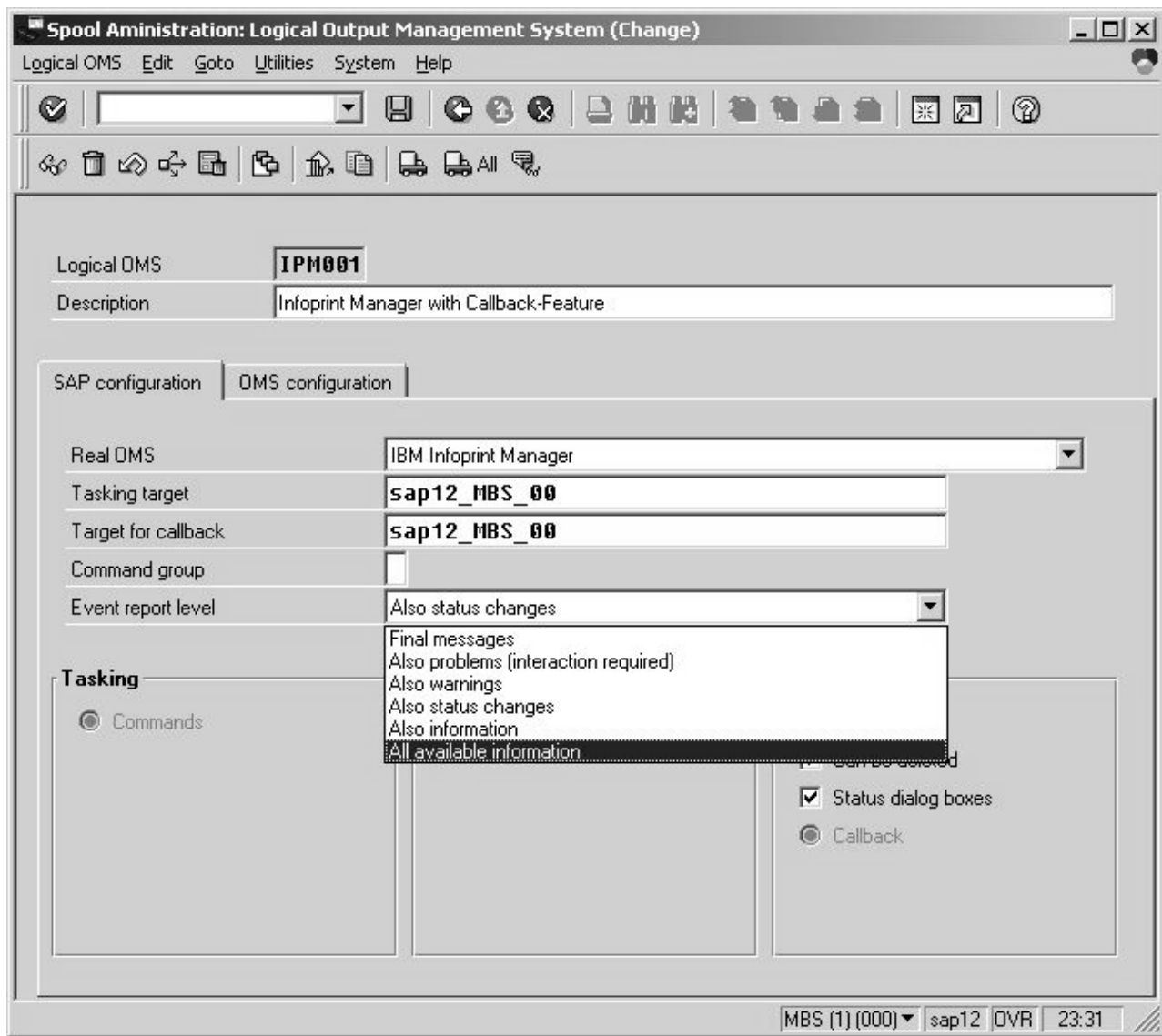


Figure 10. LOMS (Change) window: Setting the Events Report Level

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

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 "Defining a SAP user for the OMS callback daemon or process" on page 39. Beginning with SAP R/3 Release 4.5B, SAP delivers asynchronous pop-ups to users who are logged onto any SAP client.

7. From the **OMS Configuration** tab (Figure 11 on page 39), 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.

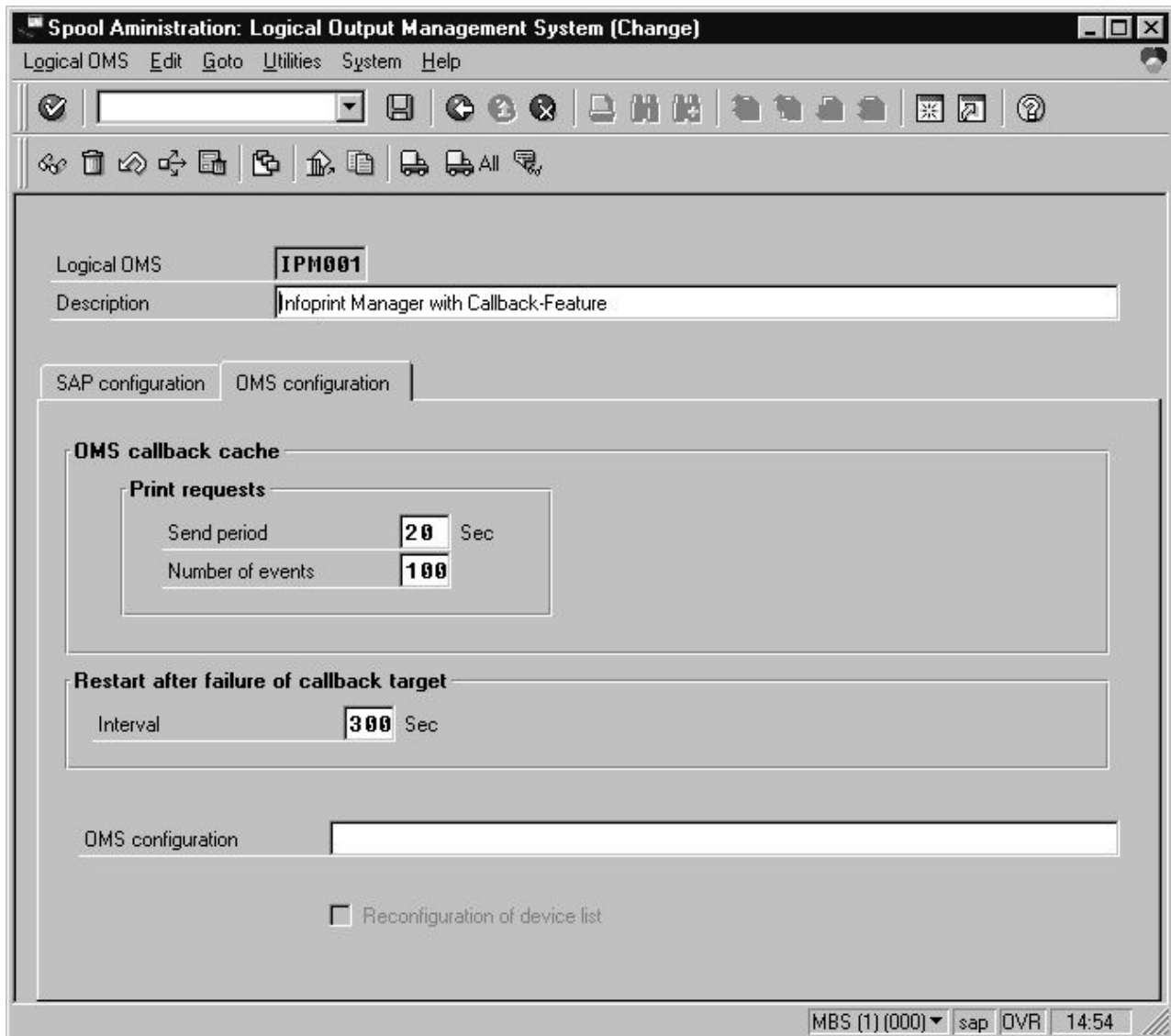


Figure 11. Specify Notification Event Values

8. Save this information by clicking on the **Save** (diskette) icon.
9. Now you can use the SAP GUI for “Defining a SAP user for the OMS callback daemon or process”.

Defining a SAP user for the OMS callback daemon or process

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 “Starting the SAP callback daemon or process” on page 40.

The user should be a **CPIC** (or **System**) 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.

Note: If you ever change or modify this SAP user, remember to make the changes where the SAP callback daemon is running:

- If on Infoprint Manager for AIX, edit the **rc.iprsap** file in the **/etc** directory

- If on Infoprint Manager for Windows, use the **Infoprint Manager Management Console** to left-click on SAP Callback Processes from the **Objects** view. This step allows you to access the SAP Callback Processes in the main view. From the main view, you can right-click and select **Open** (from the pop-up menu shown in Figure 12 on page 42).

Collecting information necessary to start an SAP callback daemon or process

The following tables display the variables needed to start a SAP Callback Daemon or Process. All variables in the tables are examples and will differ from values that you specify, unless otherwise noted. These variables are grouped into two categories:

1. SAP R/3 instance where the Callback Daemon logs on

Table 4. SAP R/3 instance where the Callback Daemon or Process (**sapcbd**) logs on

Variable	Explanation
MBS	The three-character System Name
sap12	The Host Name
00	The Instance ID

Note: If you are starting multiple SAP Callback Daemons and SAP Callback Processes to run on different SAP application servers, you must ensure that there is a unique SAP R/3 instance (system name, host name, and instance ID) for each SAP Callback userid as shown in Table 5.

If you don't know what values you can specify for these variables, you can refer to the dropdown list for the **Callback target** field from the **Spool Admin.: Change Logical Output Management System** window (for an example, see Figure 8 on page 36 and 5 on page 35 of "Defining a Logical Output Management system" on page 34).

2. Callback Daemon or Process Userid information

You defined the information for Table 5 when you performed the step described in "Defining a SAP user for the OMS callback daemon or process" on page 39.

Table 5. Callback Daemon or Process Userid Information

Variable	Explanation
ibm	The User value. This value and the two that follow were originally defined when you created a SAP userid for the OMS Callback daemon.
030	The Client value
newname	The Password value
En	The Language value: in this example, English Note: If you are creating a SAP Callback Process on Windows, this value is not required.

Starting the SAP callback daemon or process

Each SAP R/3 system using the Infoprint Manager Callback support needs to have one callback daemon running. If your Callback support runs on an Infoprint AIX server, you must perform both of the following procedures:

- “Starting the SAP callback daemon on AIX”
- “Configuring to start callback daemons on system reboot on AIX”

If your Callback support runs on an Infoprint Manager Windows server, you must complete the “Starting the SAP callback process on Windows” on page 42 procedure.

Starting the SAP callback daemon on AIX

To start the SAP Callback daemon, you must edit and run the `/etc/rc.ipsap` file from the AIX command line from your Infoprint Manager AIX server.

1. From the AIX command line, access the `rc.ipsap` file in the `/etc` directory. Edit the file to copy and uncomment the following two lines of code for callback daemons:

- a. An echo statement that states that the Callback daemon has been started:
`echo Starting sapcbd <System Name>`
- b. The `startcbd` command (see Callback Daemon User ID Information) at the top of the file:
`/usr/lpp/pd/bin/startcbd <System Name> <Host Name> <Instance ID> <User>
<Client> <Password> <Language>`

Note: This file also contains two lines of code for starting the SAPconnect daemon. For more information, see “Configuring the SAPconnect daemon on Infoprint Manager” on page 105.

2. Specify the same values for the items in angle brackets (< >) that you collected in “Collecting information necessary to start an SAP callback daemon or process” on page 40.
3. Verify that you can ping the SAP server by hostname:
`ping -c3 hostname`
where *hostname* is the unqualified name for the SAP server, such as *nwser*.
If you cannot ping the SAP server by hostname, edit the `/etc/hosts` file and add both the hostname and the IP address of the SAP server (for example, 9.99.11.109 *nwser*).
4. Once you have saved and exited the file, start the SAP Callback daemon from the command line by specifying:
`/etc/rc.ipsap`

If the callback daemon has started correctly, you should see the following response:

```
0 Successfully\started\SAPCBD
```

If you receive any other message, the daemon has not started correctly. To resolve the problem, refer any messages displayed in either the message column or by selecting the **Server Log** object from the left pane of the **Infoprint Manager Management Console** to access the **Server Log** view. Correct the problems cited, and try to start the Callback daemon again. If it still does not start correctly, contact your Printing Systems technical support representative.

Configuring to start callback daemons on system reboot on AIX

The SAP Callback daemon needs to run all the time. A monitor ensures that it is restarted if it ever stops after it is started. However, to ensure that both the daemon and its monitor are restarted if the AIX system that it runs on is rebooted, you need to perform one more step to add the `rc.ipsap` file to the `/etc/inittab` directory.

To ensure that the SAP Callback daemon(s) are restarted automatically whenever the system they are running on is restarted, use the Infoprint **SMIT** interface on your Infoprint Manager AIX server:

Infoprint Printing Systems → Infoprint Utilities → SAP Daemons

From the **SAP Daemons** panel, select the **Start SAP daemons at reboot** option.

If you prefer the command line, you can enter the the following at the AIX command line instead:

```
mkitab "rciprsap:2:once:/etc/rc.iprsap.out 2>&1 # Autostart of Infoprint sapcbd"
```

Both the SMIT interface and this command ensure that the SAP daemons (**sapcbd**) are restarted automatically whenever the systems they are running on are restarted.

As you add more callback daemons to your Infoprint configuration, you do not have to perform this step, but you do need to add a new entry in the **/etc/rc.iprsap** file and type **/etc/rc.iprsap** on the command line. Your new callback daemons will start and any SAP Callback daemons that are already running will report that they are running.

Starting the SAP callback process on Windows

Each SAP R/3 system using the Infoprint Manager Callback support needs to have one callback process running. To start the SAP Callback process on an Infoprint Manager Windows server, you must access the **SAP Callback Processes** from the **Infoprint Manager Management Console** shown in Figure 12.

The **SAP Callback Processes** are only visible if you have installed both the optional **Infoprint Manager: SAP Print Feature**, LCD4-1921 and Infoprint Manager for Windows PTF UR53740.

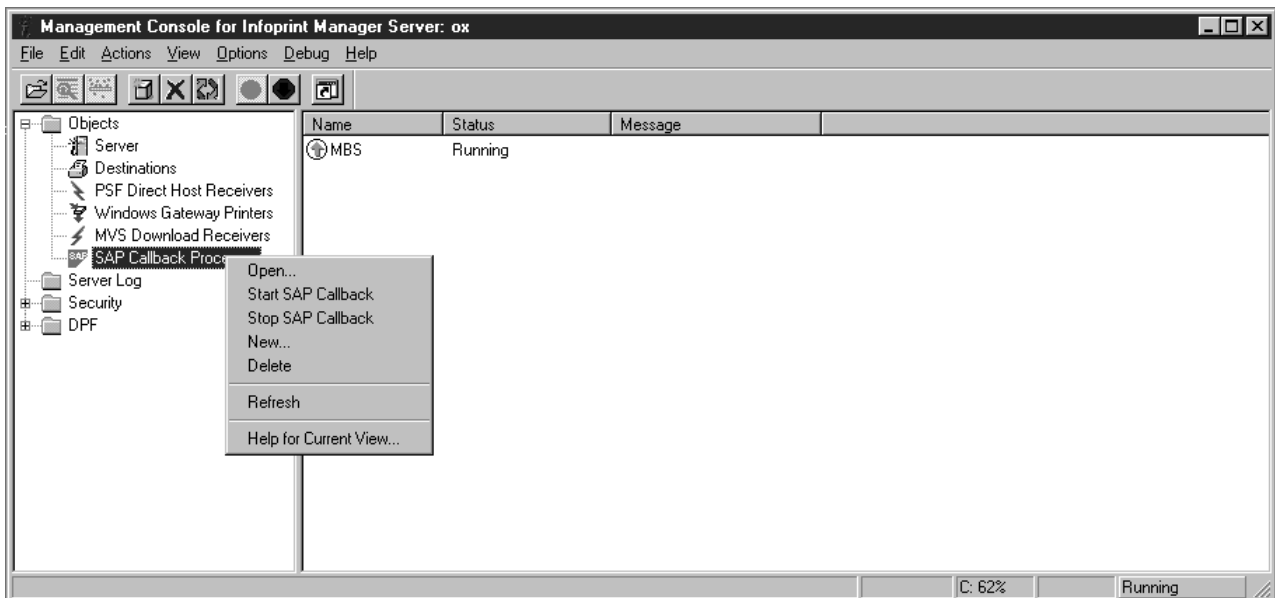


Figure 12. Infoprint Manager Management Console Main Panel showing SAP Callback Process

1. Verify that you can ping the SAP server by hostname:

From either a **Command** or a **Command Prompt** window, specify ping *hostname*

where *hostname* is the unqualified name for the SAP server, such as nwser.

If you cannot ping the SAP server by hostname, edit the **Hosts** file in the **C:\WINNT\system32\drivers\etc** folder and add both the hostname and the IP address of the SAP server (for example, 9.99.11.109 nwser).

2. From the Start menu, click on the **Programs** → **IBM Infoprint Manager** → **Management Console** path.
3. Right click the **SAP Callback Processes** object in the **Objects** view in the left pane of this window and select **New**.
4. Specify the values that you gathered in “Collecting information necessary to start an SAP callback daemon or process” on page 40, click **OK**, and wait.
5. If the Callback process has started correctly, the SAP Callback Process in the main panel should display a state of **RUNNING**, as displayed in Figure 12 on page 42.

If the state shows **Failed To Start**, the process has not started correctly. To resolve the problem, if the message displayed does not provide enough information to correct the problem, you can switch to the **Server Log** view for additional messages.

If you receive the following message,

5010-760: There are no available port numbers

see “Expanding server ports for SAP Callback Processes”.

For all other messages, correct the problems cited, and try to start the Callback process again. If it still does not start correctly, contact your Printing Systems technical support representative.

Note: If you are running the callback process on Infoprint Manager for Windows, you do not need to configure to start SAP Callback Processes on a system reboot because at reboot the Infoprint Manager SAP service is always started and the service will restart any SAP Callback process that was not manually stopped.

Expanding server ports for SAP Callback Processes: Creating and managing SAP Callback Processes on your Infoprint Manager for Windows server may require that you increase the number of server communication ports available on your system. The following procedure shows how to perform this task.

Use the following procedure to increase the number of server ports available on your Infoprint Manager for Windows server.

1. From the **Infoprint Manager Management Console**, stop the Infoprint Manager server by selecting **File** → **Stop Server** from the main menu.
2. Access the **Edit** → **Service Configuration** dialog and access the **Communication Ports** pane
3. Increase the number of **Server Interface Ports** by increasing the range to include twenty ports and save your results.

The server interface ports default values range from 6880 to 6889. To ensure that you have enough server communication ports for all SAP Callback Processes, you should increase the final number in the range to 6899.

4. Use the **Infoprint Manager Management Console** to start the Infoprint Manager server by selecting **File** → **Start Server** from the main menu.

Defining devices for Infoprint Manager that use the Infoprint OMS

Use the following procedure to define devices to SAP R/3. For more information, 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 destination defined in Infoprint Manager that sends jobs to your actual destination device.
2. From the SAP R/3 graphical user interface, specify the spad transaction.
3. From the **Spool Administration: Initial Screen (Change)** window (displayed on Figure 7 on page 35),
 - Click the **Devices/servers** tab
 - Select the **Output Devices** button
 - Click on the **Create** icon next to the **trash can** icon
4. From the **Spool Administration: Create Output Device** window, fill in the following pieces of information for device attributes and access method.:

Field	Explanation	Example Value
Output Device	Specify a long name for the device.	Device Number 1
(Output Device) Short name	Specify a short name. Note: Optionally, you can allow the system to generate a short name.	DEV1
Device type	Specifies the driver that generates the output data stream.	SAPGOF
Host printer	Specify the Infoprint Manager logical destination.	printer-ld
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.	sap12_MBS_00

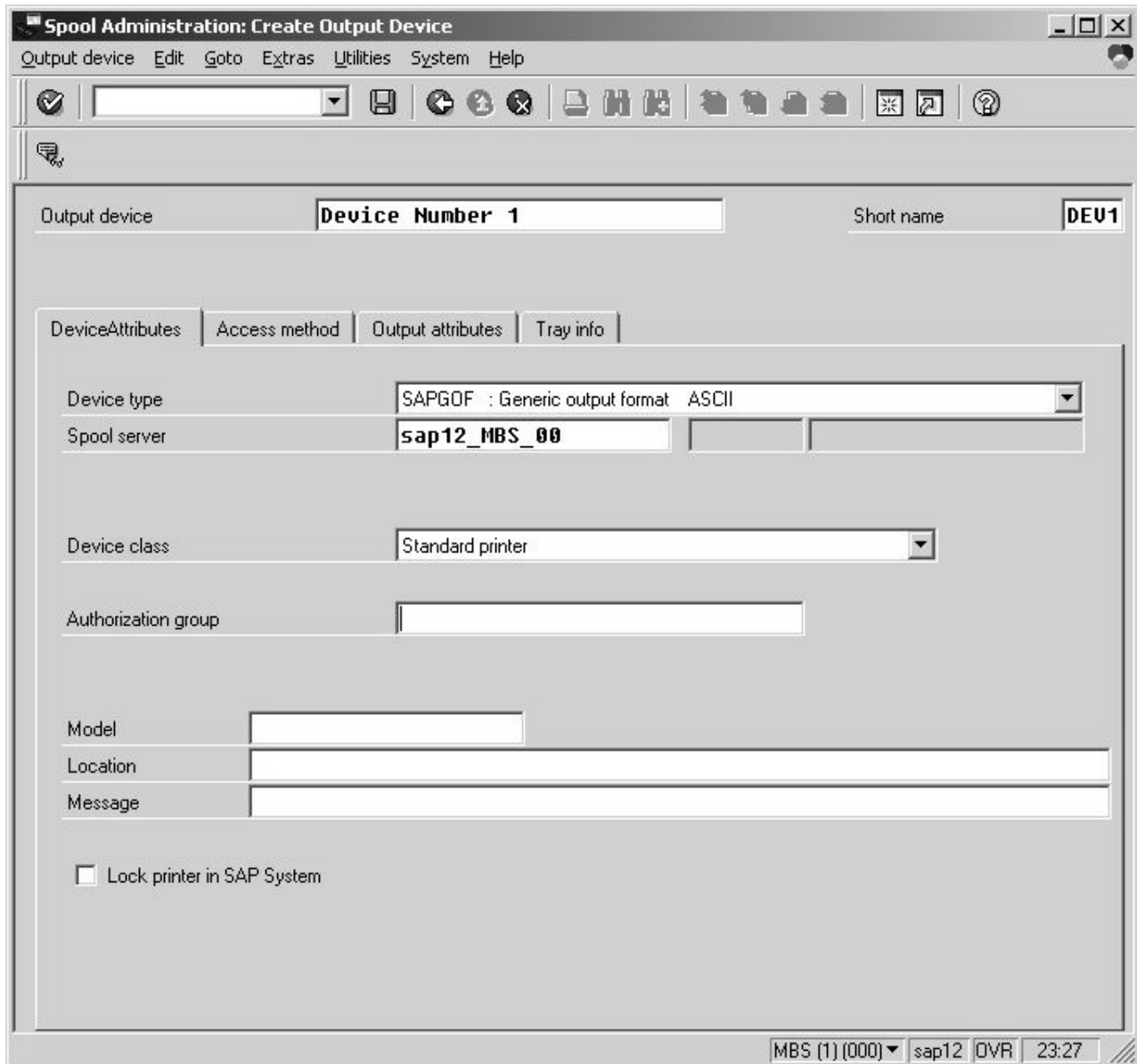


Figure 13. Display for Defining Access Method E Output Device: Device Attribute tab

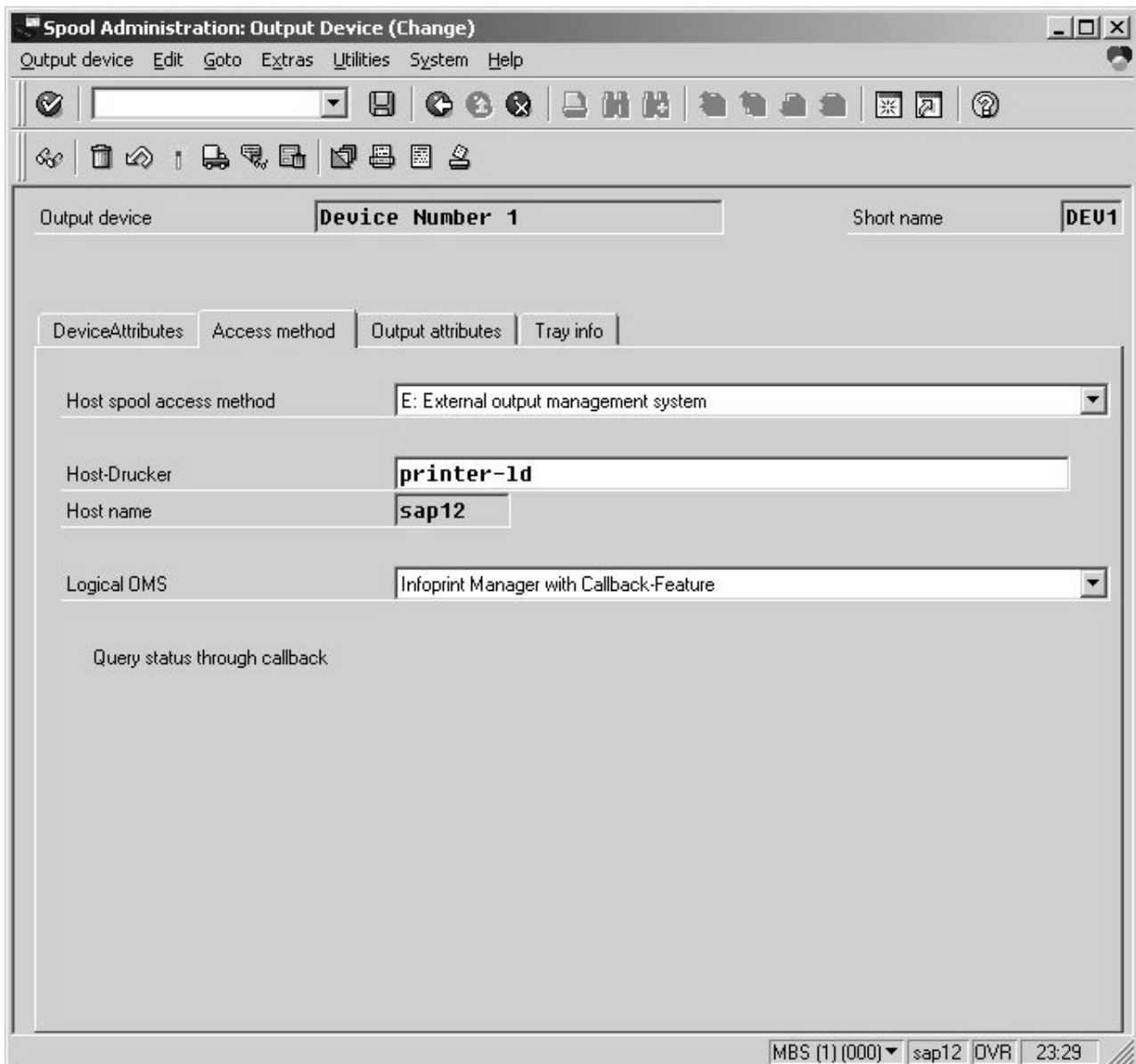


Figure 14. Display for Defining Access Method E Output Device: Access Method tab

5. Save this information by clicking on the **Save** (diskette) icon, then exit the interface.

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

Because this device is defined to send jobs to Infoprint Manager, you can “Viewing enhanced job status, job events, and querying jobs” on page 47, “Displaying device status” on page 48, and “Canceling jobs” on page 50.

Using OMS support tasks

This section consists the procedures that are available once you have configured your SAP OMS to obtain job status about your print environment.

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 graphical user interface:

1. From the **Output Requests for Spool Request xxxxxx** window (where xxxxxx 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 (see Figure 15), you can see current information about the job, including the last event received.

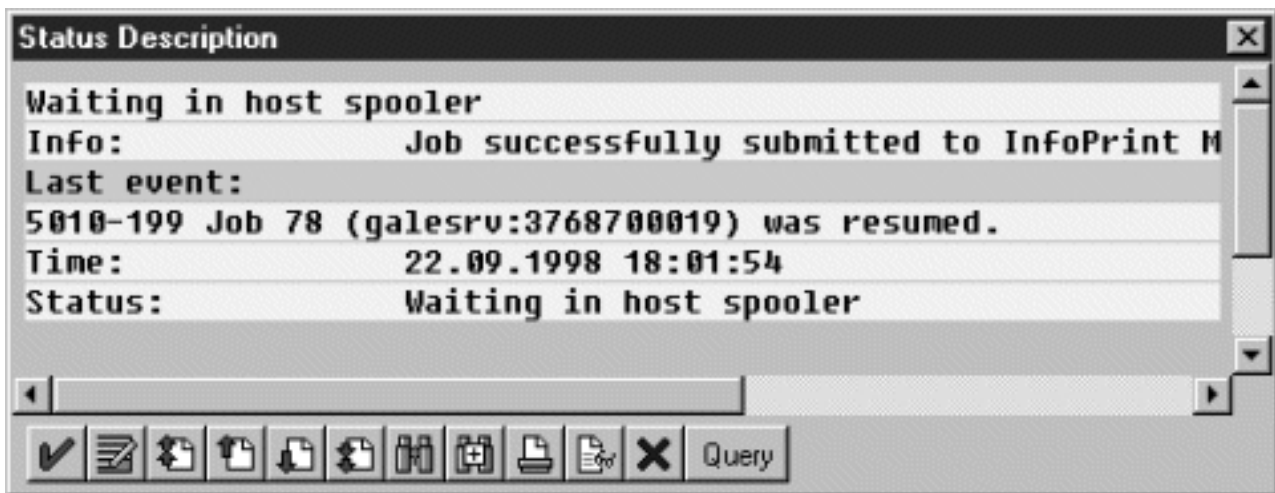


Figure 15. SAP R/3 Status Description field

3. Click on the **Events** button on the **Status Description** window to get the **Events for Output Requests** window. From the **Events for Output Requests** pop-up window (see Figure 16 and Figure 17 on page 48), you can view all the events concerning this job.

This **Events for Output Requests** pop-up window is displayed twice to show (1) the right side of the window with the date, time, and current status of the job (Figure 16), and (2) the left-side of the window with its message text (Figure 17 on page 48).

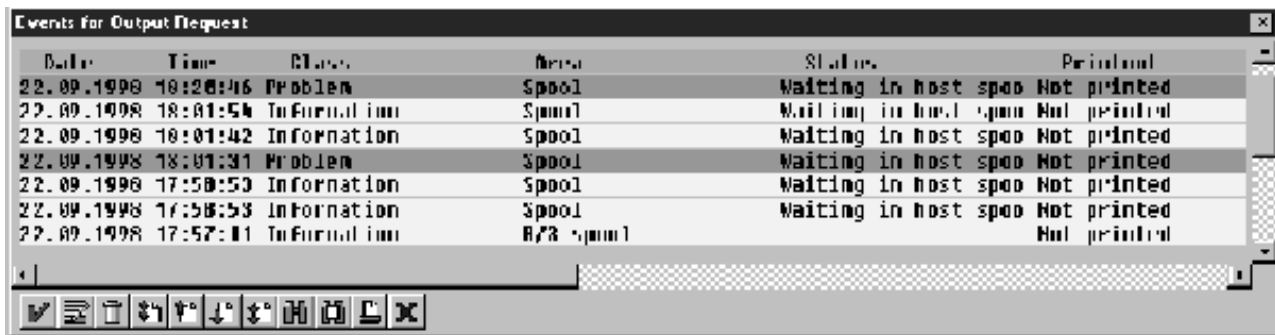


Figure 16. Events for Output Requests field, view 1

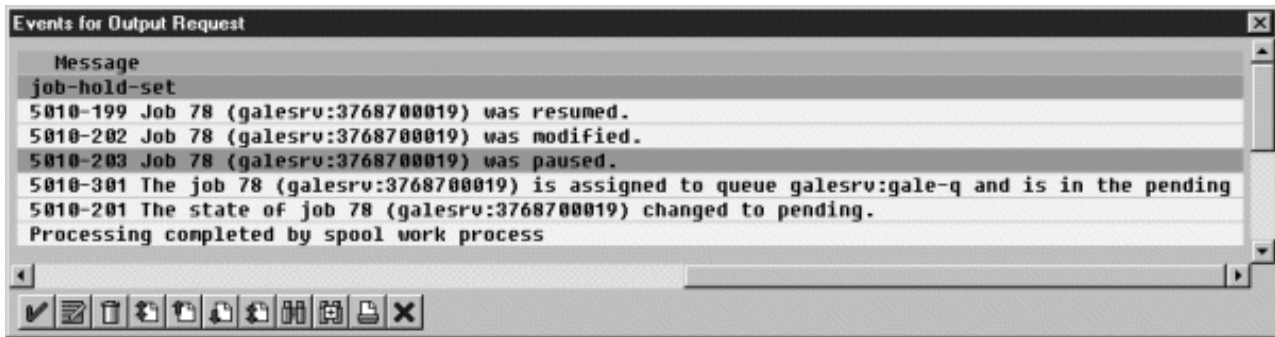


Figure 17. Events for Output Requests field, view 2

- From the **Status Description** pop-up window, you can also click on the **Query** button and issue a query to return the current information for a job, including its position in the queue. For example, Figure 18 displays the result of a 'Query' for a job that has been successfully submitted for printing. Notice that the first line shows the job's position in the print queue.

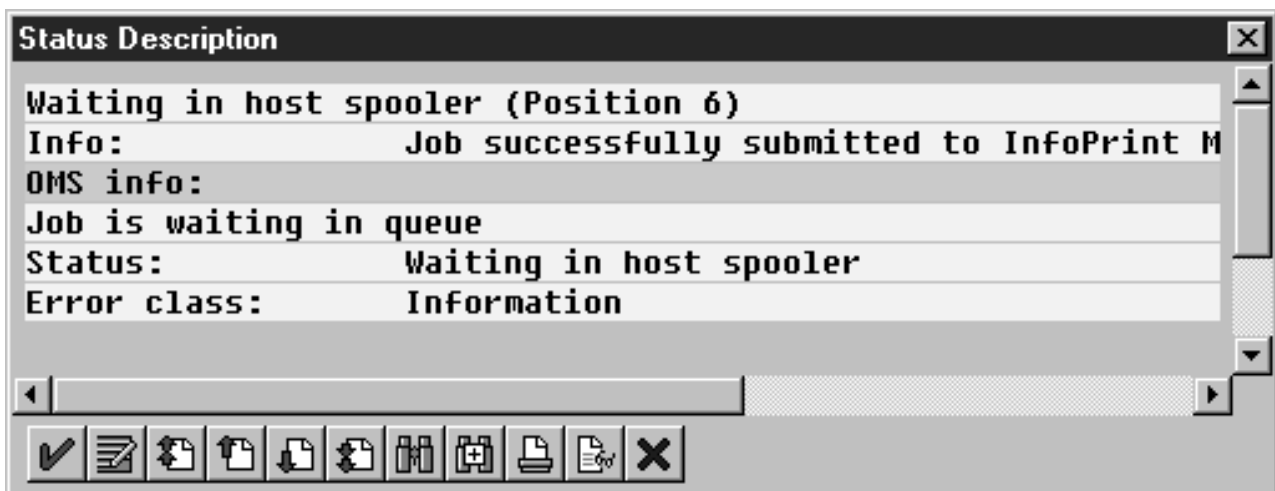


Figure 18. Status Description field

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:

- 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.
- From the **Spool Administration: Initial Screen** window, click on the **Output devices** button from the **Configuration** area.
- From the **Spool Administration: List of Output Devices** window, do the following:

- a. Highlight your Infoprint printer from the **Devices** column.
- b. Click the **Output device** pull-down menu and click the **Choose** option.
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.

The **Device Information of Host Spool** pop-up 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 (Figure 19). (2) This section shows information about each job, including its current status in Infoprint Manager (Figure 20 on page 50).

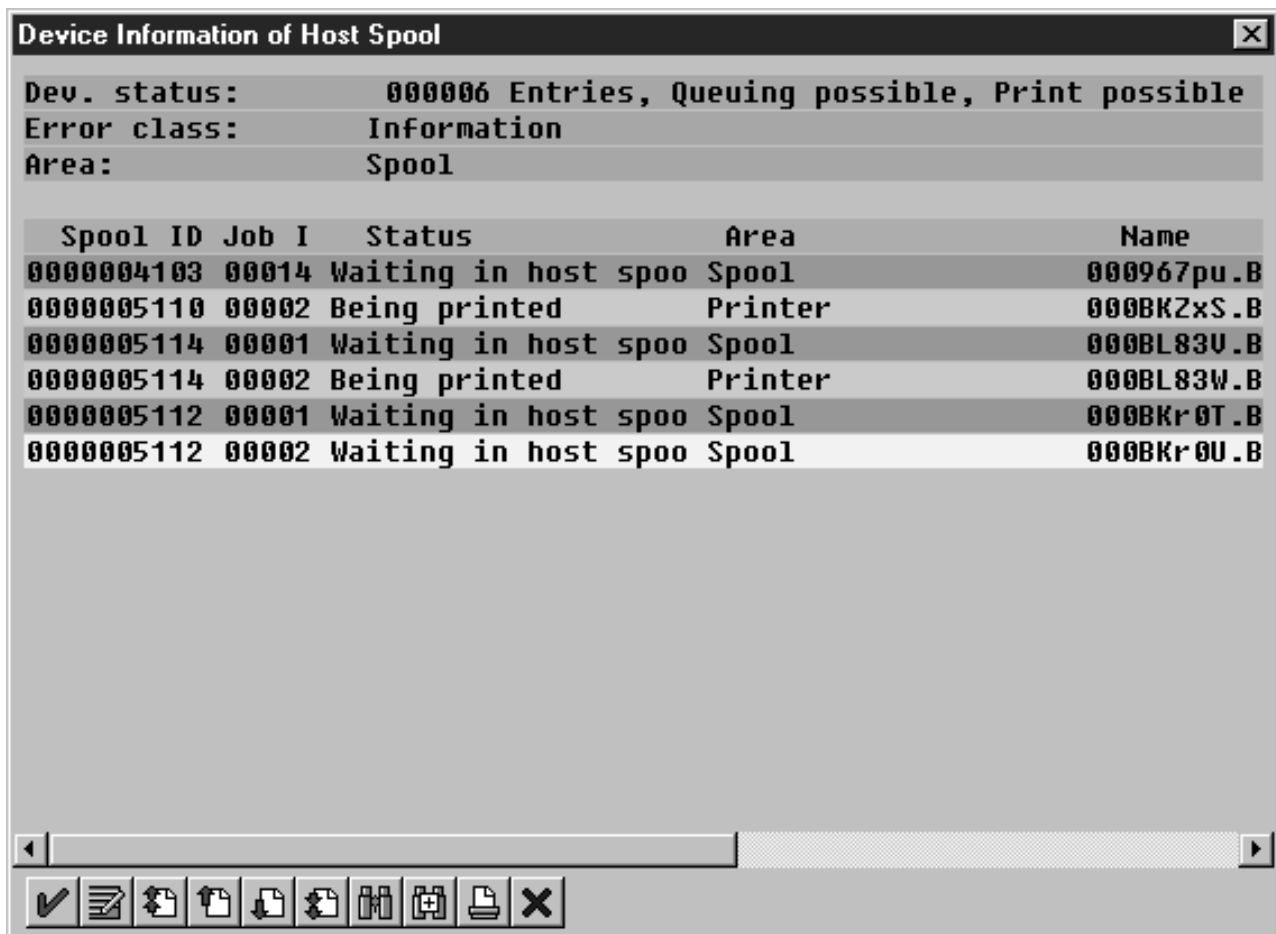


Figure 19. Device Information of Host Spool: first view

le, Print possible

Name	Message
000967pu.BTF	job-hold-set
000BKZxS.BTF	Job is processing or printing
000BL83U.BTF	required-resources-not-ready
000BL83W.BTF	Job is processing or printing
000BKr0T.BTF	job-hold-set
000BKr0U.BTF	Job is waiting in queue

Figure 20. Device Information of Host Spool: second view

Canceling jobs

The following procedure describes how you can cancel SAP print jobs that you have sent to the Infoprint Manager AIX server. Use the following procedure from the SAP R/3 graphical user interface. Note that this procedure provides only one of many methods for accessing the **Spool Output Requests for Spool Request XXXXXXXXXXXX** window, where XXXXXXXXXXXX is the number of your SAP spool request.

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:
 - a. From the **Devices** column, use the mouse to highlight the SAP device that you used to send your job to Infoprint Manager.
 - b. Click the **Spool Requests** 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 SAP spool request), click on the output request you want to cancel to highlight it and then click on the trash can icon to delete the output request from Infoprint Manager.

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

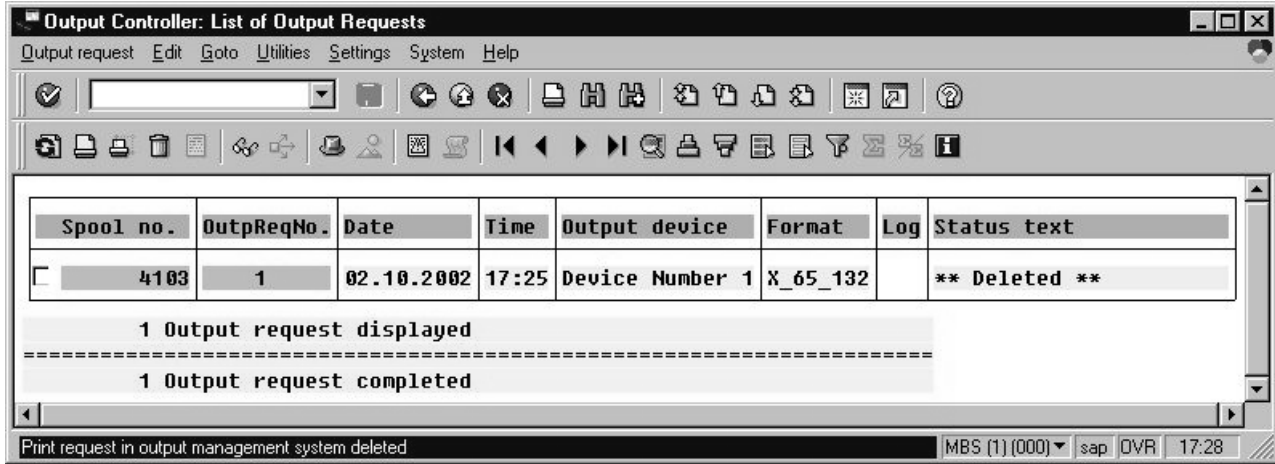


Figure 21. Spool Output Requests window

Optional OMS configuration tasks

The following sections describe useful administrative functions, including ways of configuring your OMS to improve performance. Be sure to consult your SAP R/3 Release 4 documentation in conjunction with any procedures described in this section.

Activating end-user pop-ups

Infoprint Manager delivers information to SAP R/3 about output requests (print jobs) as they process. SAP will alert job owners about problem and job completion information delivered from Infoprint Manager 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 “Defining a SAP user for the OMS callback daemon or process” on page 39. 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:

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 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** icon.

4. From the **Spool Admin.: Logical Output Management (Display)** window, click the **Change** 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.

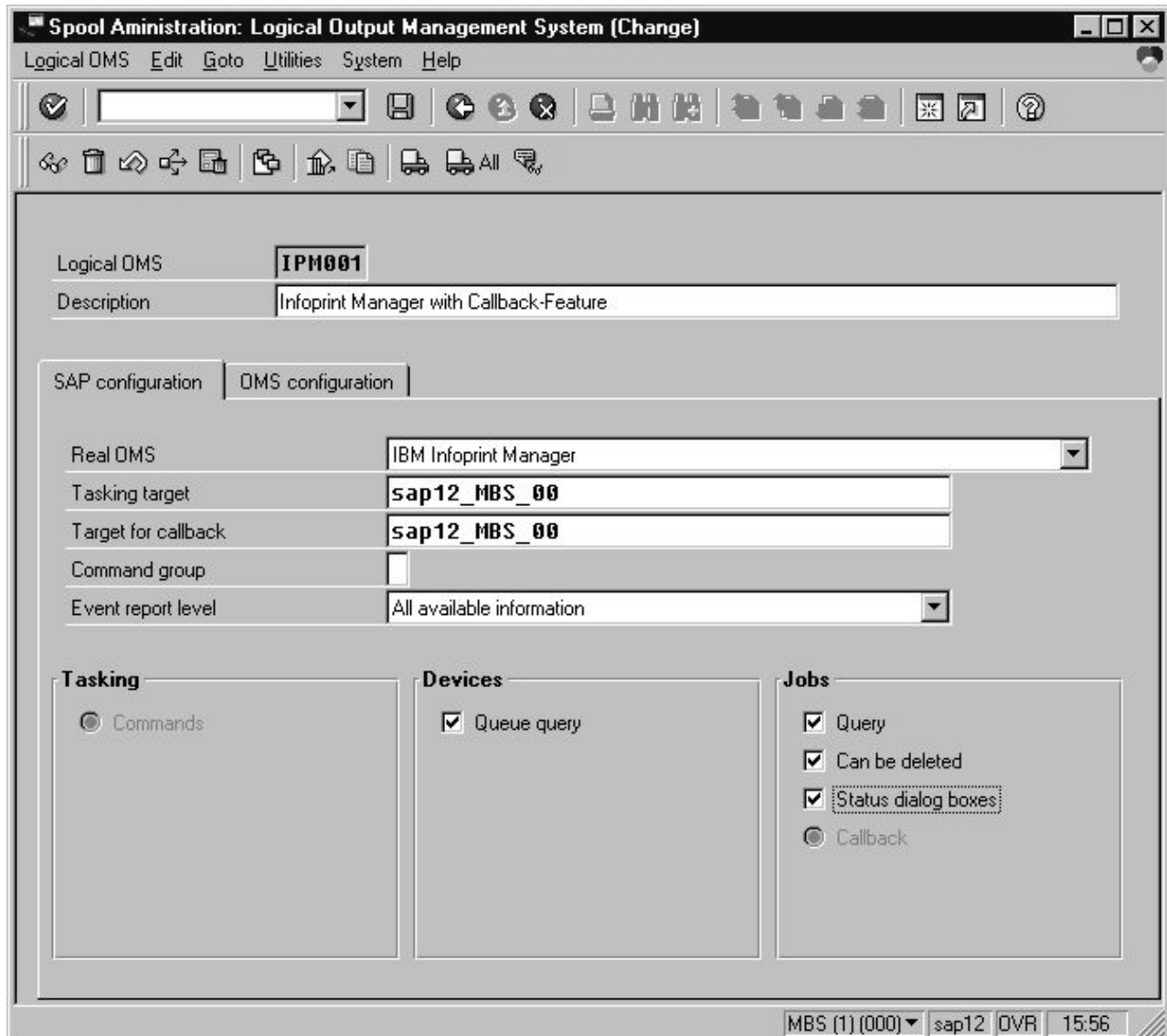


Figure 22. Logical Output Management window

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 **Info** window like Figure 23 on page 53 and Figure 24 on page 53 should appear on the output requesters' SAPGUI.

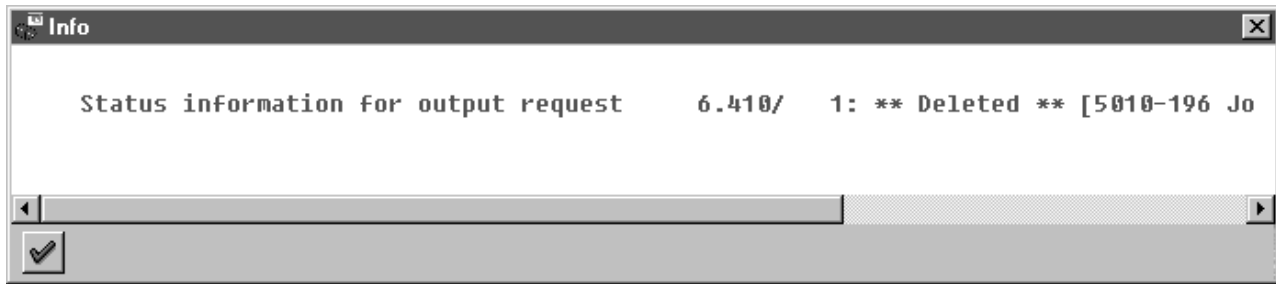


Figure 23. Info window showing cancelled output request: right-most text.

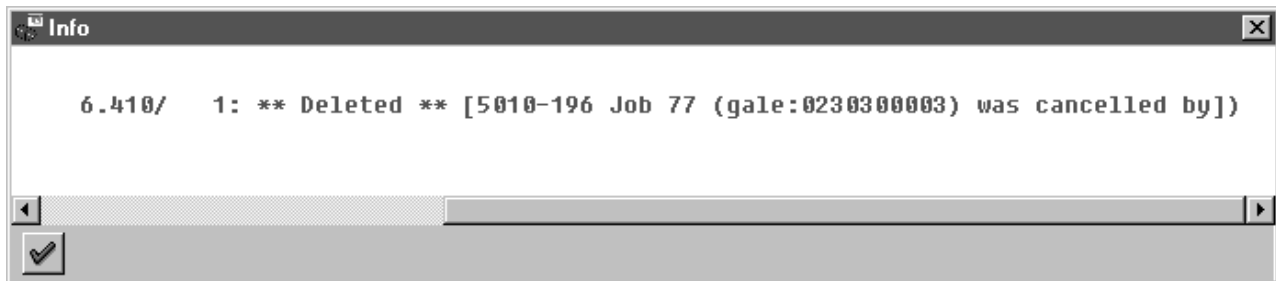


Figure 24. Info window showing cancelled output request: left-most text.

Note: All pop-up window text is scrollable, however a SAP R/3 limitation limits the text of the Infoprint Manager messages (as well as those received from any OMS) to 50 characters.

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:

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 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) icon.
4. From the **Spool Admin.: Logical Output Management (Display)** window, click the **Change** (red pencil) 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 menu field to select the most appropriate value for your installation.

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

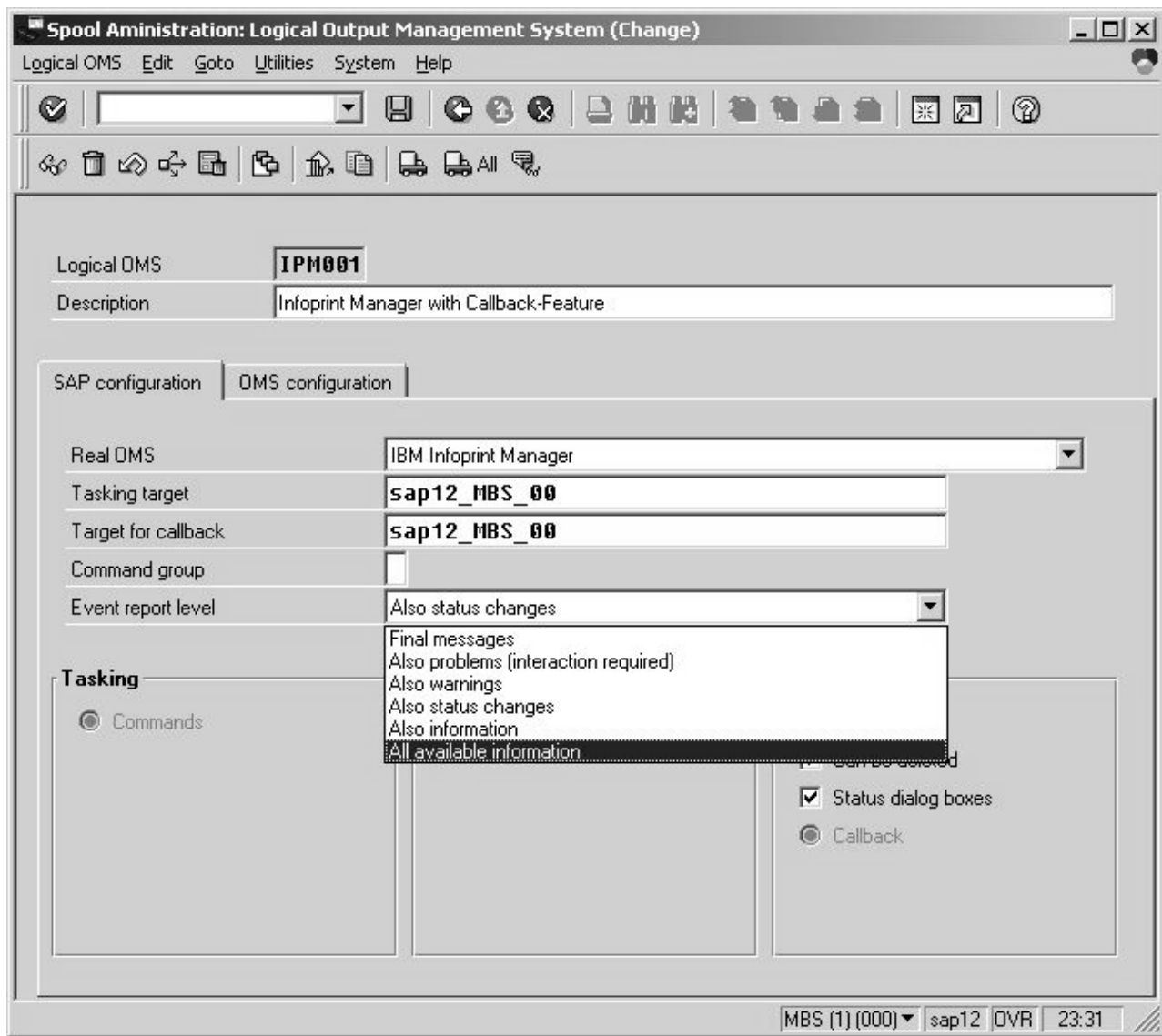


Figure 25. Logical Output Management (Change) window

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, each with different SAP devices assigned to them. After you define one or more LOMS on your system (see “Defining another Logical Output Management system” on page 55), you can assign different SAP devices to each one, depending on the functions they perform, such as:

- “Using different report levels or event delivery criteria” on page 55
- “Using different OMS services” on page 55
- “Distributing the callback workload” on page 55
- “Supporting multiple Infoprint Manager systems” on page 55

Defining another Logical Output Management system

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

1. From the SAP R/3 graphical user interface, copy a Logical Output Management System (LOMS) definition by specifying the spad transaction.
2. From the **Spool Administration: Initial Screen** window, click on the **Extended admin** push-button 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, click the **Change** (red pencil) icon.
4. From the **Spool Admin.: List of Logical Output Management Systems (Change)** window (see Figure 8 on page 36),
 - a. Highlight the **Name** field of the LOMS from which you want to copy.
 - b. Specify the **Logical OMS** → **Create using template** path.
 - c. From the **Spool Administration: Copy Logical OMS from OMS_Name** window, specify the name for your new LOMS in the **Logical OMS** field and click the **Save** (Diskette) icon.
5. By returning to the **Spool Admin.: List of Logical Output Management Systems** window, you can see your new LOMS displayed.

Using different report levels or event delivery criteria

You can define LOMSs to specify different report levels on the **Spool Admin.: Logical Output Management System (Change)** window, as described in “Selecting event report levels” on page 53. On the second screen of this same window, you can also define LOMSs to specify different Event Delivery Criteria. This allows you to determine how often and how many events are delivered together by the Callback daemon to your SAP system. Before implementing this feature, consult both “Defining another Logical Output Management system” and the online documentation about LOMS that is provided with your SAP R/3 system.

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. Before implementing this feature, consult both “Defining another Logical Output Management system” and the online documentation about LOMS that is provided with your SAP R/3 system.

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 both “Defining another Logical Output Management system” and the online documentation about LOMS that is provided with your SAP R/3 system.

Supporting multiple Infoprint Manager systems

Infoprint Manager provides you with the ability to send jobs to multiple Infoprint systems from the same SAP system. An Infoprint Manager system consists of one or more Infoprint Manager servers residing on either the same or different machines that are set up to interoperate by sharing the same namespace. If your print installation is large, with many printers distributed across a wide area and managed by different Infoprint Manager systems, this function can help you to

manage your installation more efficiently by defining separate LOMS to send jobs to separate systems (see Figure 26 on page 57).

You can implement this support by applying either PTF U484268 on Infoprint Manager for AIX or PTF UR53740 on Infoprint Manager for Windows, and then using the SAP GUI to add an optional flag with values in the form *host:socket* to your Infoprint Manager OMS commands: **ipm_submit**, **ipm_dev_query**, **ipm_job_query**, and **ipm_job_cancel**.

host represents the hostname where the Infoprint server is running and *socket* the socket for the Infoprint server on that host.

Before using this function, ensure that you understand the following:

- You cannot make changes to any commands unless you have applied the service update (either PTF U484268 or PTF UR53740) to each SAP application server where the SAP Client is installed, as well as applying the service update to the Infoprint Manager server.
- If you are using clients on HP-UX and Sun Solaris systems, you must first update the feature on your Infoprint Manager server by applying the appropriate PTF, and then use a file transfer protocol to update the client parts (**ipm_submit.sys**, **ipm_job_cancel.sys**, **ipm_job_query.sys**, and **ipm_dev_query.sys**) on the SAP application servers.

Using the procedure described in “Defining another Logical Output Management system” on page 55, you can define a new LOMS for every Infoprint Manager system to which you want to send jobs. For example, in the procedure below, you might want to create an **LOMS1** and an **LOMS2**, one for each Infoprint Manager system to which you want to send jobs. In Figure 26 on page 57, **LOMS1** points to the New York system, while **LOMS2** points to the London system.

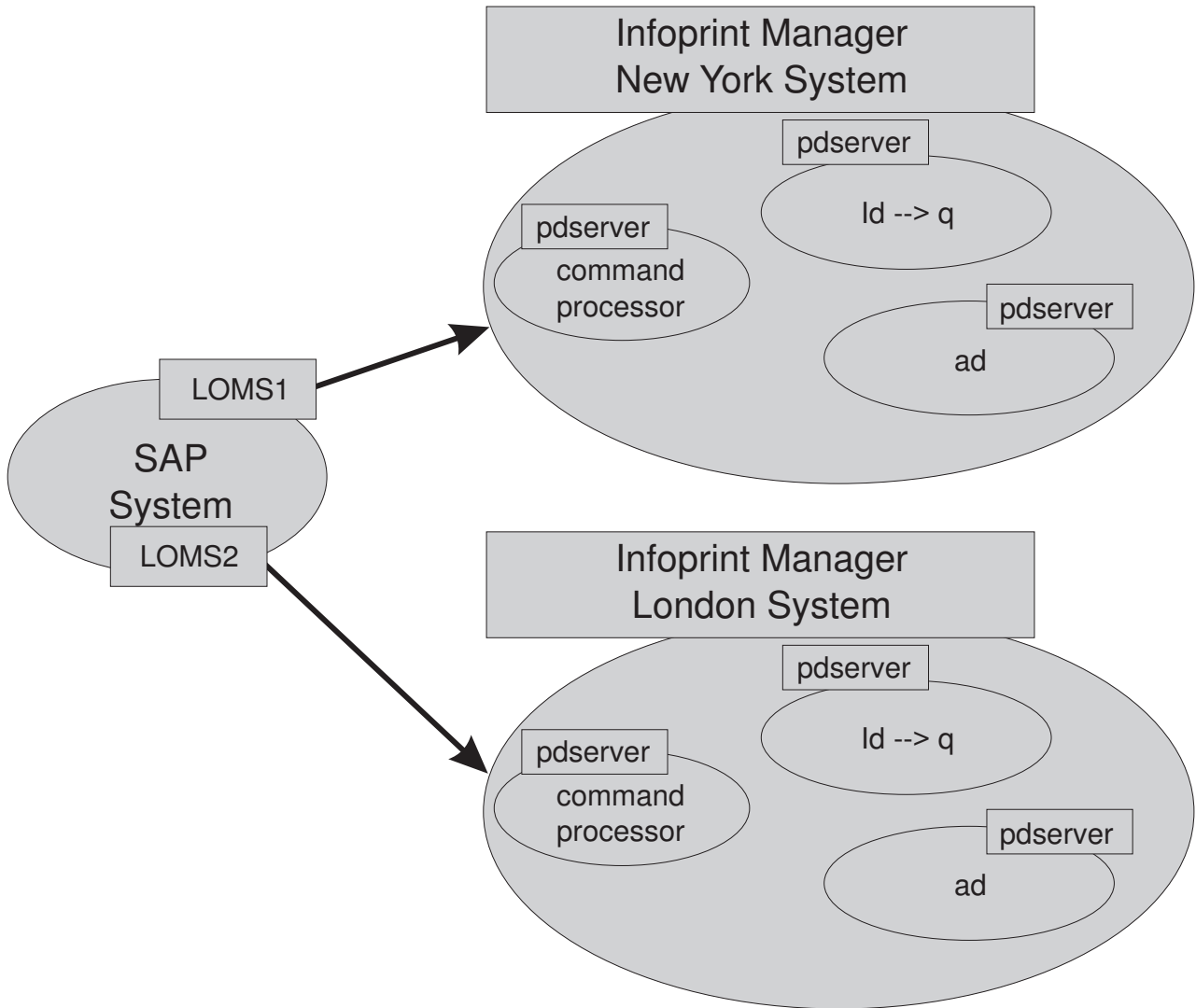


Figure 26. Sending Jobs to Multiple Infoprint Manager Instances.

To modify the OMS commands from your SAP GUI, use the following procedure:

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 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 appropriate LOMS (for example, the LOMS1) and click on the **Commands** icon.

SAP displays a list of operating systems.

4. From the list of operating systems, double-click on the operating system where your SAP system is running to access the OMS commands.

From this panel (see Figure 27 on page 58), you can modify the OMS commands to switch from one Infoprint system to another. For example, if you want to change the **ipm_submit** command to send jobs to an Infoprint system that resides in New York (**ny1** at socket **6874**), you can change the **ipm_submit** command field as follows:

Original ipm_submit command

```
ipm_submit &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C' '&Y' '&E1'
"&T" "&D" '&t'
```

Modified ipm_submit command

```
ipm_submit -c ny1:6874 &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C'
'&Y' '&E1' "&T" "&D" '&t'
```

Notes:

- a. Even though this example only shows changes to the submit command, make sure that you make the same change to all Infoprint Manager OMS commands.
- b. Do not make changes to any other part of the commands; these parameters are positional and must not be modified.

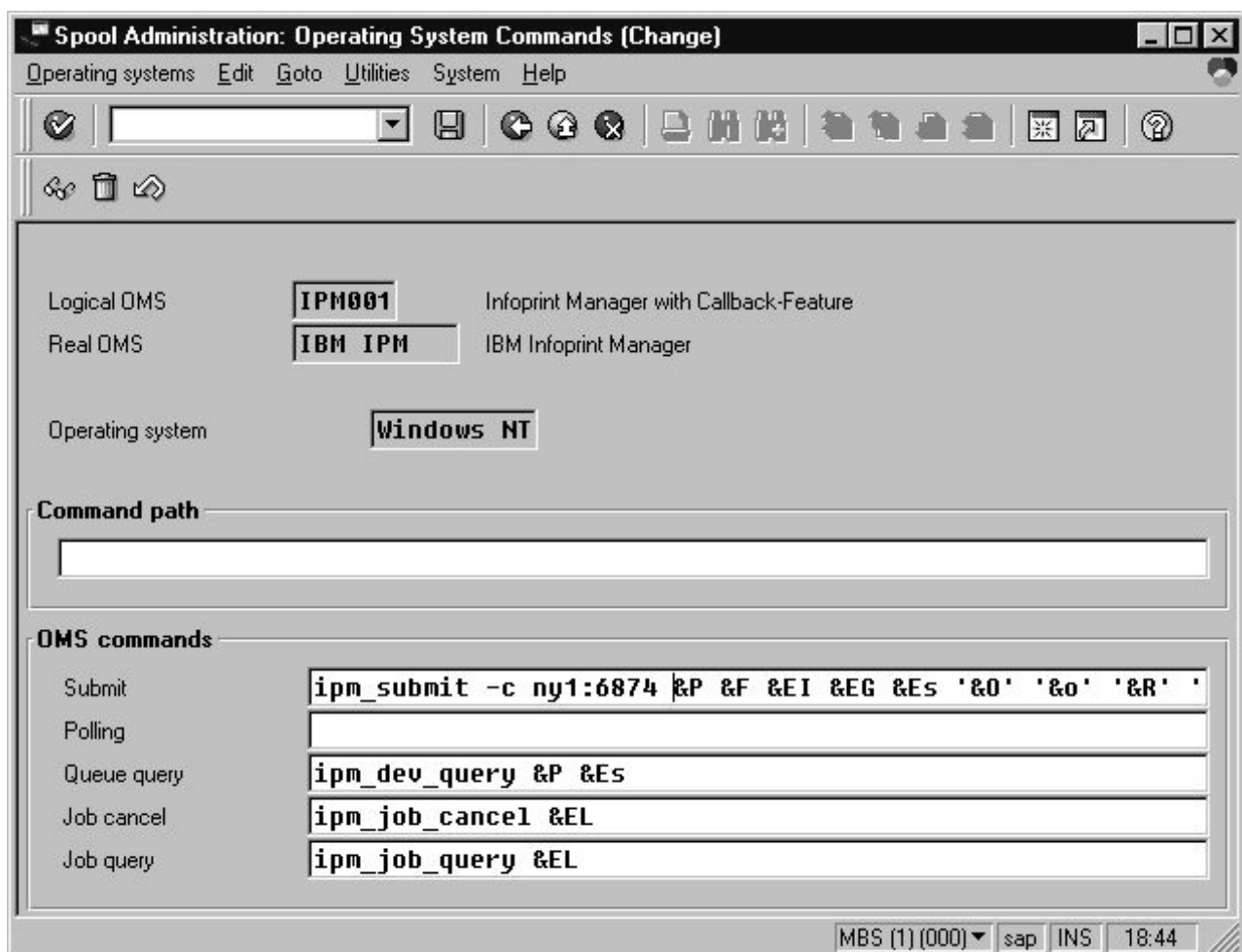


Figure 27. Spool Administration: Operating System Commands (Change) window

5. Save your changes by clicking on the **Save** (diskette) icon.

If you wanted another set of devices from this same SAP system to send jobs to another Infoprint system that resides in London, (**lon** at socket **6874**), you can return to Step 3 on page 57, access another LOMS on this SAP system, and proceed to change the **ipm_submit** command fields for this LOMS as follows:

Original ipm_submit command

```
ipm_submit &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C' '&Y' '&E1'  
"&T" "&D" '&t'
```

Modified ipm_submit command

```
ipm_submit -c lon:6874 &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C' '&Y'  
'&E1' "&T" "&D" '&t'
```

As before, remember to save your changes before exiting the **Spool Administration: Operating System Commands (Change)** window by clicking on the **Save** (diskette) icon.

Moving OMS definitions among SAP systems

You can maintain OMS definitions on a single application 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.

If you decide to transport the OMS objects from this maintenance system, then you must 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, see the "Spool Server Definitions: Classifying Servers, Using Logical Servers, and Using Alternate Servers" topic in your SAP R/3 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 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.
 - To transport both the ROMS definition and all LOMS definitions that reference it, push the **Transport all** (truck) icon to the right.

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.

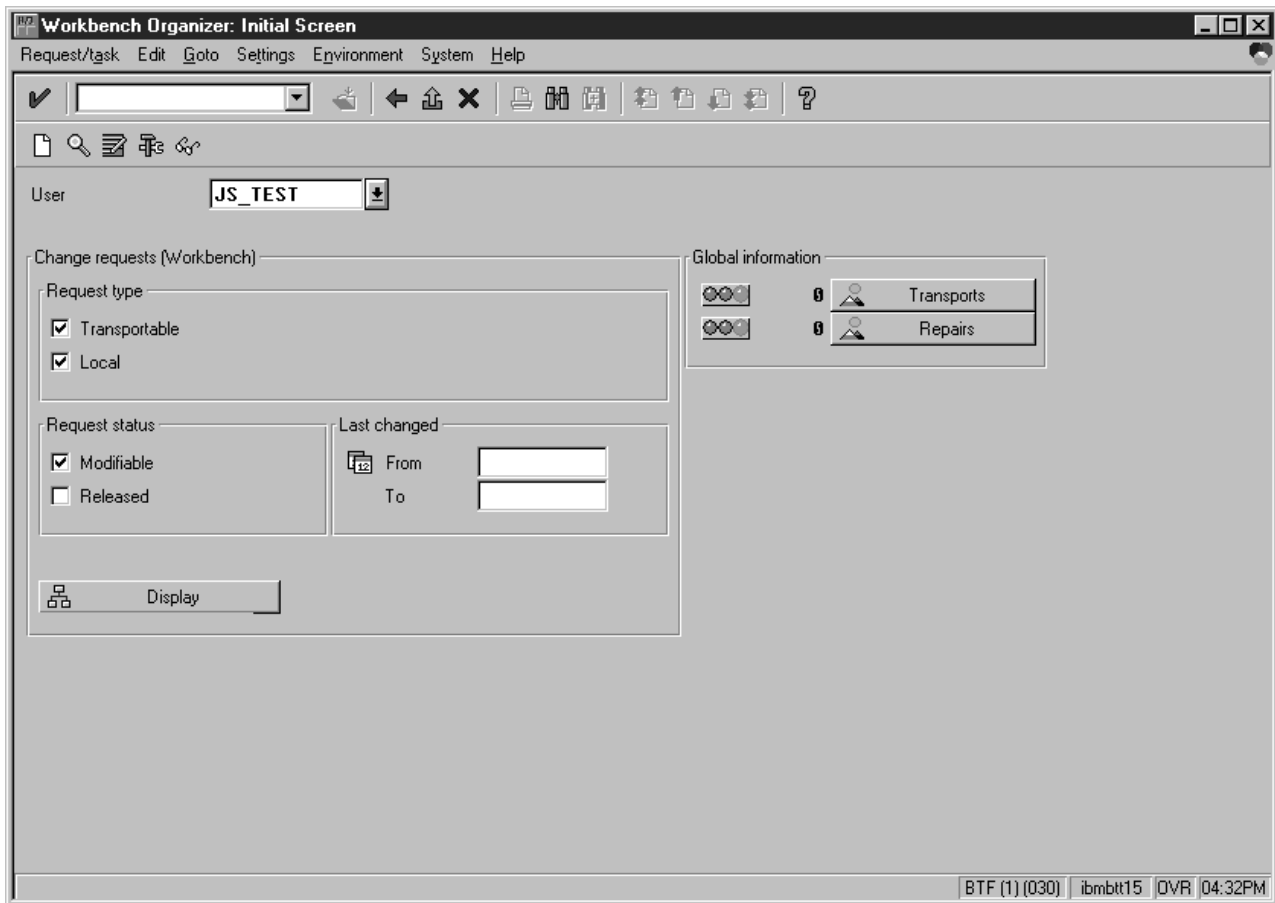


Figure 28. OMS Transport window

Switching Infoprint Manager servers

Infoprint Manager provides you with the ability to switch the Infoprint server to which your SAP system is sending commands. This can be a valuable feature to use if a particular Infoprint command processor fails and you want to switch to one that is still active, or when switching from an Infoprint test system to an Infoprint production system (as shown in Figure 29 on page 61). An Infoprint Manager system consists of one or more Infoprint Manager servers residing on either the same or different machines that are set up to interoperate by sharing the same namespace.

Note: If switching from one Infoprint Manager system to another, you must ensure that the same logical destination names have been defined on both systems.

You can implement this support by applying either PTF U484268 on Infoprint Manager for AIX or PTF UR53740 on Infoprint Manager for Windows and then using the SAP GUI to add an optional flag with values in the form *host:socket* to your Infoprint Manager OMS commands: **ipm_submit**, **ipm_dev_query**, **ipm_job_query**, and **ipm_job_cancel**.

host represents the hostname where the Infoprint server is running and *socket* the socket for the Infoprint server on that host.

Before using this function, ensure that you understand the following:

- You cannot make changes to any commands unless you have applied the service update (either PTF U484268 or PTF UR53740) to each SAP application server where the SAP Client is installed, as well as applying the service update to the Infoprint Manager server.
- If you are using clients on HP-UX and Sun Solaris systems, you must first update the feature on your Infoprint Manager server by applying the appropriate PTF, and then use a file transfer protocol to resend the client parts (*ipm_submit.sys*, *ipm_job_cancel.sys*, *ipm_job_query.sys*, and *ipm_dev_query.sys*) to their SAP application servers.

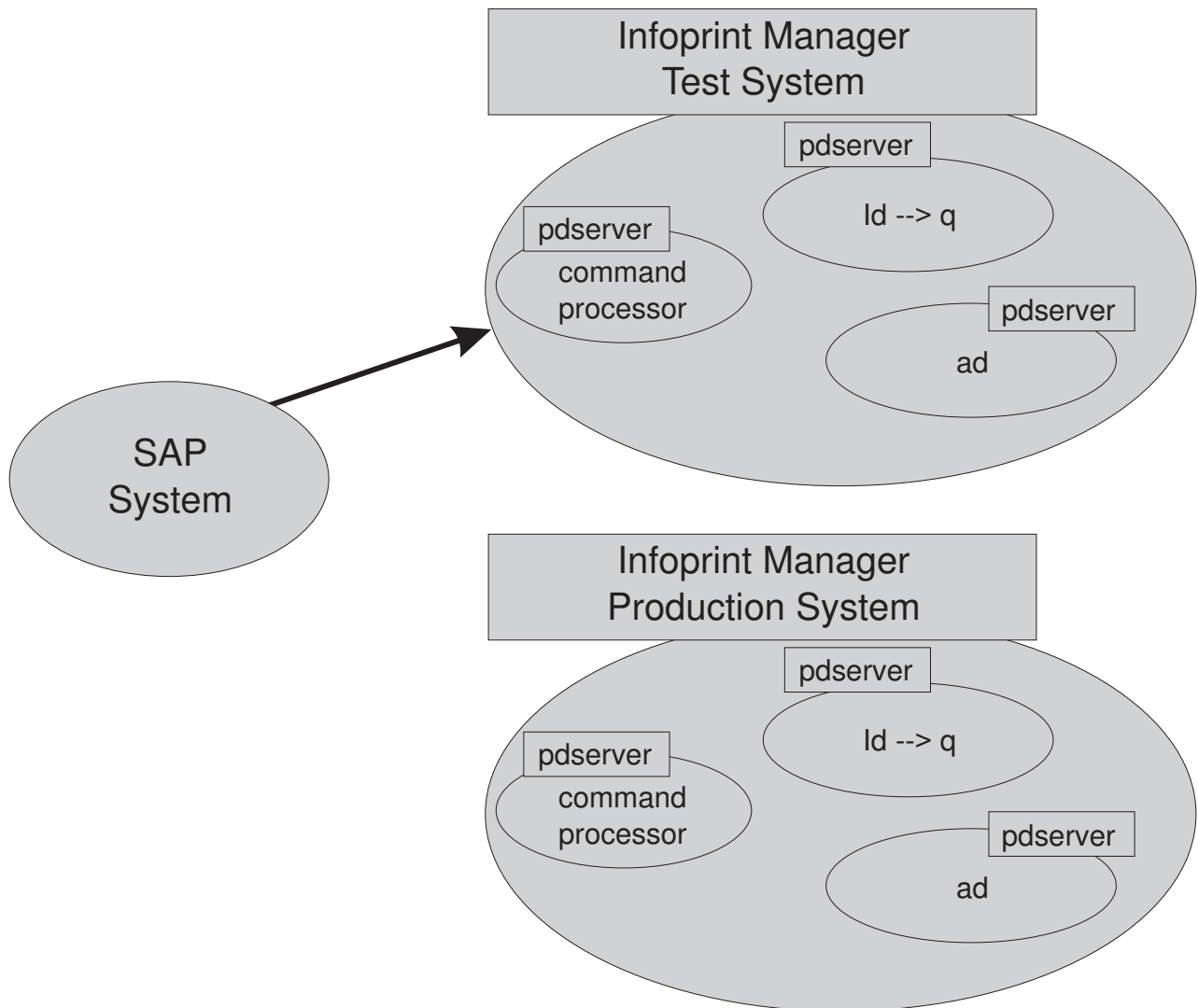


Figure 29. Switching from one Infoprint Server to another.

To modify the OMS commands from your SAP GUI, use the following procedure:

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 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 appropriate LOMS (for example, the **IPM001 LOMS**) and specify the **Commands** icon.
SAP displays a list of operating systems.
4. From the list of operating systems, double-click on the operating system where your SAP system is running to access the OMS commands.
From this panel, you can modify the OMS commands to switch from one Infoprint server to another. For example, if you want to change the **ipm_submit** command to send jobs to the Infoprint server **info1** at socket **6874**, you can change the **ipm_submit** command field as follows:

Original ipm_submit command

```
ipm_submit &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C' '&Y' '&E1'
"&T" "&D" '&t'
```

Modified ipm_submit command

```
ipm_submit -c info1:6874 &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C'
'&Y' '&E1' "&T" "&D" '&t'
```

Notes:

- a. Even though this example only shows changes to the submit command, make sure that you make the same change to all Infoprint Manager OMS commands.
- b. Do not make changes to any other part of the commands; these parameters are positional and must not be modified.

Failing over to other servers in the same Infoprint Manager system

Infoprint Manager provides you with the ability to send jobs to destinations in multiple Infoprint servers through any Infoprint Manager server in that Infoprint Manager system. An Infoprint Manager system consists of one or more Infoprint Manager servers residing on either the same or different machines that are set up to interoperate by sharing the same namespace. A distributed installation that uses an Infoprint server (**pdserver**) as a command processor might want to define another **pdserver** as a backup command processor to fail over to if the primary command processor goes down so you can continue to send jobs to the destinations. As shown in Figure 30 on page 63, you might want to specify either the Infoprint Manager server with the actual destination or the Infoprint Manager server with the logical destination as the back up server.

You can implement this support by applying either PTF U484268 on Infoprint Manager for AIX or PTF UR53740 on Infoprint Manager for Windows and then using the SAP GUI to add an optional flag with values in the form *host:socket* to your Infoprint Manager OMS commands: **ipm_submit**, **ipm_query**, **ipm_job_query**, and **ipm_job_cancel**.

host represents the hostname where the Infoprint server is running and *socket* the socket for the Infoprint server on that host.

Before using this function, ensure that you understand the following:

- You cannot make changes to any commands unless you have applied the service update (either PTF U484268 PTF UR53740) to each SAP application server where the SAP Client is installed, as well as applying the service update to the Infoprint Manager server.

- If you are using clients on HP-UX and Sun Solaris systems, you must first update the feature on your Infoprint Manager server by applying the appropriate PTF, and then use a file transfer protocol to resend the client parts (*ipm_submit.sys*, *ipm_job_cancel.sys*, *ipm_job_query.sys*, and *ipm_dev_query.sys*) to their SAP application servers.
- Even though this example only shows changes to the submit command, make sure that you make the same change to all Infoprint Manager OMS commands.
- Do not make changes to any other part of the commands; these parameters are positional and must not be modified.

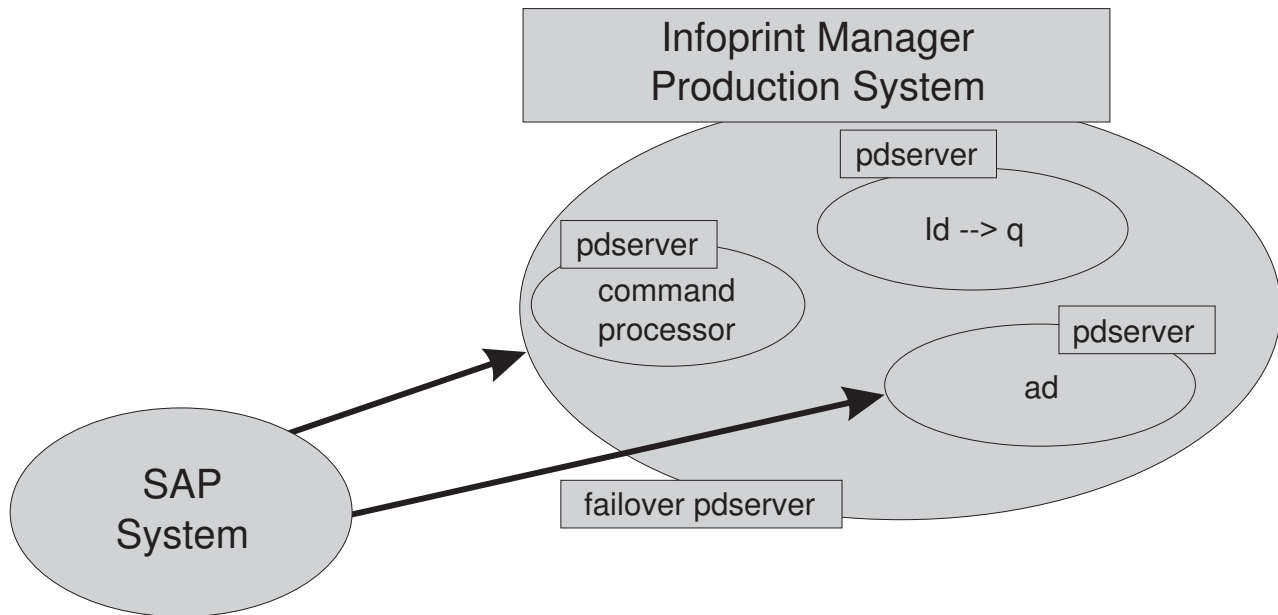


Figure 30. Failing Over from One Infoprint Server to Another on the Same System

To modify the OMS commands from your SAP GUI, use the following procedure:

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 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 appropriate LOMS (for example, the **IPM001 LOMS**) and specify the **Commands** icon.
SAP displays a list of operating systems.
4. From the list of operating systems, double-click on the operating system where your SAP system is running to access the OMS commands.

From this panel, you can modify the OMS commands to switch from one Infoprint server to another. For example, if you want to change the **ipm_submit** command to failover to another Infoprint (**pdserver**) that resides within the same Infoprint Manager system, you can change the **ipm_submit** command field as follows:

Original ipm_submit command

```
ipm_submit &P &F &EI &Eg &Es '&O' '&o' '&R' '&f' '&C' '&Y' '&E1'
"&T" "&D" '&t'
```

Modified ipm_submit command for Infoprint server failover

```
ipm_submit -c 'info1:6874 info1:5157' &P &F &EI &Eg &Es '&O' '&o'
'&R' '&f' '&C' '&Y' '&E1' "&T" "&D" '&t'
```

Notes:

- a. Even though this example only shows changes to the submit command, make sure that you make the same change to all Infoprint Manager OMS commands.
- b. Do not make changes to any other part of the commands; these parameters are positional and must not be modified.

Shutting down the callback daemon on AIX

The following procedure describes how you can shut down the SAP Callback daemon. This procedure is useful if you are migrating the SAP Callback daemon from one Infoprint Manager 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, type:

```
stopcbd systemname
```

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

If you do not want a reboot of the system to restart the SAP Callback daemon, remove its entry from the `/etc/rc.iprsap` file. If you remove its entry from the file, you do not have to perform the following task, which would also prevent any SAPconnect fax daemons from restarting automatically.

To ensure that no SAP Callback daemons are restarted automatically whenever the systems they are running on are restarted, use the Infoprint SMIT interface:

Infoprint Printing Systems → Infoprint Utilities → SAP Daemons

From the **SAP Daemons** panel, select the **Do not start SAP daemons at reboot** option.

If you are moving the SAP Callback daemon to another system, remember to follow the instructions for both “Starting the SAP callback daemon or process” on page 40 and “Configuring to start callback daemons on system reboot on AIX” on page 41.

Shutting down the callback process on Windows

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

To shut down the SAP Callback process on an Infoprint Manager Windows server, you must access the **SAP Callback Processes** from the **Infoprint Manager Management Console** .

1. From the Start menu, click on the **Programs → Infoprint Manager → Management Console** path.

2. From the **Objects** view in the left pane of this window, click on **SAP Callback Processes** to switch the main view to **SAP Callback Processes**.
3. Select the particular SAP Callback Process you want to stop from those shown in the main view. You can either perform either one of the following options:
 - Right click and select **Stop SAP Callback**.
 - From the menu bar select **Actions** → **Stop**.

If you are moving the SAP Callback process to another system, remember to follow the instructions for “Starting the SAP callback process on Windows” on page 42.

Deleting a SAP callback process on Windows

The following procedure describes how you can delete a SAP Callback process. This procedure is useful if you are removing one SAP Callback process and replacing it with another, or if the SAP R/3 system it supports is not going to be used for awhile. If you accidentally created a SAP Callback process for the wrong host or instance ID and you want to remove it from the **Infoprint Manager Management Console** and the Infoprint Manager namespace, you would use this procedure:

To delete the SAP Callback process on an Infoprint Manager Windows server, you must access the **SAP Callback Processes** from the **Management Console**.

Note: Before deleting a particular SAP Callback process, you must first stop it as described in “Shutting down the callback process on Windows” on page 64.

1. From the Start menu, click on the **Programs**→**Infoprint Manager** → **Management Console** path.
2. Select the **SAP Callback Process** object.
3. From here, you can perform either one of the following action to remove the process from the system:
 - Specify **Edit** → **Delete** → **SAP Callback Process**.
 - Right click on the **SAP Callback Process** object and select **Delete**.

Part 3. Infoprint Manager non-Output Management Support

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Chapter 9. Understanding SAP access method L support

If you either cannot or choose not to use SAP Output Management System (OMS) support, IBM recommends using SAP's local access method L (Infoprint Manager's **ipm_print** command) to send jobs to the Infoprint Manager server. Infoprint Manager provides a command-line client interface for SAP to submit jobs to Infoprint Manager with job attribute information and to query for jobs to determine when they have completed.

The Infoprint Manager **ipm_print** command provides SAP job information to Infoprint Manager. For example, each SAP userid can be used to track a job through the system. The corresponding **ipm_query** command allows Infoprint Manager to provide job status to SAP. A job is not identified as complete until it actually prints or is deleted from the print queue. You can also use the **ipm_print** command to fax jobs from SAP.

For an alternative method of submitting jobs from non-AIX SAP R/3 application servers that provide no feedback to the SAP servers, see Appendix B, "Alternate access methods for submitting SAP jobs to Infoprint Manager", on page 153.

If you want to use the Infoprint Manager SAP Transform, you must install the SAP Print Feature and fonts on every Infoprint Manager server with actual destinations that transforms either SAP OTF or ABAP data. For information on installing the SAP Print Feature and fonts on the Infoprint Manager server, see Chapter 10, "Installing the SAP print feature on the Infoprint server", on page 71.

Depending on the platform that your SAP system runs on, see the appropriate chapter from the list below to install and then see Chapter 14, "Configuring your SAP system to use the Infoprint Manager Client command", on page 85 to configure your SAP system to use Infoprint Manager's SAP access method L client:

- For installing Infoprint Manager's client when SAP runs on either HP-UX or Sun Solaris servers, see Chapter 11, "Installing Infoprint SAP Client support when SAP runs on either HP-UX or Sun Solaris", on page 75.
- For installing Infoprint Manager's client when SAP runs on AIX servers, see Chapter 12, "Installing the SAP Client when SAP runs on AIX", on page 79.
- For installing Infoprint Manager's client when SAP runs on Windows systems, see Chapter 13, "Installing the SAP Client when SAP runs on Windows", on page 81.

Once you have installed the Infoprint Manager's client for the appropriate operating system, see Chapter 14, "Configuring your SAP system to use the Infoprint Manager Client command", on page 85 to configure your SAP system to use the Infoprint Manager command.

Chapter 10. Installing the SAP print feature on the Infoprint server

If you are printing either Output Text Format (OTF) or Advanced Business Application Programming (ABAP) data, ensure that you have installed the **sap2afp** transform and the fonts necessary for printing. To install the transform, you must install the SAP Print Feature on each Infoprint Manager Windows server or Infoprint Manager Windows server with actual destinations that will be transforming data.

Note: At a minimum, on every AIX system on which you will be running the SAP (**sap2afp**) transform (on your Infoprint servers), you must have the following fileset installed:

`bos.loc.adt.iconv` (Language Converter Development Toolkit)

To install the Infoprint Manager for AIX SAP Print Feature on your AIX server, see "Starting the Infoprint Installer for Version 4.1" in the *Infoprint Manager for AIX: Getting Started* manual.

To install the SAP Print Feature on your Infoprint Manager Windows server, follow the directions under the "Installing Infoprint Manager server software" topic in the *Infoprint Manager for Windows: Getting Started* manual. The install program will guide you through installing **Infoprint Manager: SAP Print Feature**, LCD4-1921.

To install the necessary fonts and configure the SAP transform on both the Infoprint Manager AIX server and the Infoprint Manager Windows server, see the rest of this chapter.

Installing Infoprint fonts for printing with the SAP transform on an Infoprint Manager AIX server

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 on an Infoprint Manager AIX server, as well as the required code pages. You can obtain these font resources from the product 5648-B45: **IBM AFP Font Collection for AIX, OS/400 and OS/2** (LK2T-9269). For more information about purchasing this product, see either your IBM sales representative or access the AFP Font Collection homepage (<http://www.printers.ibm.com/R5PSC.NSF/Web/AFPFontHome>) on the World Wide Web.

Note: If you are printing double-byte fonts, you may require the following AFP Font Collection CD-ROMs:

- *Japanese Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9276)
- *Korean Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9278)

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 AIX 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 the following two commands in sequence:
 - a. `mount /cdrom`
 - b. `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:
 - a. **afpfonts.bookmstr**
 - b. **afpfonts.compat**
 - c. **afpfonts.codepage**
 - d. **afpfonts.ocr**
12. To install the fonts, press **Enter**.
These fonts should take approximately 43 MB on your AIX server.
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 two commands in sequence:
 - a. `cd /cdrom`
 - b. `umount /cdrom`
16. Then you can remove the CD-ROM from your CD-ROM drive.

Installing Infoprint fonts for printing with the SAP transform on an Infoprint Manager Windows server

To print output from the **sap2afp** transform, you must install the Gothic fonts that are specified in the **fonts.tab** configuration file in the `install_path\sap2afp` directory, as well as the required code pages. You can obtain these resources from the product 5648-B45: **IBM AFP Font Collection for AIX, OS/400 and OS/2 (LK2T-9269)**. For more information about purchasing this product, see either your IBM sales representative or access the AFP Font Collection homepage (<http://www.printers.ibm.com/R5PSC.NSF/Web/AFPFontHome>) on the World Wide Web.

Note: If you are printing double-byte fonts, you may require the following AFP Font Collection CD-ROMs:

- *Japanese Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9276)
- *Korean Fonts for AIX, Windows NT, and Windows 2000* (LK2T-9278)

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. Insert the CD-ROM for the AFP Font Collection into the CD-ROM drive on your Infoprint Manager Windows server.
2. If autorun does not start the install, double-click on the **My Computer** icon on your desktop.
3. From the **My Computer** window, double-click on your CD-ROM drive and then double-click on the **NT** folder icon.
4. From the **NT** folder window, double-click on the **setup.exe** executable to begin the install.
5. Select the drive where you have installed Infoprint Manager to install these fonts. For example, if Infoprint is installed on the **D** drive, the fonts should be installed in the **D:\afpfonts** path.
6. While Infoprint recommends that you use the **full installation** option, if you select a customized install, you should be certain to choose the following four options:
 - **BookMaster Fonts**
 - **Compatibility Fonts**
 - **OCR Fonts**
 - **Symbols Fonts**
7. To install the fonts, press **Next**.
When the fonts finish loading, you will see a Font Collection pop-up dialog with the message:
Installation of Font Collection 2.1.0.1 is complete.
8. Verify that the fonts cited in your **fonts.tab** configuration file (which is installed in the *install_path*\sap2afp directory).
You can use a **Notepad** editor to both view and change this file.
9. Infoprint Manager installs these fonts in the *install_path*\afpfonts directory.
10. Remove the CD-ROM from your CD-ROM drive.

Configuring the SAP R/3 transform

Depending upon the types of data you are printing, you may need to configure some of the files that are provided with the SAP transform. For example:

- If you want to use form definitions that are mapped to SAP Formats (Paper Types), you must configure the **pagedef.tab** file as described in “Changing document print orientation” on page 126.
- If you have created a new font in a SAP R/3 document, you must configure the **fonts.tab** file as described in “Setting up your SAP R/3 system to support new OTF user fonts” on page 140.
- If you want to expand or shorten the width of a barcode for printing, you must configure the **barcode.tab** file as described in “Bar codes and printing from SAP R/3 through Infoprint Manager” on page 147.

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. On an Infoprint Manager AIX server, this file is installed in the `/usr/lpp/psf/bin` directory. On an Infoprint Manager Windows server, this file is installed in the `install_path\bin` path.

- Table 6 shows the configuration files that are installed in either the `/usr/lpp/psf/sap2afp` directory on an Infoprint Manager AIX server or the `install_path\sap2afp` path on an Infoprint Manager Windows server.

Table 6. SAP (**sap2afp**) transform configuration files for AIX

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
6400fonts.tab	Provides a list of raster fonts that apply exclusively to the IBM 6400 printer, 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 (SAP PAPER TYPE) used, as well as the page definition and fonts for jobs that go through ACIF.	ABAP/OTF
defcp.tab	Converts ASCII into EBCDIC characters.	ABAP data only

Chapter 11. Installing Infoprint SAP Client support when SAP runs on either HP-UX or Sun Solaris

SAP R/3 installations that run on HP-UX or Sun Solaris systems work with Infoprint Manager when these installations are configured to invoke commands remotely on the Infoprint server.

To use the access method L support of the SAP Print feature of Infoprint Manager with a SAP R/3 system running on a non-AIX UNIX system, you must perform the following tasks:

1. "Configuring the Infoprint Manager Server"
2. "Configuring the SAP System Server(s)" on page 77

Configuring the Infoprint Manager Server

Follow the appropriate procedure depending on which version of Infoprint Manager you are using:

- "Configuring the Infoprint Manager Windows server"
- "Configuring the Infoprint Manager AIX server" on page 76

Configuring the Infoprint Manager Windows server

Note: The **rshd** and **rexecd** services are prerequisites for HP-UX and Sun Solaris SAP client support.

Use the following procedure to configure the Windows server that has already installed Infoprint Manager Version 2 Release 1 with the SAP Print Feature:

1. Install both an **rshd** and **rexecd** service on your Infoprint Manager Windows server .

While Windows NT and Windows 2000 systems natively support both **rcp** and **rexec** commands as a client, you just add these services to ensure that these command requests are honored by the Infoprint Manager Windows server. One company which sells software that provides **rshd** and **rexecd** services for Windows NT and Windows 2000 is Denicomp Systems (<http://www.denicomp.com>).

Note: During the installation of these services, ensure that remote users are defined users on the Infoprint Manager for Windows 2.1 system so that it is possible to write to this server from the Windows SAP client system.

2. From the **Start** menu, access the **Programs**→**Administrative Tools**→**User Manager** path.
3. Create a new user named **sapuser**.

Note: This user does not have to be part of any special groups.

4. Authorize the **sapuser** userid to issue remote commands by adding the following entry to the **.rhosts** or equivalent file: **+sapuser**.
5. Authorize all remote servers running the SAP R/3 applications to specify remote commands on the Infoprint Manager Windows server by specifying:
fully_qualified_server_name +

where *fully_qualified_server_name* is either the IP address (in dotted decimal format) or the host name of the server.

Notes:

- a. If you use a host name, TCP/IP must be able to resolve that name through either the security file or through a Domain Name Server (DNS).
- b. If a DNS is not being used, but the host name is specified in the **hosts** file, specify the fully-qualified name in the **.rhosts** or equivalent file.
- c. If a DNS is not being used, and the host name is not specified in the hosts file, you must specify an IP address in the **.rhosts** or equivalent file (for example, 172.16.8.10 +).

For added accountability among SAP systems and print jobs, you can create separate NT users for each SAP system or SAP R/3 application server. Repeat steps two through five below to create new userids that you can map to each SAP application server from which you plan to use Infoprint Manager to print.

Configuring the Infoprint Manager AIX server

Use the following procedure to configure the AIX server that has already installed Infoprint Manager Version 4 Release 1 with the SAP Print Feature.

1. Add a user called **sapuser**.

Note that this user does not have to be part of any special groups.

2. Authorize the **sapuser** userid to issue remote commands by adding the following entry to the **/etc/hosts.equiv** file:

```
+ sapuser
```

3. Authorize all remote servers running the SAP R/3 application to specify remote commands on the Infoprint Manager AIX server as **sapuser** by performing the following procedure:

- a. Add an **.rhosts** file with permissions of 600 to the **/home/sapuser** directory.
- b. Edit the **.rhosts** file and add a line for each non-AIX server running a SAP R/3 application with a plus (+) sign appended to it.

If a Domain Name Server is being used, specify the fully-qualified name to the **.rhosts** file as shown below:

```
/home/sapuser/.rhosts:          sol.penn.boulder.ibm.com +
```

If a Domain Name Server is not being used, you must also add the host name and its IP address to the **/etc/hosts** file as show below:

```
/home/sapuser/.rhosts:          sol.penn.boulder.ibm.com +
```

```
/etc/hosts:                      172.16.8.10 sol.penn.boulder.ibm.com +
```

For added accountability among SAP systems and print jobs, you can create separate AIX users for each SAP system or SAP R/3 application server. Follow the three steps specified in this topic to create additional users (like **sapuser**) that you can map to each application server from which you will be using Infoprint Manager to print.

For more information about using the **rsh** and **rcp** commands to connect to the Infoprint Manager AIX server and send files between servers, refer to your AIX Operating System documentation.

Configuring the SAP System Server(s)

To allow SAP on either HP-UX or Sun Solaris to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP Client on every SAP server where an SAP application server will issue the commands. This includes every application server with a spool work process (SWP) managing R/3 devices that have been configured to use access method **L**. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

Use the following procedure to configure remote server(s) (HP-UX or Sun) running the SAP R/3 application so you can print with Infoprint Manager:

1. Obtain access to each HP-UX or Sun Solaris server running SAP R/3 and log on.

2. Verify that you can ping the Infoprint Manager server by hostname:

```
ping -c 3 hostname
```

where *hostname* is the unqualified name for the Infoprint Manager server, such as *nwser*.

If the response shows that a good communication path exists, you will see the following:

```
----tcpip_addr PING Statistics----
```

```
packets transmitted, 3 packets received, 0% packet loss
```

```
round-trip min/avg/max = 7/7/7 ms
```

3. If you cannot ping the Infoprint Manager server by hostname, edit the **/etc/hosts** file and add the hostname and IP address of the Infoprint Manager server:

```
/etc/hosts:          9.99.11.109 nwser
```

4. Create a small directory named **/usr/lpp/pd/bin**:

```
mkdir /usr/lpp/pd/bin
```

5. Use the FTP of your choice to copy the following two files from the Infoprint Manager server to an SAP R/3 application server in your configuration. If you are using an Infoprint Manager AIX server, these files reside in the **/usr/lpp/pd/bin** directory. If you are using an Infoprint Manager for Windows server, these files reside in the *install_path*\bin folder:

- a. **ipm_print.sys**

- b. **ipm_query.sys**

For the secondary qualifier (*sys*), specify the name of the system where your SAP applications are running, either **sun** for Sun Solaris or **hp** for HP-UX.

6. Ensure that each file copied in step 6 is executable.
7. On the SAP application server in your installation, edit both files so they specify the name of the user (**sapuser**) and hostname where Infoprint Manager is running.
8. Copy the edited SAP command files to any other SAP application servers in your installation that use the Infoprint Manager server.

Once you have completed this procedure, follow the directions for updating the SAP Profile to activate the SAP Print command and define SAP devices that use access method **L** in Chapter 14, "Configuring your SAP system to use the Infoprint Manager Client command", on page 85.

Chapter 12. Installing the SAP Client when SAP runs on AIX

To allow SAP to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP client on every SAP server where an SAP application server will issue the commands. This includes every application server with an SWP managing R/3 devices that have been configured to use access method L for sending jobs to Infoprint Manager. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

The SAP client package installs the necessary filesets on the SAP application server. The SAP Client package requires a small set of prerequisites:

1. bos.rte 4.2.1.0
2. bos.rte.printers 4.2.1.8

To install the SAP client for AIX on your SAP application servers, use the following procedure:

1. Log into the AIX system as **root**.
2. Insert the **Infoprint Manager Common Client**, LCD4-1917, into the CD-ROM reader.
3. Open a terminal window.

If you are using the Common Desktop Environment (CDE), you may open a terminal window by clicking on the terminal icon contained in the front panel. (The front panel is the task bar that appears at the bottom of the screen.) By default, the terminal icon is contained in a pop-up menu above the text editor icon that appears on the front panel.

4. The first time you run the Installer, follow this procedure:
 - a. Type the following on the command line:

```
smit cdrfs
```
 - b. Select **Add a CDRom File System** from the list of choices presented.
 - c. Click the List button and select your CD-ROM device name (cd0, for example).
 - d. Type the following in the **MOUNT POINT** field:

```
/cdrom
```
 - e. Click **OK**. The running person will raise his arms to indicate success. If he instead falls down and you see crfs: 0506-909 /cdrom file system already exists, do not interpret this as a failure. (The existing **/cdrom** file system should be usable.)
 - f. Press the **F12** key to exit **SMIT**.
5. Type the following on the command line:

```
mount /cdrom
```
6. The SAP Client package (**ipr.sapclient**) is installed at the command line by specifying **setup -x**.

During the course of the install, you are prompted to specify values for both **PDHOST** and **PD_SOCKET**.

Note: Note that the SAP Client package cannot be installed if other ipr* filesets reside on a SAP application server.

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Once you have completed this procedure, follow the directions for updating the SAP profile to activate the SAP Print Command and define SAP devices that use access method L in Chapter 14, "Configuring your SAP system to use the Infoprint Manager Client command", on page 85.

Chapter 13. Installing the SAP Client when SAP runs on Windows

To allow SAP to issue the Infoprint Manager commands, you must install the Infoprint Manager SAP client on every SAP server where an SAP application server will issue the commands. This includes every application server with an SWP managing R/3 devices that have been configured to use access method L for sending jobs to Infoprint Manager. If you have configured your SAP R/3 system to use alternate servers, you must repeat these installation tasks on the alternate servers as well.

To install the Infoprint Manager SAP Client for Windows on your Windows SAP system, use the following procedure:

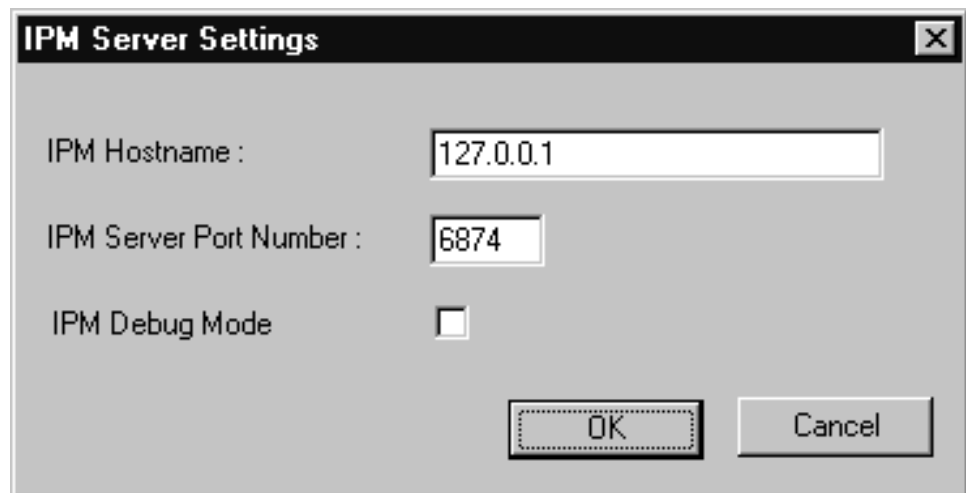
1. Log in as the Administrator user.
2. Insert the **IBM Infoprint Manager: Common Clients**, LCD4-1917, into your CD-ROM drive.
3. From the **IBM Infoprint Manager: Common Clients** window, click on **Install Infoprint Manager Products**.
4. Click on **Infoprint Manager SAP Clients**.
5. Select a location for installing the clients (the default is *install_path* \Infoprint Manager SAP Clients\).
6. From the **IPM Server Settings** pop-up dialog (see Figure 31 on page 82), specify either the fully-qualified hostname or the IP address of the Infoprint Manager server to which you will be sending jobs. The **IPM Hostname** field defaults to showing the loop back address and must be changed.

The **IPM Server Port Number** field defaults to 6874, which you do not need to change.

Note: Do not check the **IPM Debug Mode** checkbox unless instructed to do so by IBM support.

Once you have set the appropriate values, click **OK** to close this dialog.

Figure 31. IPM Server Settings dialog



7. When the SAP client has been installed, click the **Finish** button shown in Figure 32.

Figure 32. InstallShield Wizard Complete screen after installing SAP Clients on Windows



8. To exit the install process, click the **Back** button, and then the **Exit** button on the next screen.
9. To complete the configuration, follow the directions for updating the SAP Profile to activate the SAP print command and define SAP devices that use

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access method **L** as described in Chapter 14, “Configuring your SAP system to use the Infoprint Manager Client command”, on page 85.

Chapter 14. Configuring your SAP system to use the Infoprint Manager Client command

SAP R/3 systems work best with Infoprint Manager when these installations are configured to use our **ipm_print** command.

The Infoprint Manager **ipm_print** command provides SAP job information to Infoprint Manager. For example, each SAP userid can be used to track a job through the system. The corresponding **ipm_query** command allows Infoprint Manager to provide job status to SAP. A job is not identified as complete until it actually prints or is deleted from the print queue. You can also use the **ipm_print** jobs to fax jobs from SAP.

Use the “Modifying the Print Profile for SAP” before “Defining SAP devices to send jobs to Infoprint Manager” on page 89.

Modifying the Print Profile for SAP

In order to print with access method L from an SAP server, you must edit the Print Profile on your SAP application server. From your SAP R/3 graphical user interface, use the following procedure:

1. Enter RZ10 in the **OK-Code** field to access the **Edit Profiles** window shown in Figure 33 on page 86.

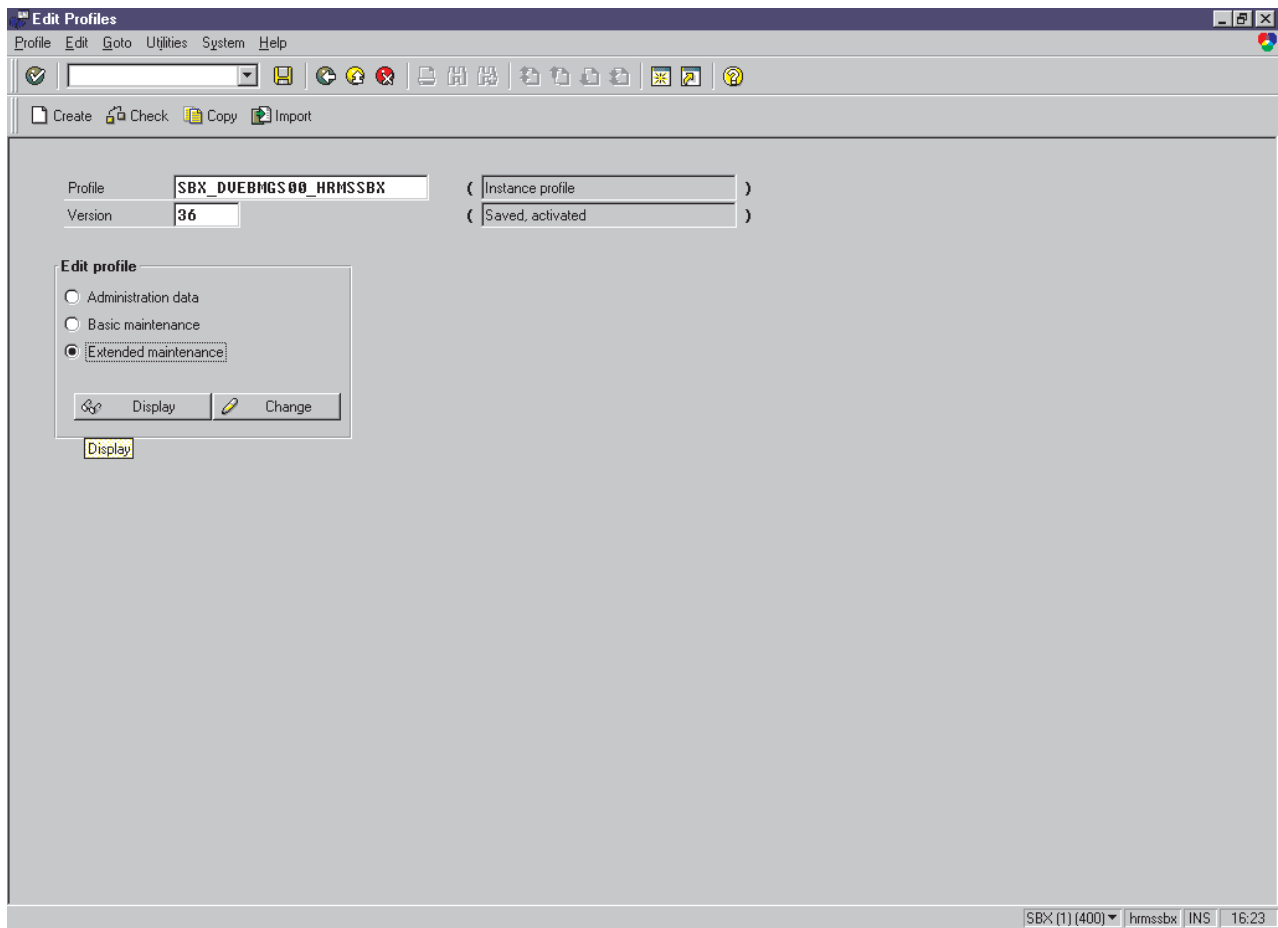


Figure 33. *print_profile* window

2. Select the **Extended maintenance** radio button and click the **change** button to access the **Maintain R/3 Profile *print_profile*** window shown in Figure 34 on page 87.

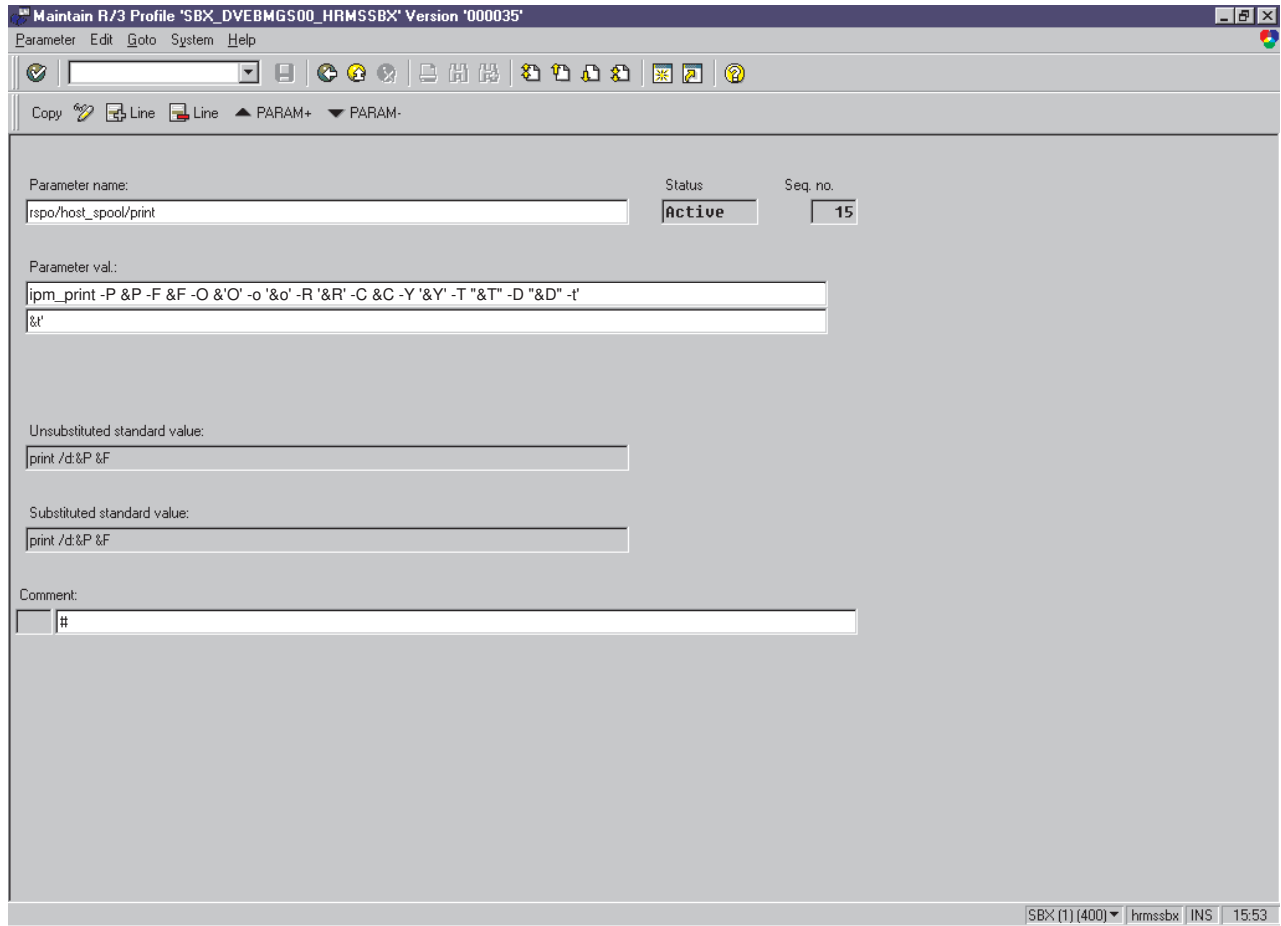


Figure 34. Maintain R/3 Profile Print Profile window

3. In the appropriate fields, specify the following values, and click the **check** icon in the upper left corner, to save the values. You will return to the screen two more times to add `rspo/host_spool/query`, and `rspo/host_spool/answer_format` values:

Parameter name:

`rspo/host_spool/print`

Parameter val:

`ipm_print -P &P -F &F -O '&O' -o '&o' -R '&R' -C &C -Y '&Y' -T '&T' -D '&D' -t '&t'`

Parameter name:

`rspo/host_spool/query`

Parameter val:

`rspo/host_spool/query=ipm_query -P&P`

Parameter name:

`rspo/host_spool/answer_format`

Parameter val:

`rspo/host_spool/answer_format=lpstat`

Note: For the `rspo/host_spool/print` values, some parameters are single-quoted ('&o') and some are double-quoted ("&T").

- Specify the **check** icon in the upper left corner to save this data.

The SAP system responds by providing a display that demonstrates how this print profile has been changed. Note the two highlighted sections to see the **ipm_print** and **ipm_query** SAP clients:

Parameter name	Active parameters	Parameter value
0/12/2001		14:33:04
rspo/host_spool/query	ipm_query -P &P	
rspo/host_spool/print	ipm_print -P &P -F &F -O "&o" -o "&o" -R "&R" -C &C -T "&T"	
eu/iwb/server_win32	hrmsds1.jones.s10.ca.us	
eu/iwb/server_mac	hrmsds1.jones.s10.ca.us	
eu/iwb/path_mac	zdummy	
login/system_client	400	
SAPLOCALHOST	hrmssbx	
eu/iwb/path_win32	saphelp\helpdata	
:		

Figure 35. Active parameters list display from changed print profile

- Once you have completed steps 4 and 5 three times to enter all the appropriate values, you must save these print profile changes. To save these print profile changes, be sure you check **yes** for the dialog box about the parameter change.

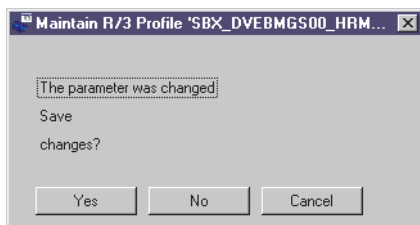


Figure 36. Maintain R/3 Profile display: accepting parameter change

- Then ensure that you click **yes** for the dialog box about the profile change.

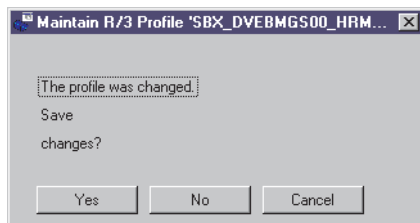


Figure 37. Maintain R/3 Profile display: accepting profile change

Note: If you neglect to specify yes for both dialog boxes, the SAP system may not save your changes.

Once you verify these changes to the print profile, SAP R/3 may display the following message, which you can ignore:

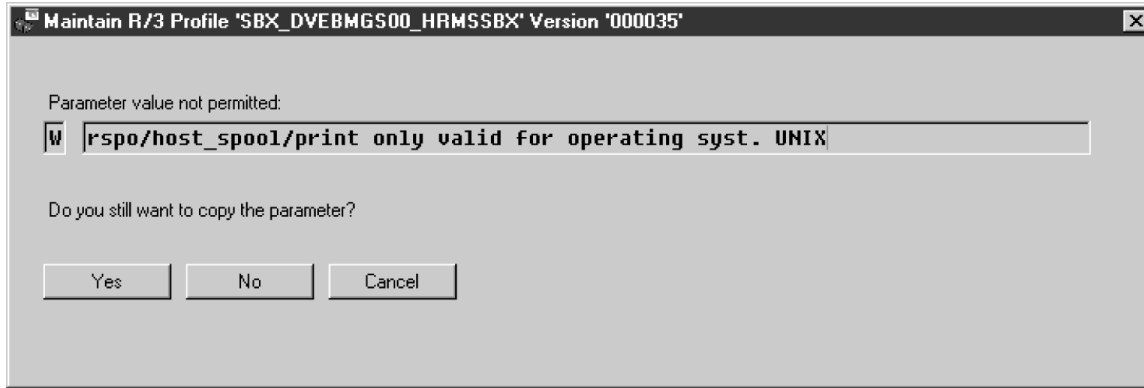


Figure 38. System warning display

- Once you have notified the other SAP R/3 application users, click on the **Save** folder and restart (bounce) the R/3 application servers.

Once you have completed these procedures, you can create devices to print from your SAP R/3 system, using Infoprint Manager to driver the printer(s). Use the procedure for “Defining SAP devices to send jobs to Infoprint Manager”.

Defining SAP devices to send jobs to Infoprint Manager

The following topic describes how to create a new output device for printing to Infoprint Manager. To enable this support, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

- Ensure that you have a logical destination defined in Infoprint Manager, which will send jobs to your physical printer device.
- 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.
- From the **Spool Administration** window, select the **Output devices** option and select the **Change** push-button.
- Select the **Create** icon and fill in the following information on the **Create Output Device** window:

Table 7. Devices that use the Infoprint Manager OMS.

Field	Explanation	Example Value
Output Device	Type the name that R/3 users will need to access the printer.	PRT1
Device type	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. SAPGOF sends both OTF and ABAP data to be transformed into AFP by the Infoprint Manager SAP Transform.	POSTSCPT

Table 7. Devices that use the Infoprint Manager OMS. (continued)

Spool server	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.	us01d2_P40_41
Host printer	Type the name of the Infoprint Manager logical printer.	prt1-lp
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	Select the method that the spool work process uses to pass data to the host spool system.	L

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

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Chapter 15. Fax support in SAP R/3

Infoprint Manager provides two distinct methods for providing fax support to SAP users: either the **SAPcommunications (SAPcomm)** interface or the **SAPconnect** interface. The **SAPcomm** interface applies to all SAP releases until Release 6 and only provides you the ability to send faxes (fax-out). The **SAPconnect** interface supports future releases of SAP R/3 and provides you with the capability to both send (fax-out) and receive (fax-in) faxes from your SAP user interface, using your Infoprint Manager AIX server.

IBM recommends using the **SAPcomm** method if possible, since it combines all the benefits of using Infoprint Manager's OMS support (see Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13) with the ability to send faxes. You can also send faxes from your SAP system to Infoprint Manager, using access method **L** (see Part 3, "Infoprint Manager non-Output Management Support", on page 67).

In order to submit faxes from SAP R/3 systems, you must have installed and configured the separately-priced **Infoprint Manager for AIX Fax Line Feature**, LCD4-5577. For information about installing and configuring Infoprint Fax Line Feature, see both the *Infoprint Manager for AIX: Getting Started* and *Infoprint Manager for AIX: Procedures* manuals.

Note: Fax support is not currently available with Infoprint Manager for Windows, unless you are also using Infoprint Manager for AIX.

Using SAPcomm support for fax-out

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.

To submit faxes from SAP R/3 systems using **SAPcomm**, you must:

- Configure the Infoprint Fax support on your Infoprint Manager AIX server
- Have set you SAP system to send print jobs to Infoprint Manager using either the OMS support (see Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13) or access method **L** (see Part 3, "Infoprint Manager non-Output Management Support", on page 67)

Once you have verified that these prerequisites have been done, 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 Manager 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 either `/nspad` transaction in the **ok-Code** field, or take the **Tools → Administration:Spool → Spool Administration**) path from the main menu.

3. From the **Spool Administration: Initial Screen** window, click the **Output Devices** button, click the **Change** (red pencil) 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, fill in the following information:

Field	Value
Output Device	FAX Type the name that R/3 users will need to access the device.
Device class	F Select a device class for the fax.
Host printer	ip01-sam Type the Infoprint Manager logical destination (printer) name that will send the job to the Infoprint fax destination. .
Access method to host spool	access method E or access method L . Ensure that you specify the appropriate access method, depending upon how you configure your SAP system to communicate with Infoprint Manager.
LOMS (only applies to access method E).	IPM001 If you are running with the Infoprint Manager OMS support (access method E), specify the LOMS to which this device should be assigned. You specified this value on the Spool Admin.: Logical Output Management System window when you Defined the Infoprint Manager OMS to SAP R/3 on the SAP System Server.
Spool server	ibmbtt15_BTf_15 Choose an applicable spool server from the entries list on the field.

6. Save your device definition, by specifying **Output Device** → **Save** from the menu options.
7. Specify the /nscon (**Tools** → **Communication** → **Configuration**) transaction.
8. From the **SAPcomm: Configuration** window, select the **Location** option from the **Destination** pane and click on the **Change** push-button.
9. Click on the check box to close the pop-up message window that displays information about the table's client independent status.
10. 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.
Note: Specify the appropriate country code in the **Cntry** 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 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	Value
Service	TELEFAX Specify the type of service.
Cntry	US Specify the country code that you specified in step 9 above.

Note: 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: FAX.

Note: The **Country of location** field should be left blank.

17. Save your fax definition by clicking the **Save** folder icon.

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

Once you have finished creating an R/3 fax device, you can use the following procedure to submit a fax from your SAP R/3 system to the Infoprint Manager AIX server:

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 /nsp01 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.
7. 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.

Using SAPconnect support for fax-out and fax-in

SAPconnect is the successor to the SAP Communications Server (SAPcomm). By using remote function call (RFC) technology SAPconnect allows SAP R/3 users to access a variety of communication systems – including fax servers – directly from R/3. The Fax function of Infoprint Manager allows the Infoprint Manager AIX server to act as a fax server. Infoprint Manager for AIX 4.1 offers the separately-priced **Infoprint Manager for AIX Fax Line Feature**, LCD4-5577.

With Infoprint Manager SAPconnect support, a SAP user can log onto a SAP system from his or her personal computer and either send or receive a fax through Infoprint Manager. This SAP user can create a document in their SAP Office outbox, select attachments, and send a fax through Infoprint Manager. When ready, the user can select the Fax icon and enter a fax number. The SAPconnect interface on the SAP system forwards the job to Infoprint Manager's SAPconnect daemon, which passes the job through an Infoprint server to an Infoprint Fax actual destination. For more information about how to use this support, see "Using SAPconnect for fax out support (sending faxes)" on page 98

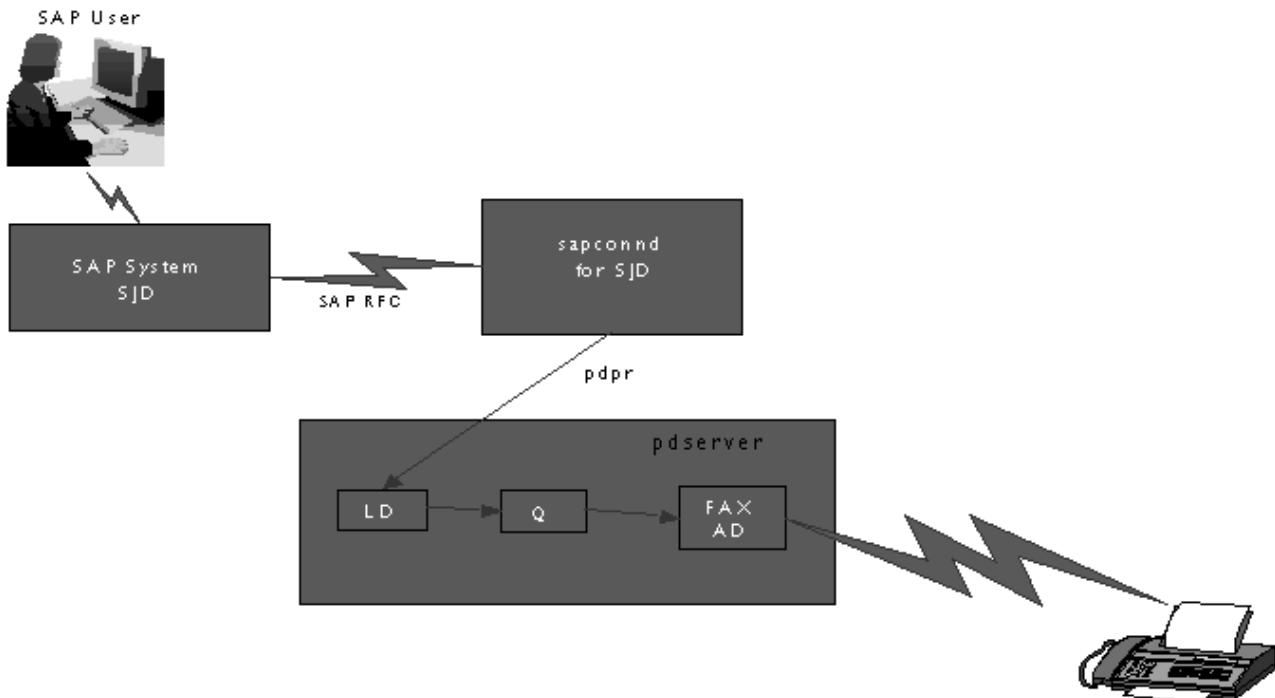


Figure 39. SAPconnect Fax-Out Overview

SAPconnect support also allows a SAP user to receive incoming fax messages from others through Infoprint Manager. Another person can fax something to a SAP user's fax number, which is being monitored by Infoprint Manager. Infoprint Manager Fax In support forwards the fax through an Infoprint Manager server to a **sapconnect** actual destination, which delivers the fax to the user's SAP system. The SAP system receives the fax request for a particular fax number through the SAPconnect interface and delivers it to that SAP user's SAP Office in box. For more information about how to use this support, see "Using SAPconnect for fax in support (receiving faxes)" on page 118.

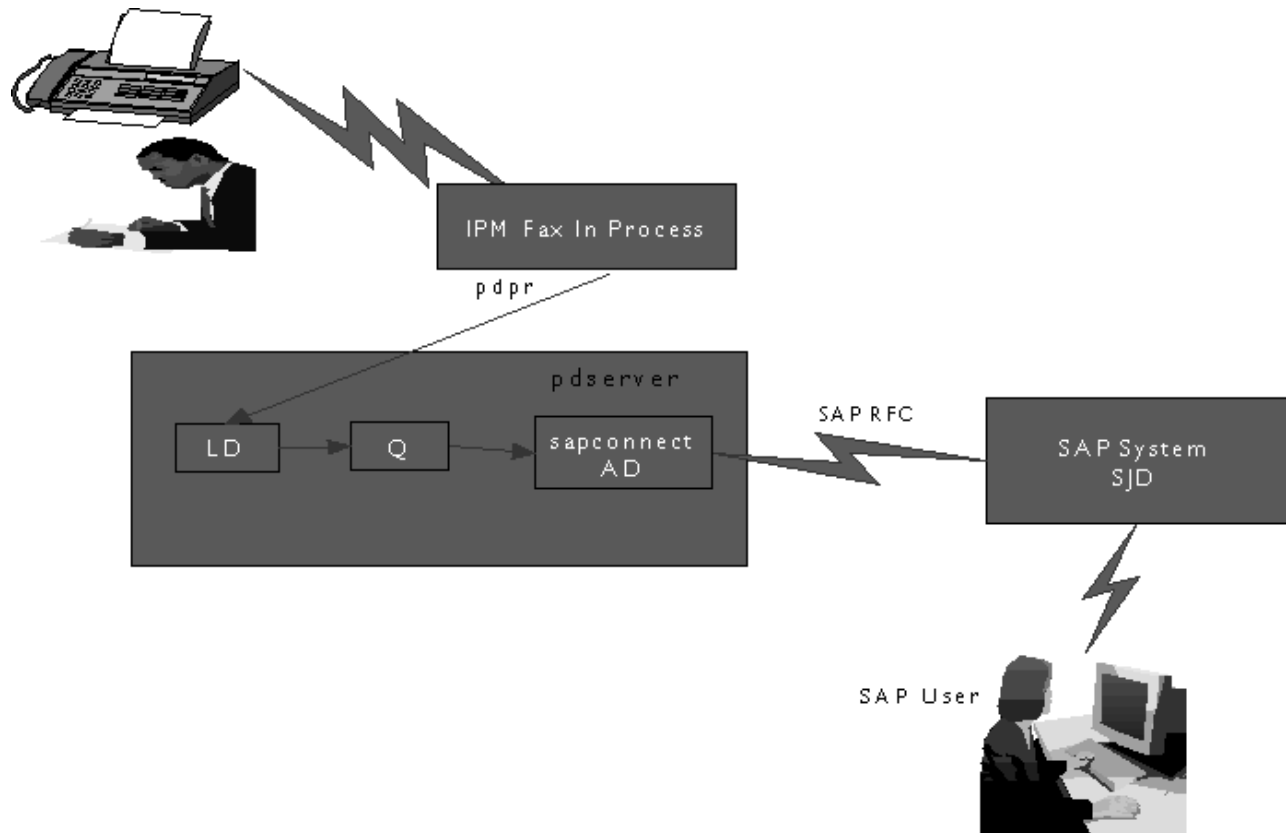


Figure 40. SAPconnect Fax-In Overview

Using examples from the New Visual Design SAP GUI on a Release 4.6c system, this topic provides the following information:

1. "Installing the SAPconnect Support" on page 98.
2. "Using SAPconnect for fax out support (sending faxes)" on page 98.
 - a. "Preparing to connect the SAP System to an Infoprint Manager SAPconnect daemon" on page 99.
 - b. "Customizing SAPconnect" on page 103.
 - c. "Using the Infoprint fax actual destination for fax-out" on page 98.
 - d. "Configuring the SAPconnect daemon on Infoprint Manager" on page 105.
 - e. "Testing the RFC from SAP R/3" on page 110.
 - f. "Preparing and sending faxes from R/3" on page 111.
3. "Using SAPconnect for fax in support (receiving faxes)" on page 118.
 - a. "Creating a CPIC or system type userid for the Infoprint Manager sapconnect actual destination" on page 119.
 - b. "Creating Infoprint Manager objects" on page 119.
 - c. "Logging the Infoprint actual destination onto the SAP system" on page 120.
 - d. Configure the Fax-in lines to feed the appropriate SAPconnect actual destination on an Infoprint Manager AIX server.

Installing the SAPconnect Support

To use the SAPconnect support for either fax-out or fax-in support, you need to install and configure the following on your Infoprint Manager AIX server(s) before performing the configuration tasks described in this publication:

- **Infoprint Manager SAP Print Feature**, LCD4-1921.

You must install this feature through the Infoprint Installer in order to use the SAPconnect daemon for fax-out support and the **sapconnect** DSS for fax-in support. For more information about installing the SAP Print feature, see Chapter 4, "Installing the SAP print feature on the Infoprint server", on page 17.

- Infoprint Fax function.

Fax support is available with the separately-priced **Infoprint Manager for AIX Fax Line Feature**, LCD4-5577, of the base Infoprint Manager for AIX 4.1 product. See "Configuring and using Infoprint Manager Fax" in the *Infoprint Manager for AIX: Procedures* manual to perform the necessary configuration tasks on your Infoprint Manager AIX server.

Note: If you have multiple interoperating AIX servers running Infoprint servers, the Infoprint Fax feature can be installed on a different Infoprint Manager AIX server than the server that runs the SAP Print feature.

Using SAPconnect for fax out support (sending faxes)

By configuring SAP to use the new Infoprint Manager SAPconnect support, the SAP System sends the request in the form of a SAP RFC call to the Infoprint Manager SAPconnect daemon that is running on the Infoprint Manager AIX server. The SAPconnect daemon converts the RFC call into a print request (an Infoprint Manager **pdpr** command), which is sent to an Infoprint Manager Fax destination. The Fax destination faxes this job to the fax number specified by the SAP user.

An Infoprint Manager SAPconnect daemon supports a single SAP system. Start one SAPconnect daemon for each SAP system that you plan to support.

Once you have ensured that the prerequisites are installed on your Infoprint Manager AIX server (see "Installing the SAPconnect Support"), you must complete the following configuration tasks in order for SAP users to send faxes:

1. "Using the Infoprint fax actual destination for fax-out".
2. "Preparing to connect the SAP System to an Infoprint Manager SAPconnect daemon" on page 99.
3. "Customizing SAPconnect" on page 103.
4. "Configuring the SAPconnect daemon on Infoprint Manager" on page 105.
5. "Testing the RFC from SAP R/3" on page 110.
6. "Preparing and sending faxes from R/3" on page 111.

Note: To make this task more manageable, you may want to access Appendix A, "SAPconnect fax-out configuration worksheet", on page 151 and print out copies so you can keep track of the different values specified throughout your configuration.

Using the Infoprint fax actual destination for fax-out

Before you configure the SAPconnect daemon, you must have an Infoprint actual destination to send fax output. In order to send faxes through Infoprint Manager, you must first configure the Infoprint Fax support, using the "Configuring and Using Infoprint Fax" section of the *Infoprint Manager for AIX: Procedures* manual. You must purchase, install, and configure the **Infoprint Manager for AIX Fax Line**

Feature, LCD4-5577. Ensure that this Fax DSS Infoprint actual destination works correctly. Use the Infoprint logical destination that feeds this actual destination or create a new one for SAPconnect fax output. Record the name of this destination for use later when you define the start command for the SAPconnect daemon. You specify the name of this destination for the **IPMLogicalDestinationName** parameter value in “Starting the SAPconnect daemon from the Infoprint Manager AIX server” on page 107.

Preparing to connect the SAP System to an Infoprint Manager SAPconnect daemon

The following three procedures must be completed in sequence before your Infoprint Manager Fax support can be connected to your SAP R/3 system:

1. “Creating a CPIC or system type user for the Infoprint Manager SAPconnect daemon”.
2. “Creating a SAP RFC destination”.
3. “Activating fax function in SAP Office” on page 103.

Creating a CPIC or system type user for the Infoprint Manager SAPconnect daemon:

Because the Infoprint Manager SAPconnect daemon (**sapconnd**) daemon must logon to the SAP system to make RFC calls to the SAP system sending fax output, you must create a user for it. This userid allows the SAPconnect daemon to send asynchronous data about the results of the fax back to the SAP system.

To create a user for the Infoprint Manager SAPconnect daemon (**sapconnd**) daemon, use transaction su01 to access the **User Maintenance: Initial Screen** window.

The user must be either a **CPIC** or **System** type and have authorizations provided in the **S_A.SCON** profile. Record the user, password, and client values for use later when you define the start command for the SAPconnect daemon in “Starting the SAPconnect daemon from the Infoprint Manager AIX server” on page 107.

If you ever modify this SAP user, remember to make the changes to the **rc.iprsap** file in the **/etc** directory on the Infoprint Manager AIX server where the SAPconnect daemon is running.

Creating a SAP RFC destination: Before you can submit faxes from SAP R/3 using Infoprint Manager fax support, you must create a Remote Function Call (RFC) destination. You will need this destination for “Configuring the SAPconnect daemon on Infoprint Manager” on page 105.

1. Login to the SAP R/3 GUI.
2. Type SM59 in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) key and diskette icons.
3. From the **Display and maintain RFC destinations** window (Figure 41 on page 100), click on the **Create** button.

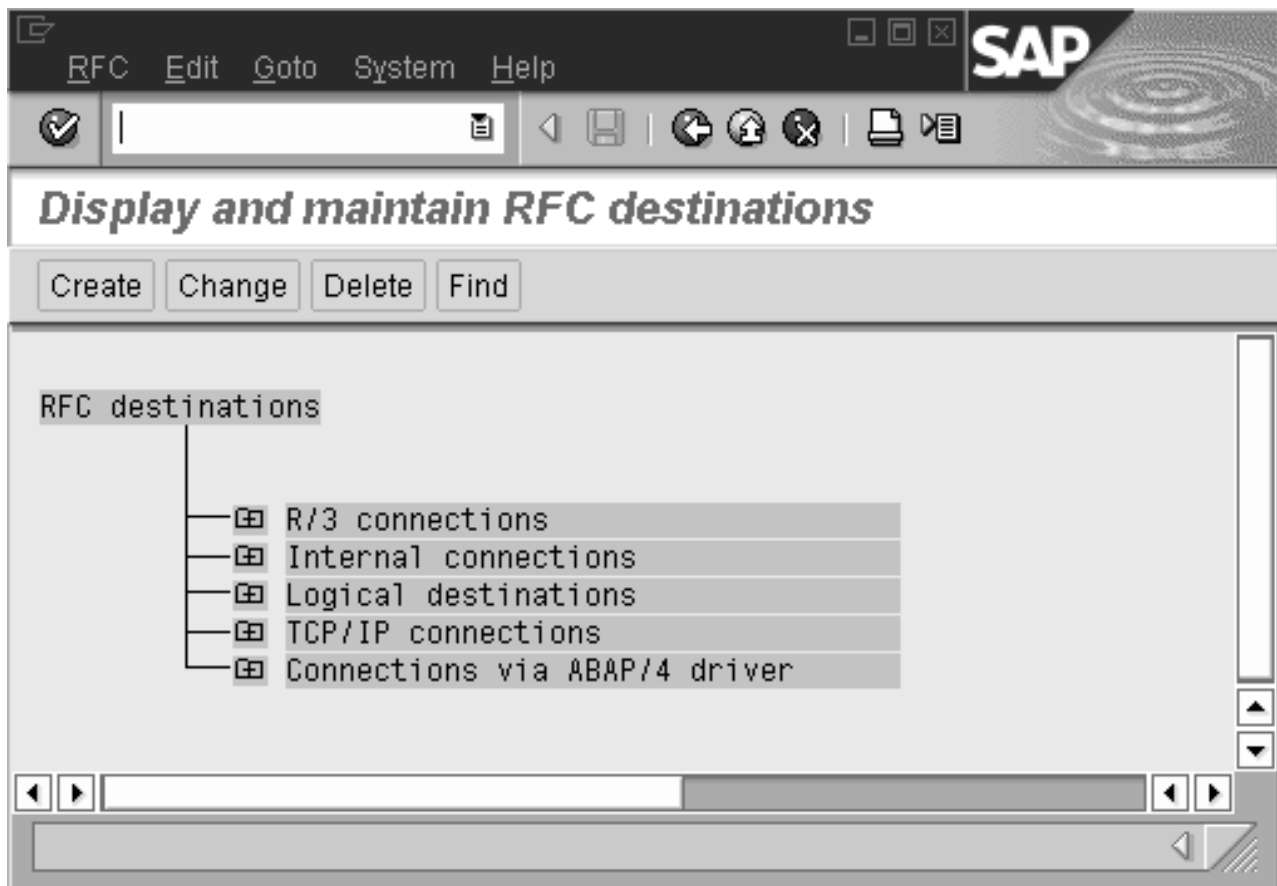


Figure 41. Display and maintain RFC destinations window

4. From the **RFC destination** window shown in Figure 41, you must:
 - a. Enter the name of the destination in the **RFC destination** field.
Record the destination name for use later when you define the start command for the SAPconnect daemon in "Starting the SAPconnect daemon from the Infoprint Manager AIX server" on page 107 and in "Configuring the RFC initialization file on Infoprint Manager" on page 105. Note that this value must match the **DEST=** parameter value in the **saprfc.ini** file that resides on your Infoprint Manager AIX server.
 - b. Specify **T** in the **Connection type** field to indicate an external TCP/IP connection.
 - c. Specify a short description (such as IPM FAX destination) in the **Description** field.
 - d. Press the **Enter** key.

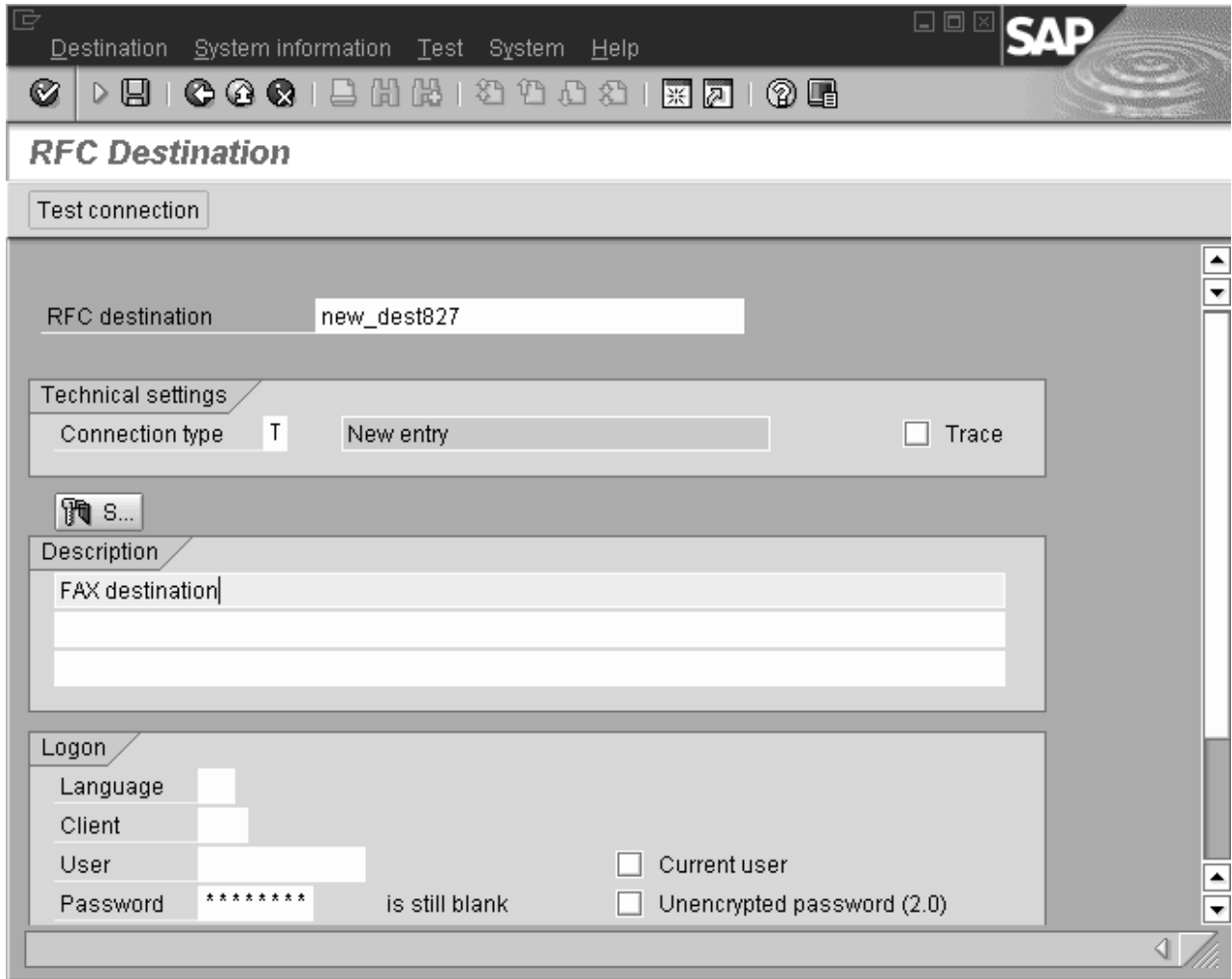


Figure 42. RFC Destination window

- From Figure 43, access the **Activation Type** and press the **Registration** push-button next to **Activation Type**.

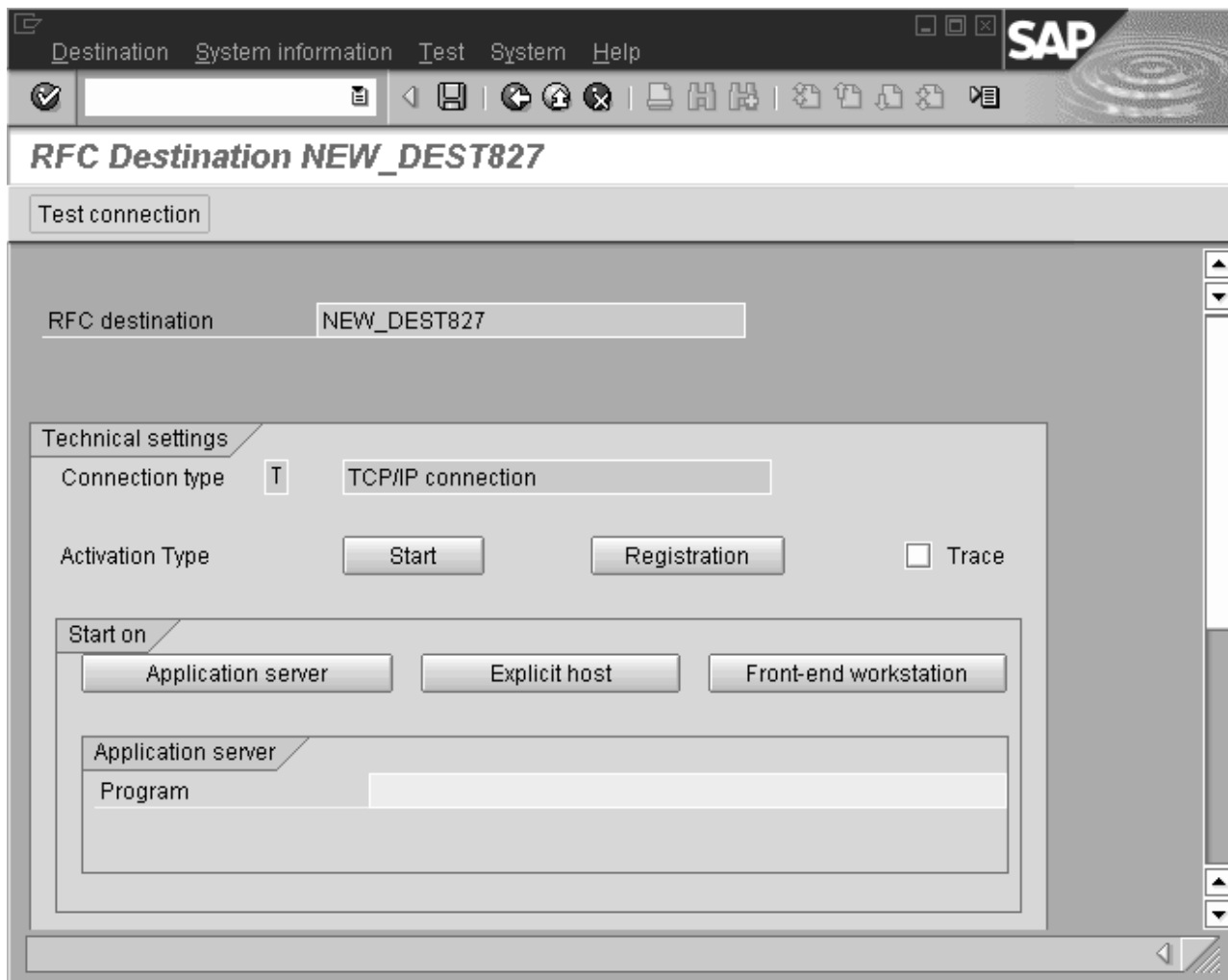


Figure 43. RFC Destination window for registration

- Enter a **Program ID** field value for the Infoprint Manager SAPconnect daemon in the format *sysname.program_name*, such as *info1.sapconnd*, where *info1* is the name of the Infoprint Manager AIX server where the SAP Print feature was installed and *sapconnd* is the name of the program.
Record this value for use in “Configuring the RFC initialization file on Infoprint Manager” on page 105. Note that this value must match the **PROGID=** parameter value in the **saprfc.ini** file that resides on your Infoprint Manager AIX server.
- From the **RFC Destination NEW_DEST827** window main menu, take the **Destination → Gateway** options path.
- From the **RFC Destination NEW_DEST827** pop-up dialog, specify values for both the **Gateway host** and the **Gateway service** fields.
Record this value for use in “Configuring the RFC initialization file on Infoprint Manager” on page 105. Note that these values must match the **GWHOST=** and the **GWSERV=** parameter values respectively in the **saprfc.ini** file that resides on your Infoprint Manager AIX server.
- Select the **OK** button to save these values.

10. Use **F11** to save your entries.

At the very bottom of the window to the right of the green checkbox, you should see a message similar to the following:

```
Destination NEW_DEST827 saved
```

Activating fax function in SAP Office: You must activate the Fax function in the SAP Office component of your SAP R/3 application using the following procedure if you are running with a SAP R/3 Release 4.0. If you are using a SAP R/3 Release 4.5 system or higher, this procedure is unnecessary, but you should still verify the fax component is selected after customizing SAPconnect for faxing.

1. Login to the SAP R/3 GUI.
2. Type S016 in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar, between the **Enter** (green checkmark) and diskette icons.
3. From the **Shared office settings** window, select the **Send** tab and click the checkbox for the Fax component.
4. Press the **F11** key to save your entries.

Customizing SAPconnect

Before you can use the Infoprint SAPconnect daemon to send faxes from a SAP R/3 system, you must perform the following two customization tasks on your SAP system:

1. "Customize SAPconnect for faxing".
2. "Creating a SAPconnect node".

Customize SAPconnect for faxing:

1. From the SAP R/3 GUI, type SC0T in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
2. From the **SAPconnect:Administration (jobs)** window, take the **Settings → Communication methods** options path.
3. From the **Change View "SAPconnect: Maintenance view — communication methods"::.** window,
 - Set the **Typ** field value to FAX.
 - Set the **Method** field value to SAPCONNECT.
4. Press the **F11** key to save your entries.

Creating a SAPconnect node: In R/3, a node is a logical view of a communication system that can represent a fax system, an e-mail system, or another R/3 system. This SAP node is being created to represent the Infoprint Manager fax server.

1. Login to the SAP R/3 GUI.
2. From the SAP R/3 GUI, type SC0T in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
3. From the **SAPconnect: Administration (jobs)** window, take the **View → Node** options path.

4. From the **SAPconnect: Administration (nodes)** window, select the **Create** icon (piece of paper) on the far left.
5. From the **Create nodes** pop-up dialog:
 - Set the **Node** field value to the name you select for this node, such as IPMFAX.
 - Set the **Description** field value to IPMFAX Node for Fax Support.
6. Click the **continue** button and specify the object you created in “Creating a SAP RFC destination” on page 99 (NEW_DEST827) in the **RFC destination** field. If defined correctly, you should be able to click on the circular icon of two superimposed pages to the right of this field to select this value instead of just typing it into the field.
7. Click the **continue** button and ensure that the **Fax** radio button is selected.
8. Click the **continue** button and ensure that the **Address area** field contains a *. By specifying a *, you ensure that this node will send faxes to any series of numbers. If you were limiting this node to a particular number, you would specify it in the form of *ctry num* where *ctry* specifies the abbreviation for faxes sent to a particular country and *num* specifies the fax number without any special characters. To ensure that you correctly specify these fax numbers, IBM recommends that you select the [Click here for further information.... link](#).
9. Click the **continue** button, ensure that the **Only the fil formats** radio button is clicked, and type in each of the following as separate entries in the **Format** table:
 - PDF
 - PS
 - RAW
 - GIF
 - JPEG
 - PCL
10. Click the **continue** button and specify a valid PostScript device type, such as POST2, in the **Dev. type** field.

This defines the SAP device type for which SAPscript documents are prepared if SAPconnect data is converted into a print format.
11. Click the **continue** button and click on the check box next to **Country** so you can use the drop down list to select the appropriate country code for sending fax output.

From the **Country key** pop-up dialog, use the cursor to select the appropriate country abbreviation, then click on the **Enter** (green checkmark) key to save your value and exit the dialog.

Before deciding on whether to check the **Node-specific fax number changes** check box, IBM recommends that you select the [Click here for further information... link](#). Selecting this check box allows you to define general replacement rules for nodes that replace one row of digits with another, such as deleting the area code for all faxes submitted from the local area.
12. Click the **continue** button and select the radio button **N** next to the question **Set further address types?**
13. Click the **continue** button and specify the **Maximum waiting time for repeat send attempt procedure:** in the **Hours** and **Minutes** fields.
14. Click the **continue** button and specify the appropriate radio buttons to indicate that this node cannot resolve path references.
15. Click the **continue** button and specify the **Node is ready for use** radio button.

Once you set this value, you receive a status panel that shows your node defined to the SAP R/3 system as shown on Figure 44

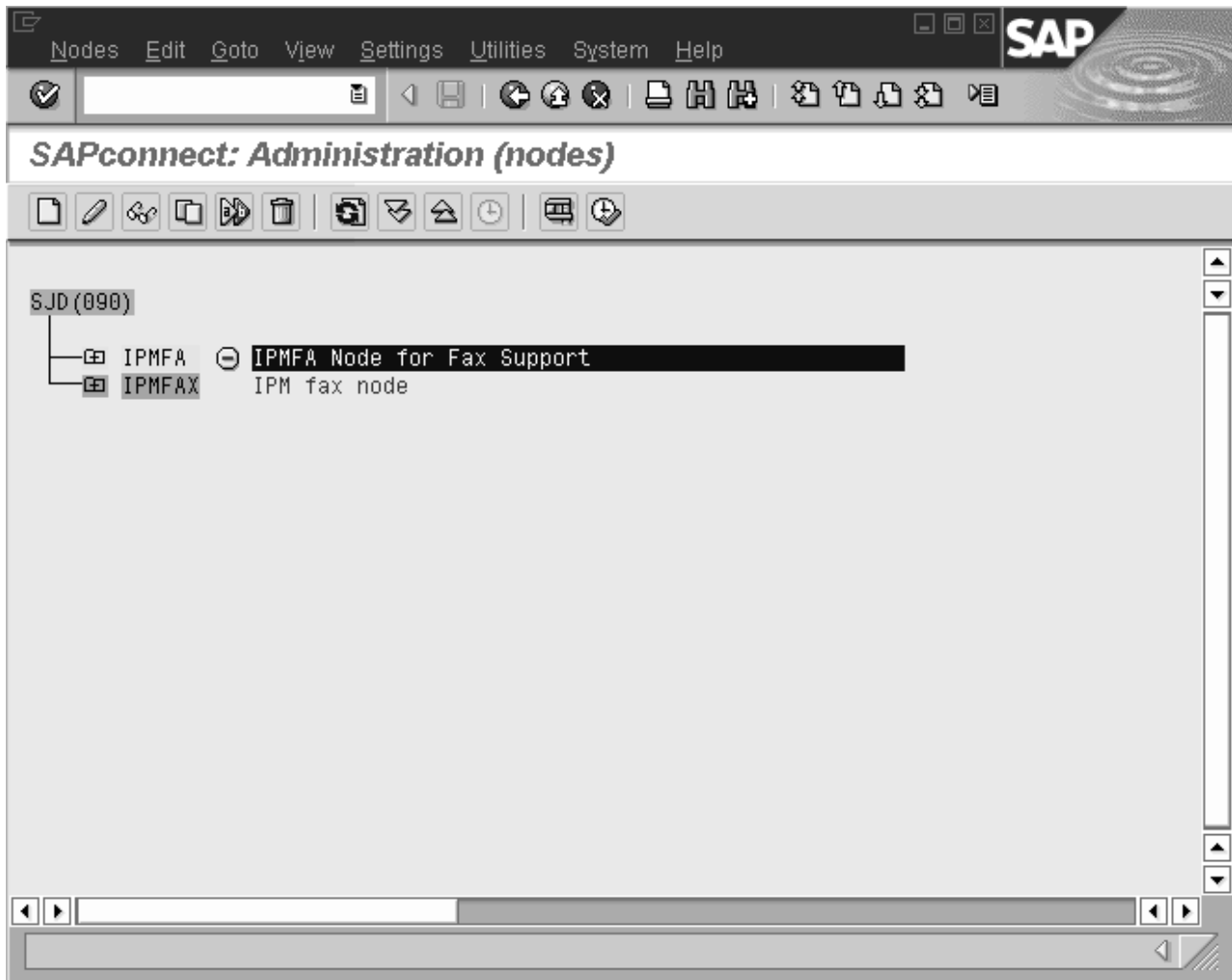


Figure 44. Display of defined node On SAP system

Configuring the SAPconnect daemon on Infoprint Manager

Before you can begin to send faxes from your SAP R/3 system to Infoprint Manager, you must perform the following steps to configure the SAPconnect daemon on your Infoprint Manager AIX server:

1. "Configuring the RFC initialization file on Infoprint Manager".
2. "Starting the SAPconnect daemon from the Infoprint Manager AIX server" on page 107.
3. "Configuring to start SAPconnect daemons on system reboot" on page 108.

Configuring the RFC initialization file on Infoprint Manager: Before your Infoprint Manager AIX server can begin to receive SAPconnect RFC requests from a particular SAP R/3 system, you must edit and configure both the RFC Server Information (see step 2 on page 106) and the RFC Client Information (see step 4 on page 106) found in the `saprfc.ini` file.

Use the following procedure to perform this task on your Infoprint Manager AIX server:

1. From an AIX command line, copy the default **saprfc.ini** file from its default location to the **/var/pd** directory where it must be installed by typing :

```
cp /usr/lpp/pd/bin/saprfc.ini /var/pd/saprfc.ini
```

If you are reinstalling, ensure that you copy any customization you've made from your existing **/var/pd/saprfc.ini** file to the new file so it is not lost.

2. From the **/var/pd** directory, edit the **saprfc.ini** file and copy the following sample block of server information to the bottom of the file:

```
# RFC Server Information

#DEST=<SAP defined Destination>
#TYPE=R
#PROGID=<SAP defined Program ID>
#GWHOST=<HostName of the SAP Gateway>
#GWSERV=<Service Name of the SAP Gateway>
#RFC_TRACE=1
```

3. Remove the comment indicator (**#**) in front of each line that follows the **# RFC Server Information** line and fill in the appropriate values for these fields by replacing the terms defined within the angle brackets with the actual values that you used on your SAP R/3 system in "Creating a SAP RFC destination" on page 99.

Please note that these values must match exactly the values you used in creating your RFC Destination:

```
# RFC Server Information

DEST=NEW_DEST827
TYPE=R
PROGID=info1.sapconnd
GWHOST=cpmat00
GWSERV=sapgw10
RFC_TRACE=1
```

4. Copy one of the following sample blocks of SAP client information to the bottom of the file.

If you copy the Load Balancing block, SAP R/3 will determine which SAP application server the SAPconnect daemon logs onto at runtime, using the load balancing feature of SAP R/3.

Copy the Specific Application Server block if you have only one SAP application server:

```
# RFC Client Information - Specific Application Server

#DEST=<SAP System Name>
#TYPE= A
#ASHOST=<SAP Application Server Host>
#SYSNR=<SAP System Number>
#GWHOST=<optional, default: gateway on Application Server>
#GWSERV=<optional, default: gateway on Application Server>
#RFC_TRACE=1
#ABAP_DEBUG=0
#USE_SAPGUI=0
```

Copy the Load Balancing block if you have more than one SAP application server and you want the SAP R/3 system to determine which SAP application server the SAPconnect daemon logs onto at runtime:

```
# RFC Client Information - Load Balancing

#DEST=<SAP System Name>
#TYPE=B
#R3NAME=<SAP System Name>
#MSHOST=<Host Name of the Message Server>
#GROUP=<Application Servers group name, optional, default: PUBLIC>
#RFC_TRACE=1
#ABAP_DEBUG=0
#USE_SAPGUI=0
```

5. Remove the comment indicator (#) in front of each line that follows the # RFC Server Information line, and fill in the appropriate values for these fields by replacing the terms defined within the angle brackets with the actual values that you used on your SAP R/3 system.

Please note that these values must match exactly to those set on the SAP system. The only exception to this rule are the **GWHOST** and **GWSERV** parameters, which can be left commented out.

```
# RFC Client Information - Specific Application Server
```

```
DEST=SJD
TYPE=A
ASHOST=cpmat00
SYSNR=10
#GWHOST=cpmat00
#GWSERV=sapgw10
RFC_TRACE=1
ABAP_DEBUG=0
USE_SAPGUI=0
```

6. Exit the **saprfc.ini** file and save your changes.
7. To ensure that the Infoprint SAPconnect daemon will be able to communicate with whatever SAP application server, SAP Gateway server, and SAP Message server that you refer to in the **saprfc.ini** file, you must be able to issue a **ping** command against these servers by name (not an IP address in dotted decimal notation format).

If you cannot ping the various SAP hosts by name (for example, ping cpmat00), you must

- a. From an AIX command line, move to the **/etc** directory: `cd /etc`
- b. Using your AIX editor of choice, edit the **hosts** file and copy the host names of the SAP Gateway (**GWHOST=cpmat00**), the SAP application server (**ASHOST=cpmat00**), and the message server (**MSHOST=cpmat00**) in the format:
ip_address cpmat00 # SAP Gateway hostname address

Note: It is not sufficient to be able to issue a ping command using the dotted decimal notation IP address of the SAP application server.

Starting the SAPconnect daemon from the Infoprint Manager AIX server: Each SAP R/3 system using the Infoprint Manager SAPconnect Fax support needs to have one SAPconnect daemon running. To start the SAPconnect daemon, you must edit and run the **/etc/rc.iprsap** file from the AIX command line on your Infoprint Manager AIX server.

1. From the AIX command line, copy the following lines of this file from the **/usr/lpp/pd/bin/rc.iprsap** that you just installed to the **/etc/rc.iprsap** file, being careful not to overwrite any previous definitions:

```
# echo Starting sapconnectd <System Name>
```

```
# /usr/lpp/pd/bin/startsapconnectd <SAPDestinationName <SAPSystemName>
<IPMLogicalDestinationName> <User> <Client> <Password> <Language>
```

2. From the AIX command line, access the **rc.iprsap** file in the **/etc** directory. Edit the file to copy and uncomment the two lines for the SAPconnect daemon:
 - a. An echo statement that states that the SAPconnect daemon has been started:


```
echo Starting sapconnectd <System Name>
```
 - b. The **startsapconnectd** command:


```
/usr/lpp/pd/bin/startsapconnectd <SAPDestinationName <SAPSystemName>
<IPMLogicalDestinationName> <User> <Client> <Password> <Language>
```
3. Specify the appropriate values for the items within angle brackets.

SAPDestinationName

Specifies the name of the destination that you defined in “Creating a SAP RFC destination” on page 99 and put in the server **DEST=** field value in the **saprfc.ini** file.

SAPSystemName

Specifies the three-character name of the SAP system. This value must match the client **DEST=** field value in the **saprfc.ini** file.

IPMLogicalDestinationName

Specifies the name of the logical destination on your Infoprint Manager AIX server that feeds faxes to the Infoprint Manager fax actual destination.

User The SAP user name defined in “Creating a CPIC or system type user for the Infoprint Manager SAPconnect daemon” on page 99.

Client The SAP client name.

Password

The SAP R/3 system password.

Language

The two-character language value.

4. Once you have saved and exited the file, start the SAPconnect daemon from the command line by specifying:

```
/etc/rc.iprsap
```

If the SAPconnect daemon starts correctly, you should see the following response:

```
Starting sapconnectd SJD
5010-405 Successfully started server sapconnd.SJD
```

where SJD represents the name of your SAP system.

If you receive any other message, the daemon has not started correctly. To resolve the problem, refer to the **/var/pd/sapconnd.sysname/error.log** file (where *sysname* is the SAP R/3 system name to which the SAPconnect daemon is connected), correct the problems cited, and try to start the SAPconnect daemon again. If it still does not start correctly, contact your Printing Systems technical support representative.

Configuring to start SAPconnect daemons on system reboot: The SAPconnect daemon needs to run all the time. To ensure that the daemon is restarted if the AIX system that it runs on is rebooted, you need to perform one more step to add the **rc.iprsap** file to the **/etc/inittab** directory, if it has not already been added.

To ensure that the SAPconnect daemons are restarted automatically whenever the system they are running on is restarted, use the Infoprint **SMIT** interface:

Infoprint Printing Systems → Infoprint Utilities → SAP Daemons

From the **SAP Daemons** panel, select the **Start SAP daemons at reboot** option. This action affects SAP Callback daemons (**sapcbd**) as well and only needs to be performed once.

If you prefer the command line, you can enter the following at the AIX command line instead: `mkitab "rciprsap:2:once:/etc/rc.iprsap.out 2>&1 # Autostart of Infoprint SAP daemons"`

Both the SMIT interface and this command ensure that the SAP daemons (**sapconnectd**) are restarted automatically whenever the systems they are running on are restarted.

As you add more SAPconnect daemons to your Infoprint Manager configuration, you do not have to perform this step, but you do need to add a new **echo** and **startsapconnectd** entry in the `/etc/rc.iprsap` file and type `/etc/rc.iprsap` on the AIX command line. This line starts your new SAPconnect daemons and causes any running SAPconnect daemons or SAP Callback daemons to report that they are already running.

Shutting down the SAPconnect daemon

The following procedure describes how you can shut down the SAPconnect daemon. This procedure is useful if you are migrating the SAPconnect daemon from one Infoprint Manager AIX 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 SAPconnect daemon is currently running, type:

```
stopsapconnectd systemname
```

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

If you do not want a reboot of the system to restart the SAPconnect daemon, remove its entry from the `/etc/rc.iprsap` file.

To ensure that neither SAPconnect daemons or SAP Callback daemons are restarted automatically whenever the systems they are running on are restarted, use the Infoprint SMIT interface:

Infoprint Printing Systems → Infoprint Utilities → SAP Daemons

From the **SAP Daemons** panel, select the **Do not start SAP daemons at reboot** option.

Note: Remember that this action also means that the SAP Callback daemon (**sapcbd**) is not restarted when the Infoprint Manager AIX server reboots.

Testing the RFC from SAP R/3

Once you have performed the configuration tasks on both the SAP R/3 system and your Infoprint Manager AIX server for sending Remote Function Calls (RFCs) consisting of fax data, it is time to test your installation. Use the following two procedures:

- “Verify your RFC connection”.
- “Verify that node can route fax numbers”.

Once you have verified that your Infoprint Manager AIX server and your SAP R/3 server can communicate, you can begin sending faxes from your SAP R/3 system.

Verify your RFC connection: From the **RFC Destination NEW_DEST827** window main menu, take the **Test → Connection** options path to verify the connection. The **RFC — Connection Test** pop-up dialog will display either a working connection or provide an error message to indicate the source of the problem.

Verify that node can route fax numbers: To verify that SAP can route fax numbers to the node you created in “Creating a SAPconnect node” on page 103, use the following procedure to perform a routing test. For our example, we defined an unrestrictive value of *, so all numbers should correctly resolve:

1. Login to the SAP R/3 GUI.
2. Type SCOT in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar, between the **Enter** (green checkmark) and diskette icons.
3. From the **SAPconnect: Administration (view)** window (where *view* specifies one of a series of views; it does not matter which view you select), select the **Utilities → Routing test** path.
4. From the **SAPconnect: Test routes** window, fill in the following field values:

Sender

Specifies the SAP sender ID from which the fax is to be submitted.

RecipientAddr.type

Select or type in FAX.

Recipient addr.

Specify the complete fax number to which you are submitting the fax job, prepended with the destination country abbreviation.

5. Once you have specified these values, press the **Enter** key to test these values.
If the number is provided in the correct format (which you defined in Step 8 of “Creating a SAPconnect node” on page 103), the **Outbound node and modified recipient address** portion of the window displays the node to be used in the **Node** field and the number as it is sent to Infoprint Manager in the **Recipient addr.** field. No message appears in the text block at the bottom of the window.
If the number provided is not in the correct format, the text block at the bottom of the page displays a red circle embossed with a white X and a message similar to the following: No delivery to 99999, invalid recipient address
6. If you receive an error, either select the magnifying glass icon on the upper-left side of the window to access the **SAPconnect: Explanation of Routing and Address Conversion** window.

This window explains each step in the SAP routing process and shows any errors where they appeared. Use this window to diagnose problems connecting to SAP fax numbers.

7. Once you discover the source of your error if you need to modify the node's address area, you should access your Node definition by:
 - a. Typing the SCOT transaction.
 - b. Clicking the **View** → **Node** path.
 - c. Clicking the **Change** (pencil) icon.
 - d. Double-clicking on the value under **FAX** (for our example *) and specifying a different set of criterion in the **SAPconnect: Maintain address area** pop-up dialog.

Once changed, repeat this procedure until you stop receiving an error.

Preparing and sending faxes from R/3

Once you have verified the connection, you should use the following procedures from your SAP R/3 system to ensure that you can prepare and send faxes:

1. "Creating addresses".
2. "Creating documents".
3. "Configuring to send faxes automatically" on page 116.

Once these steps have been verified, you can assign the necessary fax numbers and permissions to SAP users on the system so they can submit faxes through Infoprint Manager.

Creating addresses: Before sending faxes, an SAP administrator must assign a personal fax number to any SAP user who plans to use this feature. To perform this task, use the following procedure:

1. Login to the SAP R/3 GUI.
2. Type SU01 in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
3. From the **User Maintenance: Initial Screen** window, specify the ID from which you will be faxing output in the **User** field and click on the **Change** (pencil) icon on the left side of the menu.
4. From the **Maintain User** window, select the **Address** tab, scroll down to the **Fax** field, and type your number.
For all outgoing calls, this fax number is used as the originator address.
5. Select the **Save** (diskette) icon to save this data.

Creating documents: To create a document either with or without attachments in the **SAPoffice Outbox**, use the following procedure:

1. Login to the SAP R/3 GUI.
2. Type SBWP in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
3. Start the Business Workplace application from the **Business Workplace of ...** window, and then access the Workplace pane on the left side, click open the **Outbox**, and double-click on **Documents**.

- From the resulting right pane view (Figure 45), click on the **Create Document** icon (second icon to the left).



Figure 45. Business Workplace of ... window

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5. From the **Create Document** pop-up dialog, access the **Documents contents** tab and type in your message (see Figure 46):

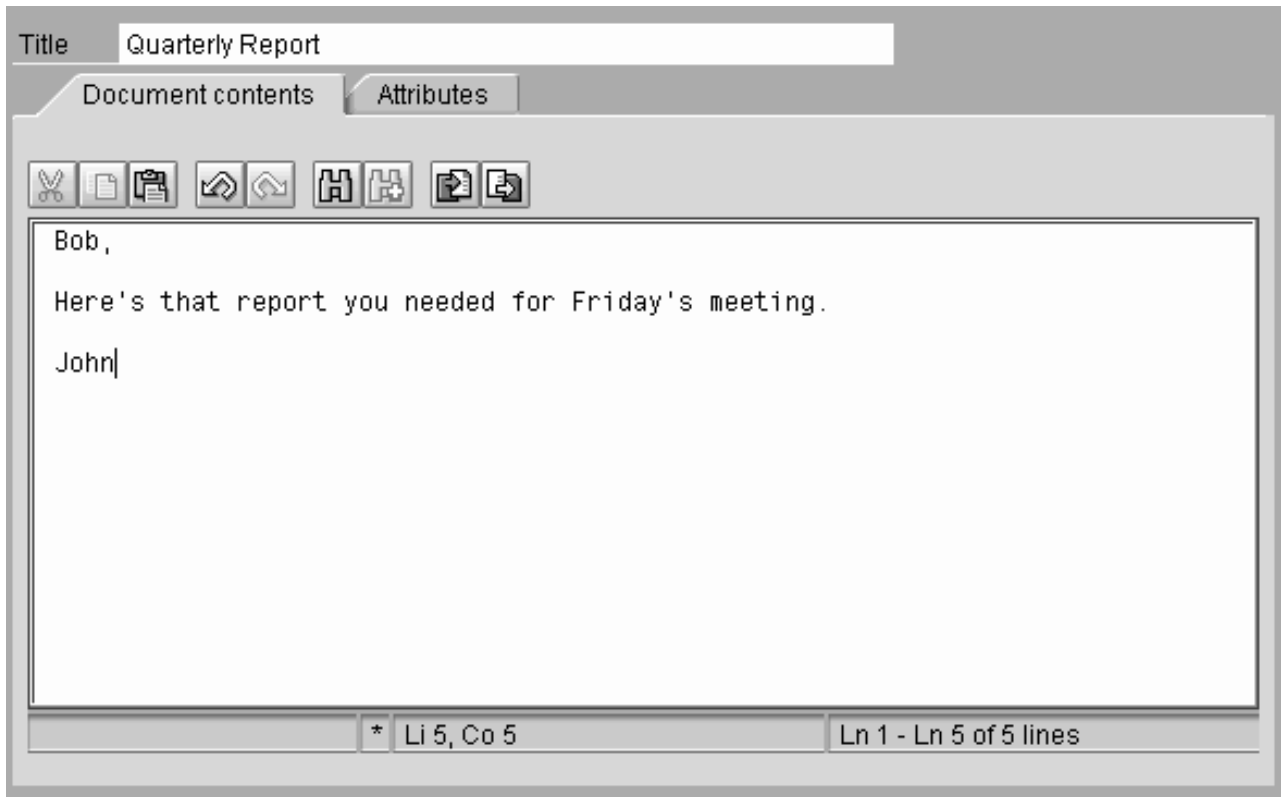


Figure 46. Create Document window

6. To add an attachment to this document, take the **Document → Create attachment** options path.
Once selected, you can access the **Attachments** tab and see the result:

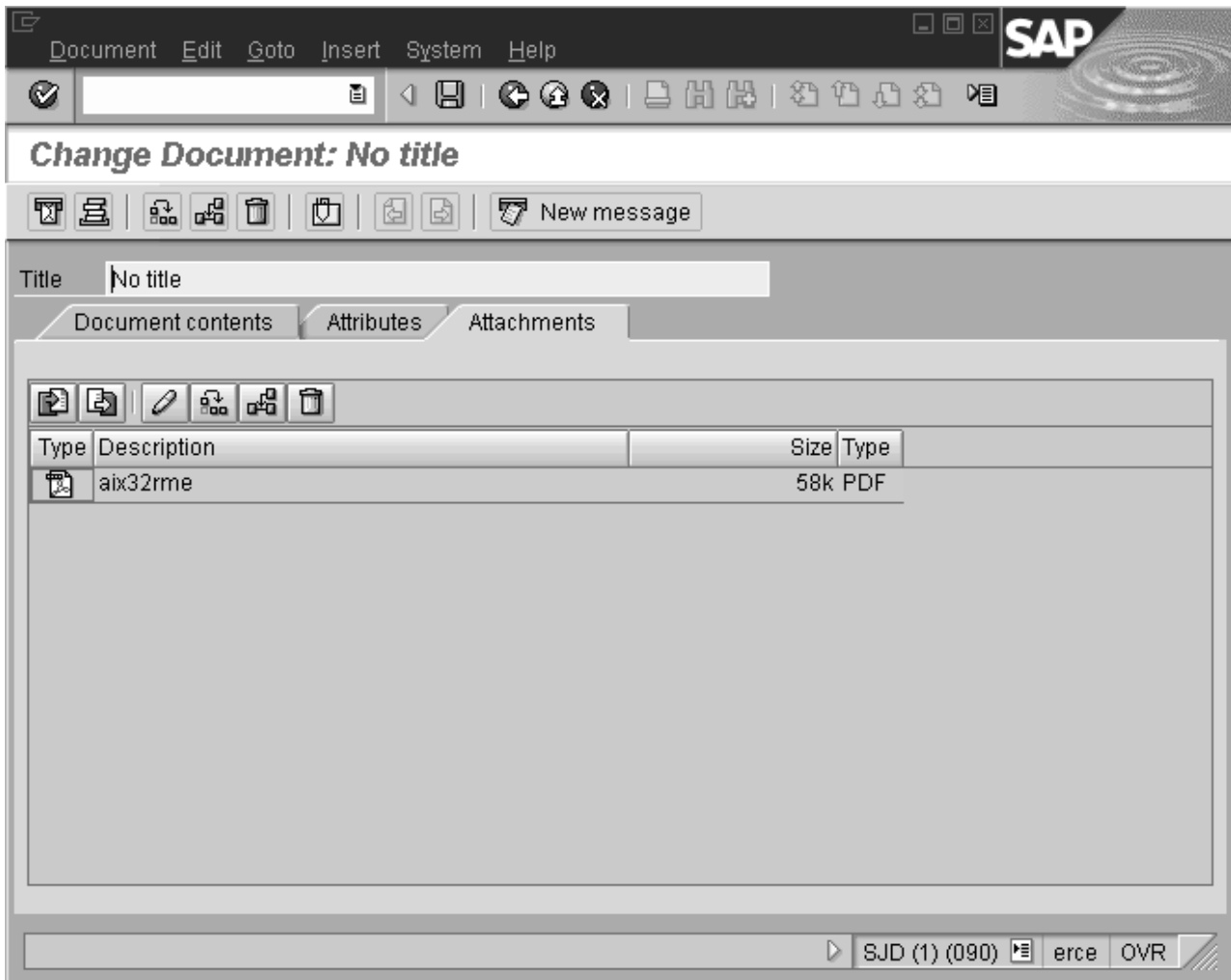


Figure 47. Viewing an attachment on a Fax document

7. Click on the **Send** icon (envelope sticking out of a mail slot on far left).

8. From the **Send Document** pop-up menu (Figure 48), you can specify a single recipient for a fax or create a distribution list to use to send the fax. Remember to start with the country code for each recipient. For example, specify us9303123456 and then select either the **Send** icon (envelope sticking out of a mail slot on far left) at the bottom of the window.

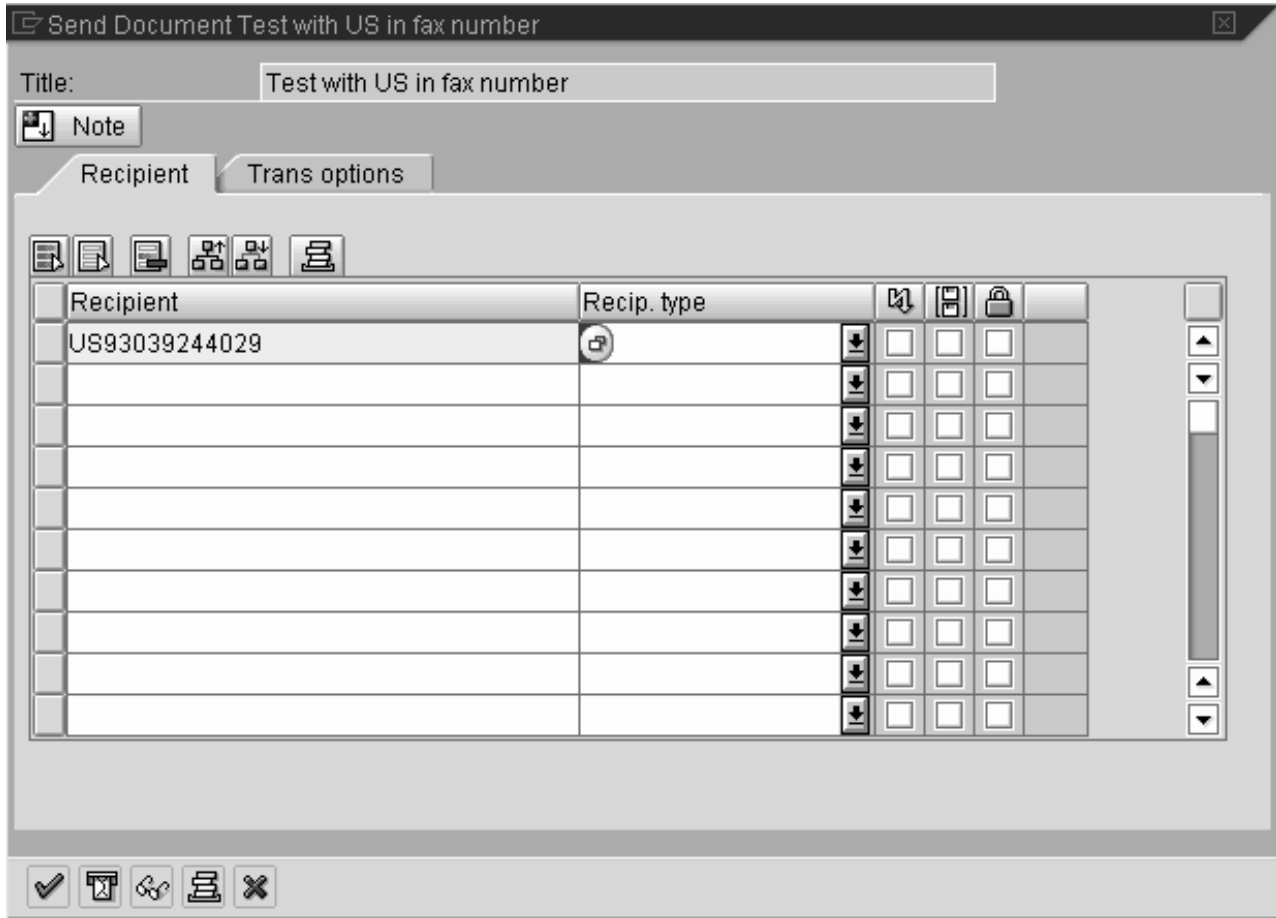


Figure 48. Send Document window

SAP R/3 submits your job to the SAPconnect queue and puts a message at the bottom of the **Business Workplace of ...** window. This message indicates that the document has been sent to the SAPconnect queue. To move the document to the Infoprint server, you must follow the procedure in “Starting the send process”.

Starting the send process: Any fax jobs that you have submitted to the SAPconnect queue will be available for selecting. To test fax documents that have been received in the SAPconnect queue on the SAP system are successfully sent onto the Infoprint Manager AIX server, use the following procedure.

1. Login to the SAP R/3 GUI.
2. Type SC0T in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
3. From the **SAPconnect: Administration (jobs)** window (the particular view does not matter), select the **Utilities → Start send process** path from the menu bar.

4. On the **Start send process** pop-up dialog, select an **Addr. type** field value of FAX and click on the green checkmark in the lower left corner.
5. From the **SAPconnect Send Process: List of Objects Selected** window, select the **Choose** icon.

The **Express information** pop-up dialog provides status on your job.

Configuring to send faxes automatically: Once you have verified that you can send faxes through the manual process described in “Starting the send process” on page 115, you should configure your SAP system so the send processes are scheduled as a background process that executes automatically on a periodic basis. To schedule the sending of faxes as a background job, use the following procedure:

1. Login to the SAP R/3 GUI.
2. Type SC0T in the field on the left side of the menu bar.
If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.
Ensure that you select **View → Jobs** from the drop-down menu.
3. From the **SAPconnect: Administration (jobs)** window, click on the **Dispatch** (piece of paper with upper-right corner folded) icon.
4. From the **Schedule send process** pop-up dialog, enter a name to represent the batch job for sending faxes and click the **Enter** key.
5. To schedule, you can either:
 - Click on **FAX** and then click on the **Schedule job** icon.
 - From the **SAPconnect send process: Variants** window, highlight the Fax variant and select the **Schedule job** (second from left) icon.

6. From the **SAPconnect send process Scheduling: Start Time** window (Figure 49), you can specify the sending characteristics of this job by clicking on the **Schedule Periodically** button and set values for how often you want the fax requests to be sent.

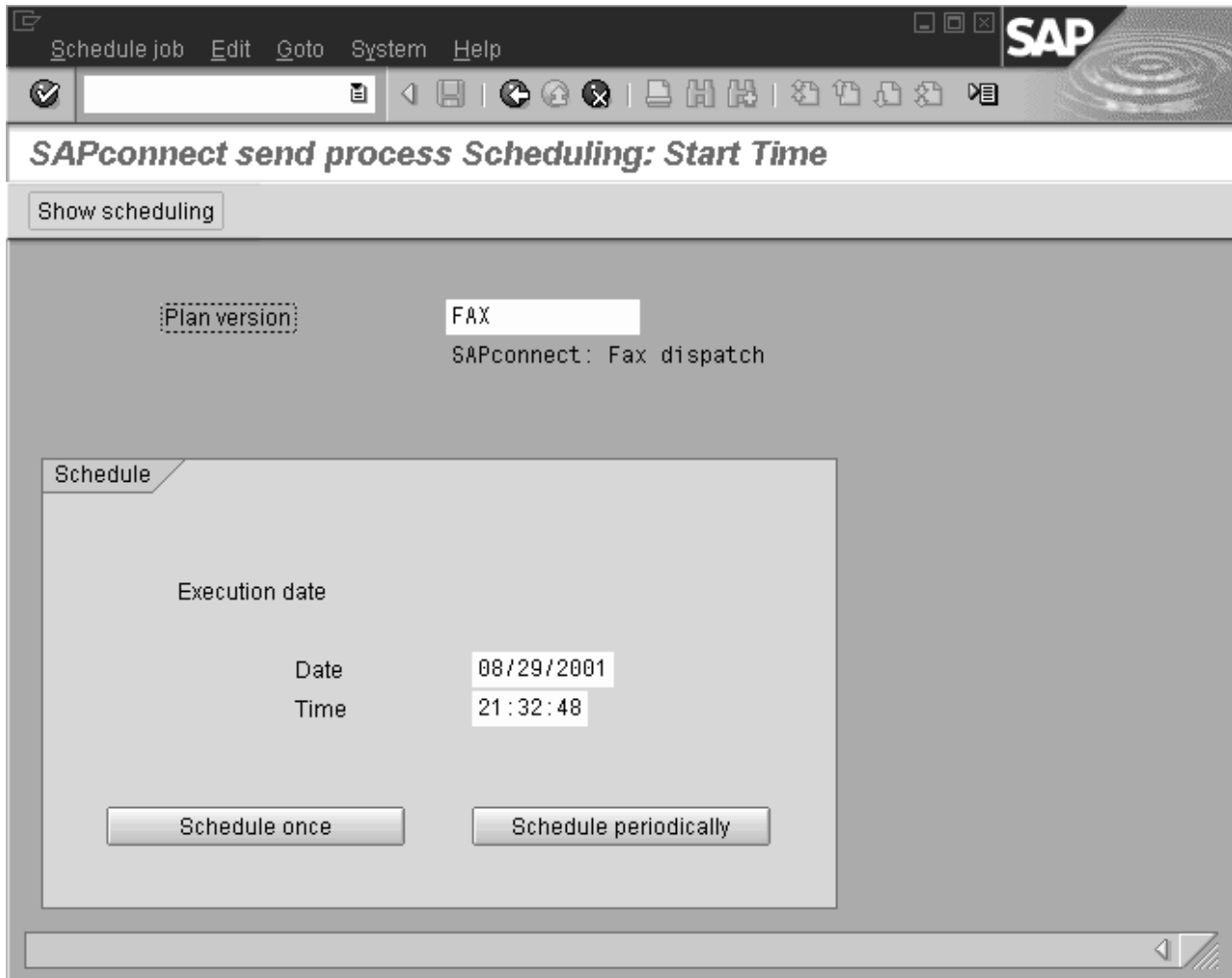


Figure 49. SAPconnect send process Scheduling: Start Time window

7. From the **Period duration** window, set a time, being sure to move the radio button to select the time designation that you are setting.

For example, note that the window (Figure 50) sets the **Months** field value.

Repeat period		
Months	1	<input checked="" type="radio"/>
Weeks	1	<input type="radio"/>
Days	1	<input type="radio"/>
Hours	1	<input type="radio"/>
Minutes	1	<input type="radio"/>

Figure 50. Repeat period window

Once you have set your value, be sure that it is saved by checking the green checkbox at the bottom of the dialog and then accessing the settings again to verify.

Using SAPconnect for fax in support (receiving faxes)

By configuring SAP to use the new Infoprint Manager SAPconnect support, the SAP System receives the request in the form of an SAP RFC call. The SAP user's fax line uses Infoprint Manager's fax in support to send incoming faxes to an Infoprint Manager logical destination, which forwards faxes to a **sapconnect** actual destination that is running on the Infoprint Manager AIX server. The **sapconnect** actual destination makes SAP RFC calls to the SAP system. When the SAP System receives the fax request for a particular fax number, it delivers the job to that user's In box.

One **sapconnect** actual destination can deliver faxes for all users on one SAP system who have defined fax lines. Create one **sapconnect** destination for each SAP system you plan to support.

Once you have ensured that the prerequisites are installed on your Infoprint Manager AIX server (see "Installing the SAPconnect Support" on page 98), you must complete the following configuration tasks in order to send faxes to a SAP user:

1. "Creating a CPIC or system type userid for the Infoprint Manager sapconnect actual destination" on page 119.
2. "Creating Infoprint Manager objects" on page 119.
3. "Logging the Infoprint actual destination onto the SAP system" on page 120.
4. "Assigning fax numbers to SAP users" on page 120.
5. "Configure the fax-in lines to feed the SAPconnect actual destination on an Infoprint Manager AIX server" on page 121.
6. "Test sending faxes to SAP system" on page 121.

Creating a CPIC or system type userid for the Infoprint Manager sapconnect actual destination

Because the Infoprint Manager **sapconnect** actual destination must logon to the SAP system to deliver RFC requests to the SAP system that is receiving fax input, you must create a SAP userid for it. This userid allows the **sapconnect** actual destination to send data to the SAP system.

To create a user for the **sapconnect** actual destination, use transaction su01 to access the **User Maintenance: Initial Screen** window.

The user must be a **CPIC** or **System** type and have authorizations provided in the **S_A.SCON** profile. Remember to record the userid, password, and client values for when you create the **sapconnect** actual destination in "Creating Infoprint Manager objects".

If you ever modify this SAP userid, remember to make the same changes to the **sapconnect** actual destination on the Infoprint Manager AIX server.

Creating Infoprint Manager objects

To create the objects on an AIX Infoprint Manager server necessary to send fax jobs to the SAP system, use the following procedure.

Note: The **Infoprint Manager Administration GUI** provides a wizard to accomplish steps 2 through 7. You can either use the command line procedure described below, or access the GUI and create the appropriate printer and objects. For more information on using the GUI, see both the **Infoprint Manager Administration GUI** online help and the "Creating and managing actual destinations" chapter of the *Infoprint Manager for AIX: Getting Started* manual.

1. Collect the information you require to define this actual destination to communicate with a SAP system:

Required Information	Example
SAP system name	SJD
SAP system hostname	cpmat00
SAP system number	01
CPIC userid	sapuser1
CPIC userid password	<i>password</i>
CPIC userid client	095
SAP Gateway Service	(for future use)
SAP Gateway Host	(for future use)
Program ID	(for future use)

2. Use the **pdcreate** command to define both a queue and a logical destination to feed the **sapconnect** actual destination:
 - For example, to create a queue named **sjd-faxin-queue** on the server **IPM1**, type:


```
pdcreate -c queue IPM1:sjd-faxin-queue
```
 - For example, to create a logical destination named **sjd-faxin-ld** that is associated with the **sjd-faxin-queue** queue, type:


```
pdcreate -x "associated-queue=sjd-faxin-queue" IPM1:sjd-faxin-ld
```

3. From an AIX command line, access the **SAPconnect** attributes file from the `/usr/lpp/pd/attr` directory.
4. Copy and rename this file in another directory on your system:

```
cp /usr/lpp/pd/attr/SAPconnect /var/pd/SAPconnect1
```
5. Use your AIX editor of choice to edit the file (in this case, **SAPconnect1**) and fill in the values you collected in step 1 and the name of the queue that you created in step 2.

The following contains a copy of the SAPconnect attributes file that is provided with Infoprint Manager:

```
# This attribute file contains all the attributes you need to
# create a SAPConnect Actual Destination.
# Copy this file and add in the required information.
#
#
device-support-system      = sapconnect
printer-realization       = physical
associated-queue           =
sap-system-name           =
sap-system-hostname       =
sap-system-number         =
sap-logon-userid          =
sap-logon-password        =
sap-logon-client          =
sap-gateway-service       =
sap-gateway-host         =
sap-program-id            =
```

6. From an AIX command line, enter the following command to create the **sapconnect** actual destination.

```
pdcreate -X SAPconnect1 IPM1:sjd-faxin
```

where IPM1 is the name for your Infoprint Manager AIX server and sjd-faxin is the name of the **sapconnect** actual destination.

7. From the AIX command line, enable the logical destination:

```
pdenable sjd-faxin-ld
```

Logging the Infoprint actual destination onto the SAP system

Before the Infoprint Manager Fax and SAPconnect support can deliver incoming faxes to SAP, the **sapconnect** actual destination must be enabled. Issue a **pdenable** command on this actual destination:

```
pdenable -c destination sjd-faxin
```

When enabled, the **sjd-faxin** actual destination logs onto the SAP system. Once the **sapconnect** DSS actual destination is enabled and logged onto the SAP system, the SAP users on that system can begin receiving faxes.

Note: The SAP logon may appear to work even if the logon information is incorrect. When the first fax is processed, if the **sapconnect** actual destination on the Infoprint Manager AIX server becomes disabled, look at the problem message attribute on the actual destination to see the cause of the problem.

Assigning fax numbers to SAP users

Before receiving faxes, an administrator must assign a personal fax number to any SAP user who plans to use this feature. To perform this task, use the following procedure:

1. Login to the SAP R/3 GUI.
2. Type SU01 in the field on the left side of the menu bar.

If this field is closed, you may need to click on the right-facing arrow on the left side of the menu bar between the **Enter** (green checkmark) and diskette icons.

3. From the **User Maintenance: Initial Screen** window, specify the ID from which you will be faxing output in the **User** field and click on the **Change** (pencil) icon on the left side of the menu.
4. From the **Maintain User** window, select the **Address** tab, scroll down to the **Fax** field, and type your number.
For all outgoing calls, this fax number is used as the originator address.
5. Select the **Save** icon to save this data.

These fax numbers are those that must be mapped to channel numbers in "Configure the fax-in lines to feed the SAPconnect actual destination on an Infoprint Manager AIX server".

Configure the fax-in lines to feed the SAPconnect actual destination on an Infoprint Manager AIX server

In order to receive incoming faxes through Infoprint Manager, you must first purchase, configure, and install the Infoprint Fax feature.

To perform this task, refer to the "Configuring Fax In (Receiving)" topic from the "Configuring and using Infoprint Manager Fax" in the *Infoprint Manager for AIX: Procedures* manual to perform the necessary configuration tasks on your Infoprint Manager AIX server.

Test sending faxes to SAP system

To verify that you have configured the system correctly and can send faxes, send a fax to one of the SAP users defined fax numbers and verify that the fax appears in their SAP Business Workplace Inbox.

Chapter 16. Print support that applies to both Infoprint AIX and Infoprint Manager Windows servers

The following topics describe SAP R/3 features that can be used by installations running SAP R/3 Release 4 and above with either Infoprint Manager for AIX 4.1 or Infoprint Manager for Windows 2.1. Please note that unless clearly identified with a particular operating system, all interfaces apply to both AIX and Windows platforms.

Customizing print characteristics

The following topics describe how you can change output appearance when printing through Infoprint Manager by modifying SAP devices and formats.

How Infoprint processes code pages from ABAP and OTF jobs

Code page support for OTF jobs is more flexible than for ABAP jobs.

Because OTF jobs request a specific font, the SAP transform compares the specified font name and point size values with the entries in the **fonts.tab** configuration file. If the transform finds a match, it uses both the AFP character set and AFP code page for the print job.

ABAP jobs can use different character sets, but are confined to using the same code page. When processing ABAP files, the SAP transform uses:

1. the **defcp.tab** file to map single-byte ASCII code points to EBCDIC code points before calling the **iconv** utility.
2. the **pagedef.tab** file to match the **Paper** parameter value with the **PJPAPER** parameter value in the ABAP print job.

Once they are matched, the SAP transform uses the **FontNorm** and **FontBold** parameters on the selected line within the **pagedef.tab** file to determine which character sets to use in both normal and bold mode.

As a result, all ABAP jobs sent to a particular Infoprint server use the same code page, but potentially different character sets, depending upon the **PJPAPER** value specified in the job.

Defining a customized device type

An SAP 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. An actual destination 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 **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.

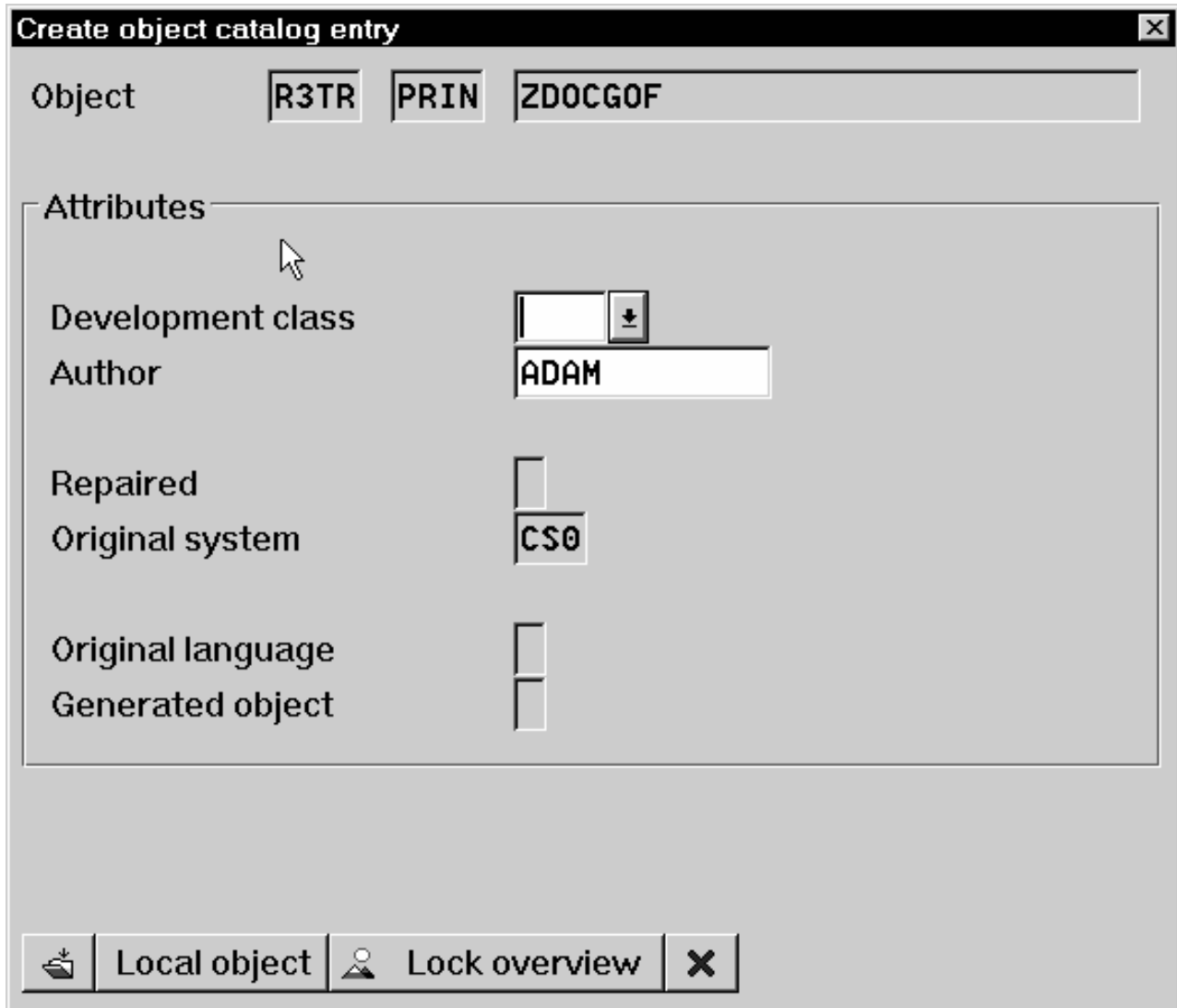
To create a customized device type, a SAP R/3 administrator must perform the following procedure from the SAP R/3 graphical user interface:

1. From the R/3 main menu, access the **Spool Administration** window by selecting **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 **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, **SAPG0F**) in the **Copy device type** field and provide a name for your customized Device Type (in this case, **ZD0CG0F**) in the **to device type** field.

Note: 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 (Figure 51 on page 125), 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:



Create object catalog entry

Object

Attributes

Development class

Author

Repaired

Original system

Original language

Generated object

Figure 51. Create Object Catalog Entry window

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 form definition" on page 134, 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: 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 an 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 customized device type for ABAP jobs"
- "Defining a new OTF format" on page 127

Defining a customized device type for ABAP jobs

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 procedure:

1. From the R/3 main menu, access the **Spool Administration** window by selecting the **Tools** main menu and then selecting **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: 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** window, specify the name of your customized Format with the naming convention of *Z_number-of-rows_number-of-columns_more-identifying-text* as shown in Figure 52 on page 127:

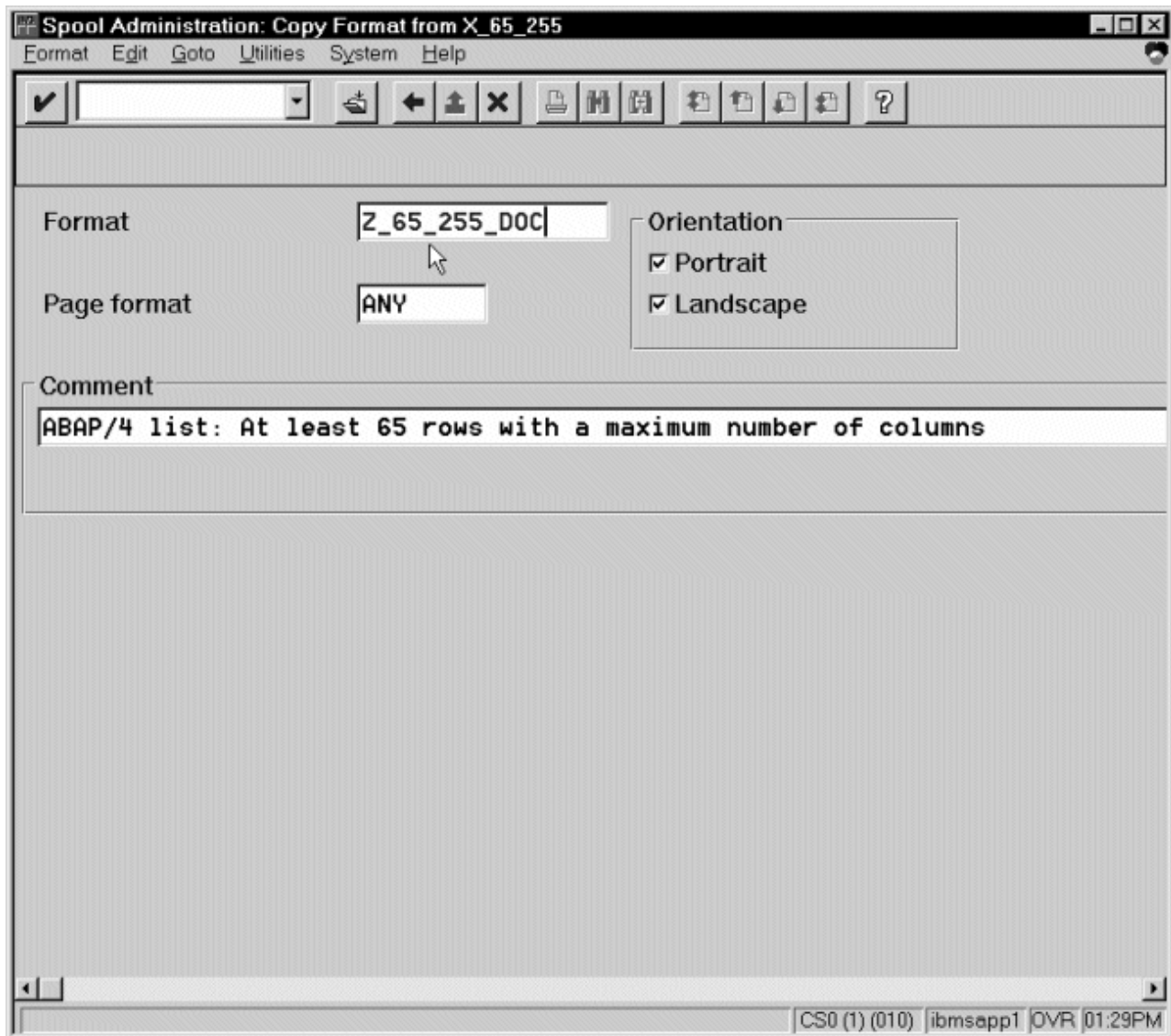


Figure 52. Spool Administration: Copy Format from X_65_255 window

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 use “Connecting a new format to a device type” on page 129.

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 the /nSPAD transaction 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 in Figure 53:

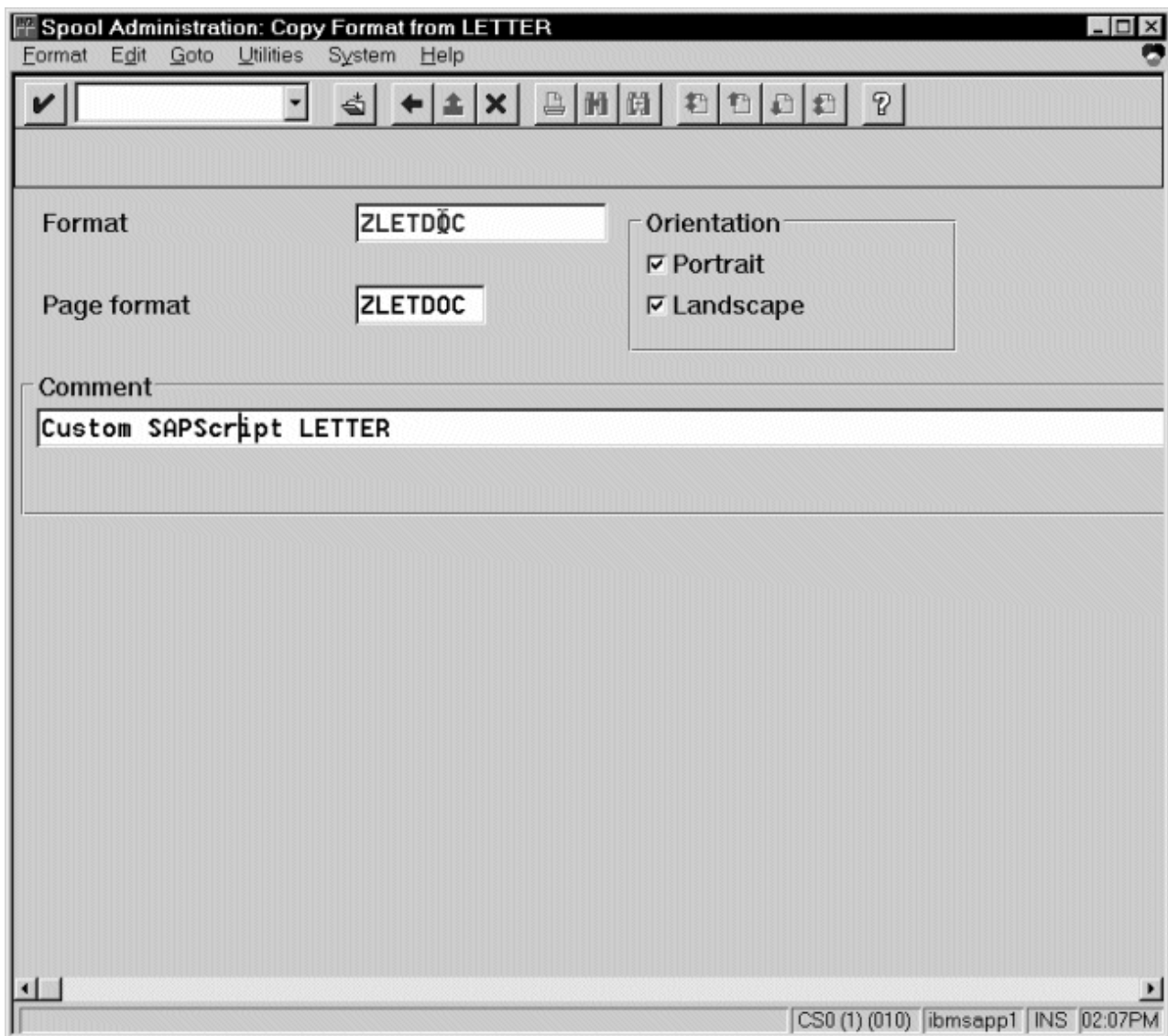


Figure 53. Spool Administration: Copy Format from LETTER window

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 use “Connecting a 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 ZLETD0C) in the appropriate fields.

Note: 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 shown in Figure 54 on page 130, the blank left column indicates that the customized format has not yet been initialized:

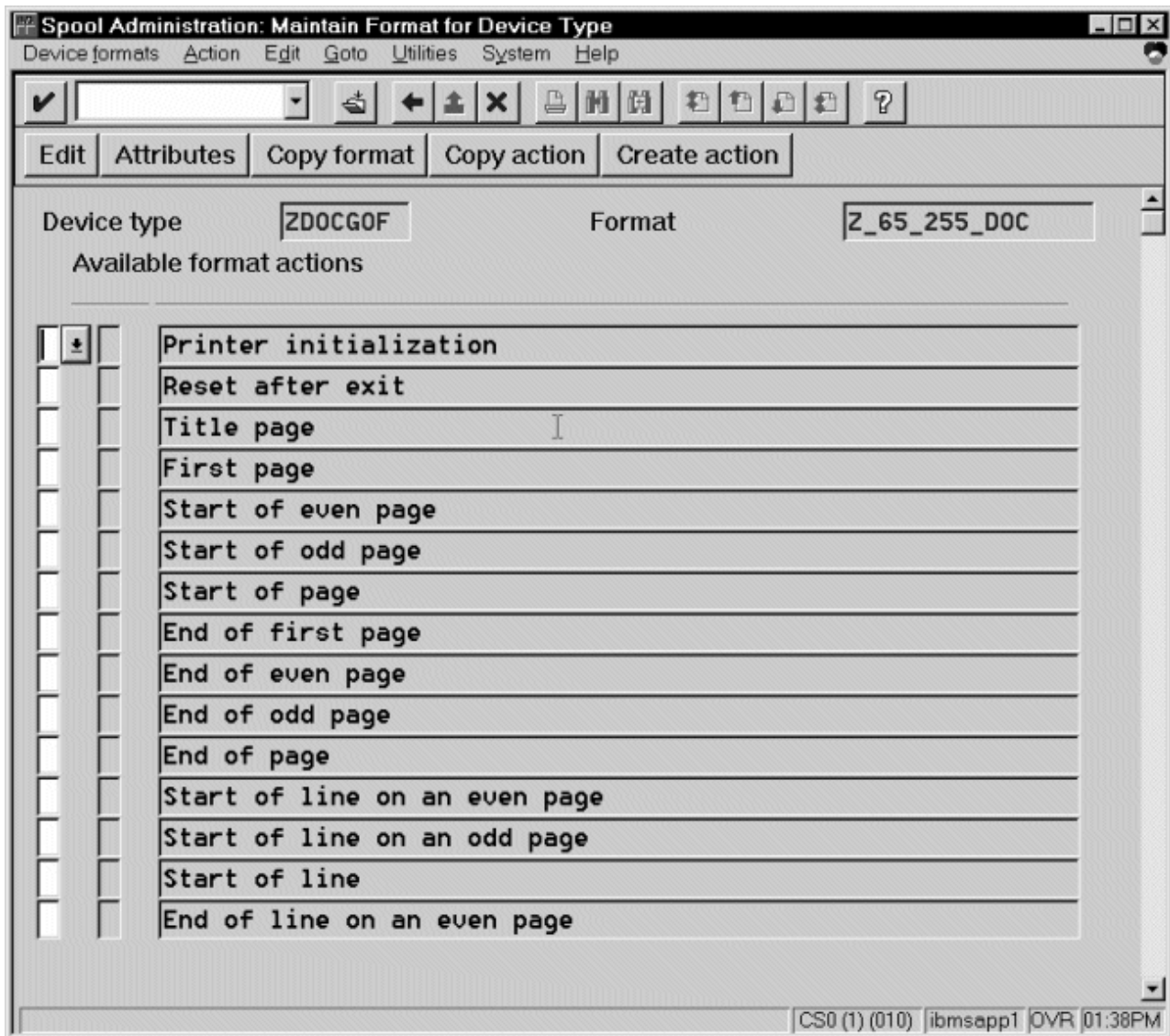


Figure 54. Spool Administration: Maintain Format for Device Type window

6. Click on the **Copy format** push-button.

- 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 as shown in Figure 55:

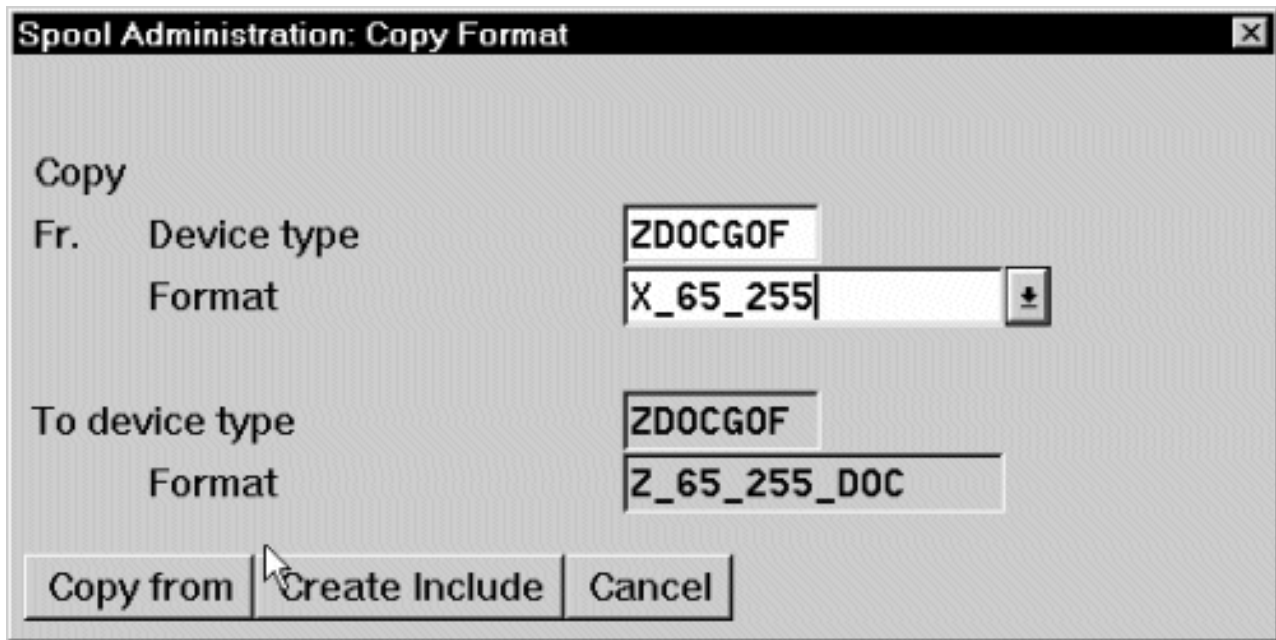


Figure 55. Spool Administration: Copy Format window

- Press the **Copy from** push-button to initialize your new Format.
- Select the back icon (the left-pointing arrow) and the system prompts you to save the new format.
- Access the **pagedef.tab** configuration file that resides in the `/usr/lpp/psf/sap2afp` directory on an Infoprint Manager AIX server and the `install_path\sap2afp` folder on an Infoprint Manager Windows server.
- 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: 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.

- Exit and save the **pagedef.tab** configuration file.

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” on page 126. 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 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 **sap2afp** transform converts names defined within SAP Layout Sets in the paper resources for pages to AFP media map names. For each page that defines a paper resource, the **sap2afp** transform uses the AFP media map.

By default, the **sap2afp** transform uses “F1SAP form definition” on page 134, 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 described in the *Infoprint Manager: Reference*.

Use the following procedure on your SAP application server to modify the media map on any page of a job by specifying the media map defined in the **F1SAP** form definition for the **Resource name** field:

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 either specifying the SE71 transaction code in the **ok-Code** field, or by selecting: **Tools → Word Processing → Layout Set**

Note: In SAP R/3 Release 4.6C, the **Layout Set** menu is the **Page** menu, which contains the **Resource Name** field cited in 3 on page 133.

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).

- 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 in Figure 56:

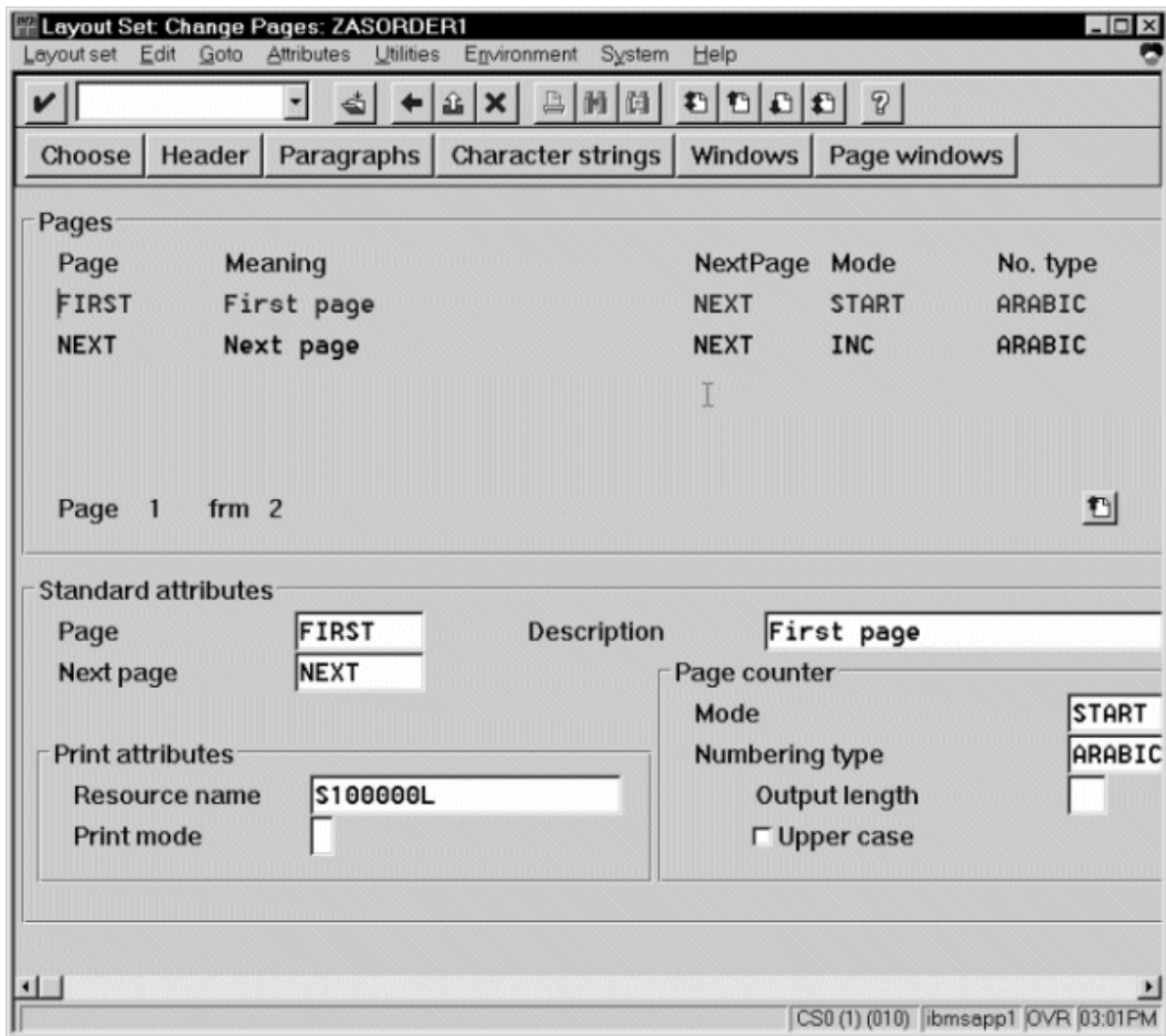


Figure 56. Layout Set Change Pages window, First page

4. Double-click on the next page that you intend to modify and fill in the **Resource Name** field on the second page as shown in Figure 57:

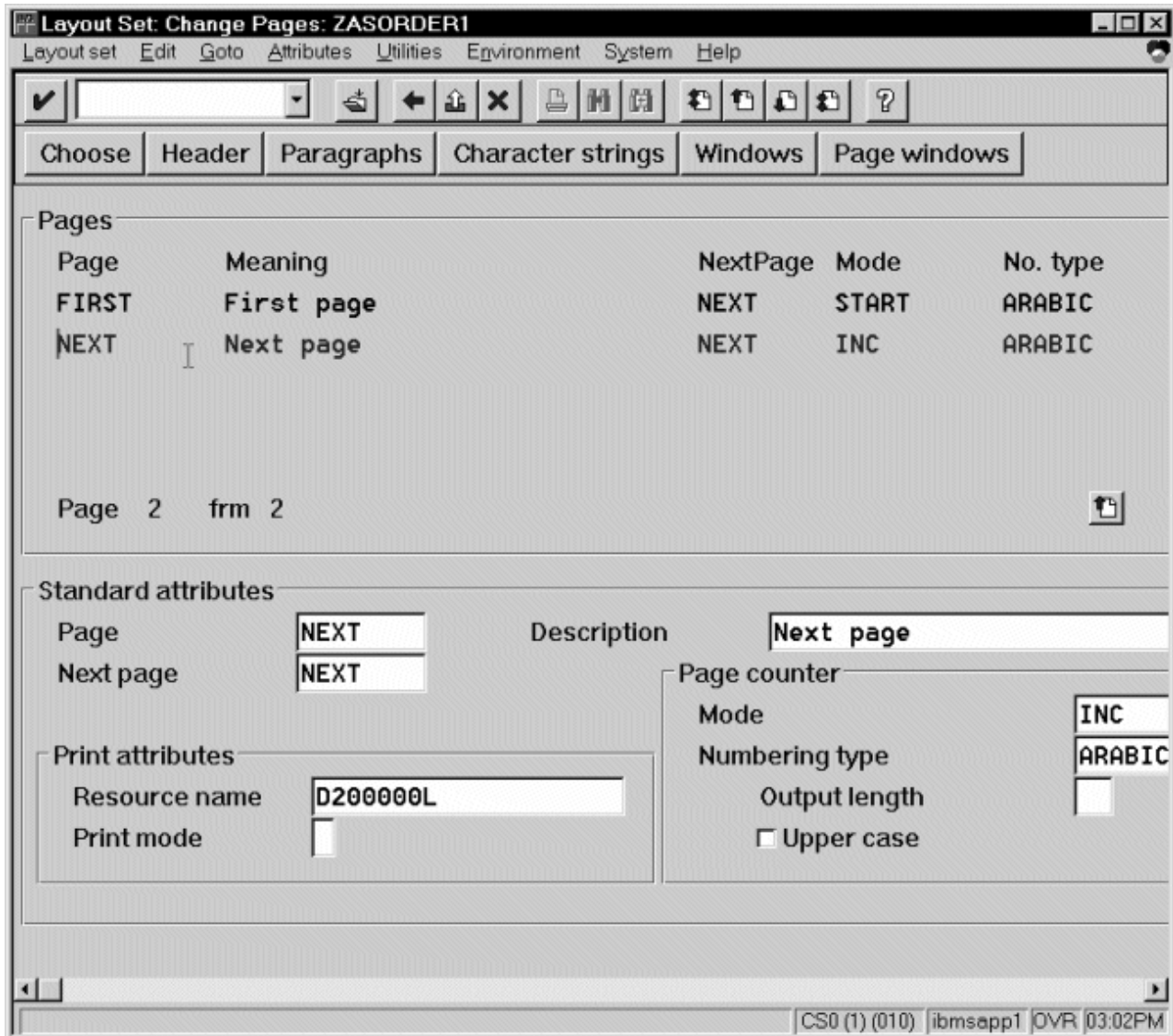


Figure 57. Layout Set Change Pages window, Next page

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

F1SAP form definition

The form definition specified in the **pagedef.tab** configuration file is the default submitted with every Advanced Function Presentation (AFP) data stream document. **F1SAP** is the default form definition that each of the media maps references. Table 8 on page 135 briefly describes the media maps contained within this form definition.

Note: 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.

Table 8. F1SAP Form Definition Values

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
S100000L	1	1	Landscape
S200000L	2	1	Landscape
S300000L	3	1	Landscape
S400000L	4	1	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

Enabling multi-byte character sets for Japanese fonts

The **sap2afp** transform supports the use of multi-byte character sets (MBCS) through the use of the **iconv** utility . 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.

Enabling Korean character sets on an Infoprint Manager AIX server

To enable this support on an Infoprint Manager AIX server, an 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 customized conversion files 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 recommendations are given in both the files **fonts.tab** and **pagedef.tab**, which reside in the **/usr/lpp/psf/sap2afp** directory on an Infoprint Manager AIX server and the **install_path\sap2afp** folder on an Infoprint Manager Windows server.

Enabling Japanese character sets on an Infoprint Manager Windows server

To support the printing of box characters on an Infoprint Manager Windows server, IBM provides a customized conversion file with the **sap2afp** transform named **IBM-9932** that resides in the **install_path\uconv** folder.

To enable this support on an Infoprint Manager Windows server, an administrator must perform the following procedure:

1. Create a backup copy of the current **install_path\sap2afp\defcp.tab** file. Ensure that the **iconv** utility is installed on the Infoprint Manager system where the **sap2afp** transform is running.
2. Copy the **install_path\sap2afp\defcp.tab.japanpath** file to the **install_path\sap2afp\defcp.tab** file.
3. Create a backup copy of the current **install_path\sap2afp\pagedef.tab** file.
4. Copy the **install_path\sap2afp\pagedef.tab.japan** to the **install_path\sap2afp\pagedef.tab** file.
5. Obtain the fonts needed for printing.

Font recommendations are given in both the files **install_path\sap2afp\fonts.tab** and **install_path\sap2afp\pagedef.tab**.

Enabling multi-byte character sets for Korean fonts

The **sap2afp** transform supports the use of double-byte character sets (DBCS) through the use of the **iconv** utility on both the AIX and Windows operating systems. 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. Before performing either of the following configuration tasks on AIX and Windows systems, you must first obtain and install the selected Korean AFP fonts that are required for printing.

Once you have installed these fonts, ensure that your actual destination uses the **/usr/lpp/psf/fontlib** directory as its primary search path for fonts. To modify the font search path from the **Infoprint Manager Administration GUI**:

1. From the **Infoprint Manager Administration Servers** window, highlight the actual destination.
2. Right-click and select **Properties** from the pop-up menu.
3. From the printer properties window, select the **AFP Resources** tab and specify
 - `/usr/lpp/psf/fontlib` in the **Location of fonts** field, as shown in Figure 58 on Infoprint Manager for AIX
 - `install_path\fontlib` in the **Location of fonts** field, as shown in Figure 59 on page 138 on Infoprint Manager for Windows

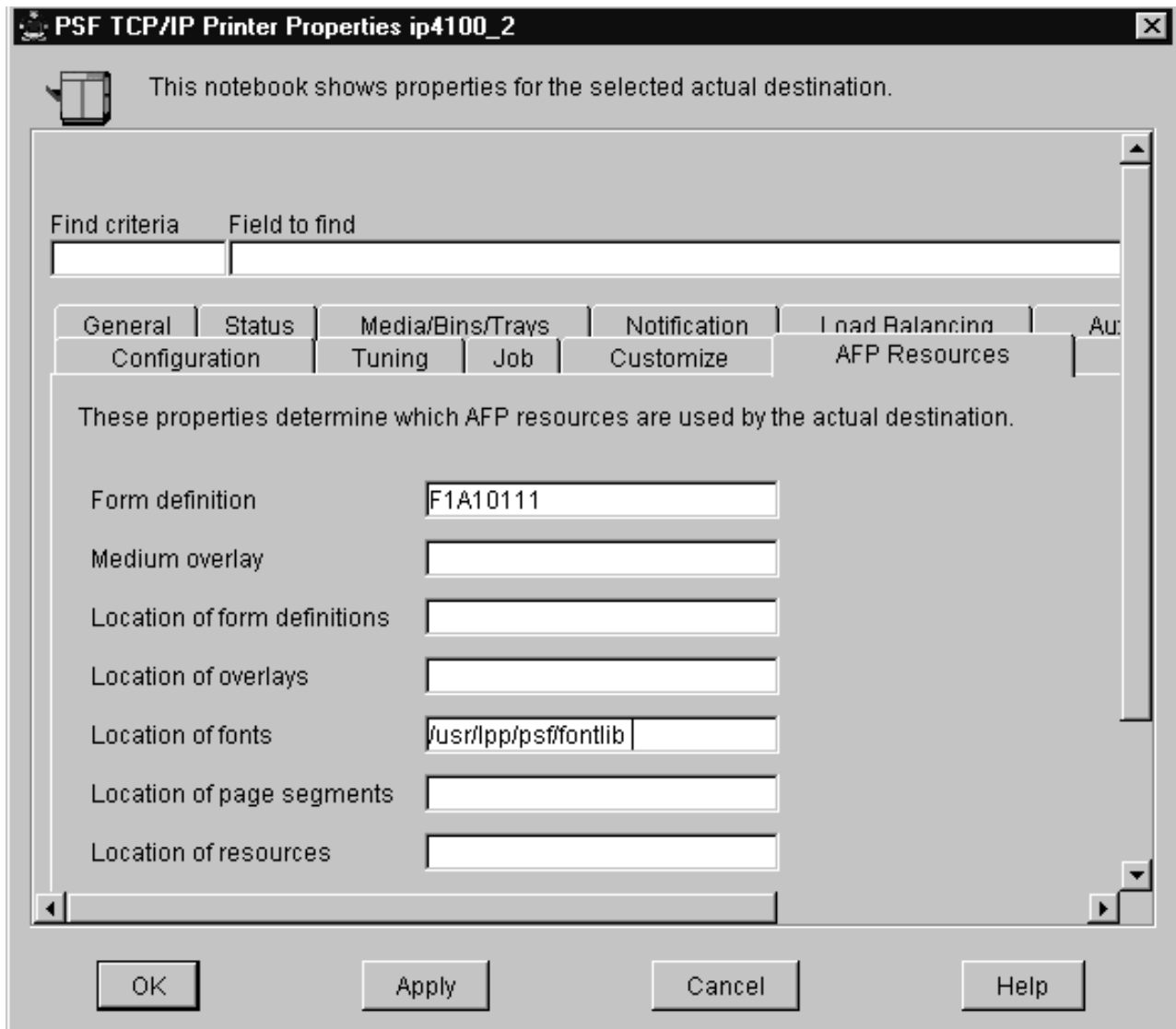


Figure 58. Printer Properties window for specifying the Fonts Path on AIX.

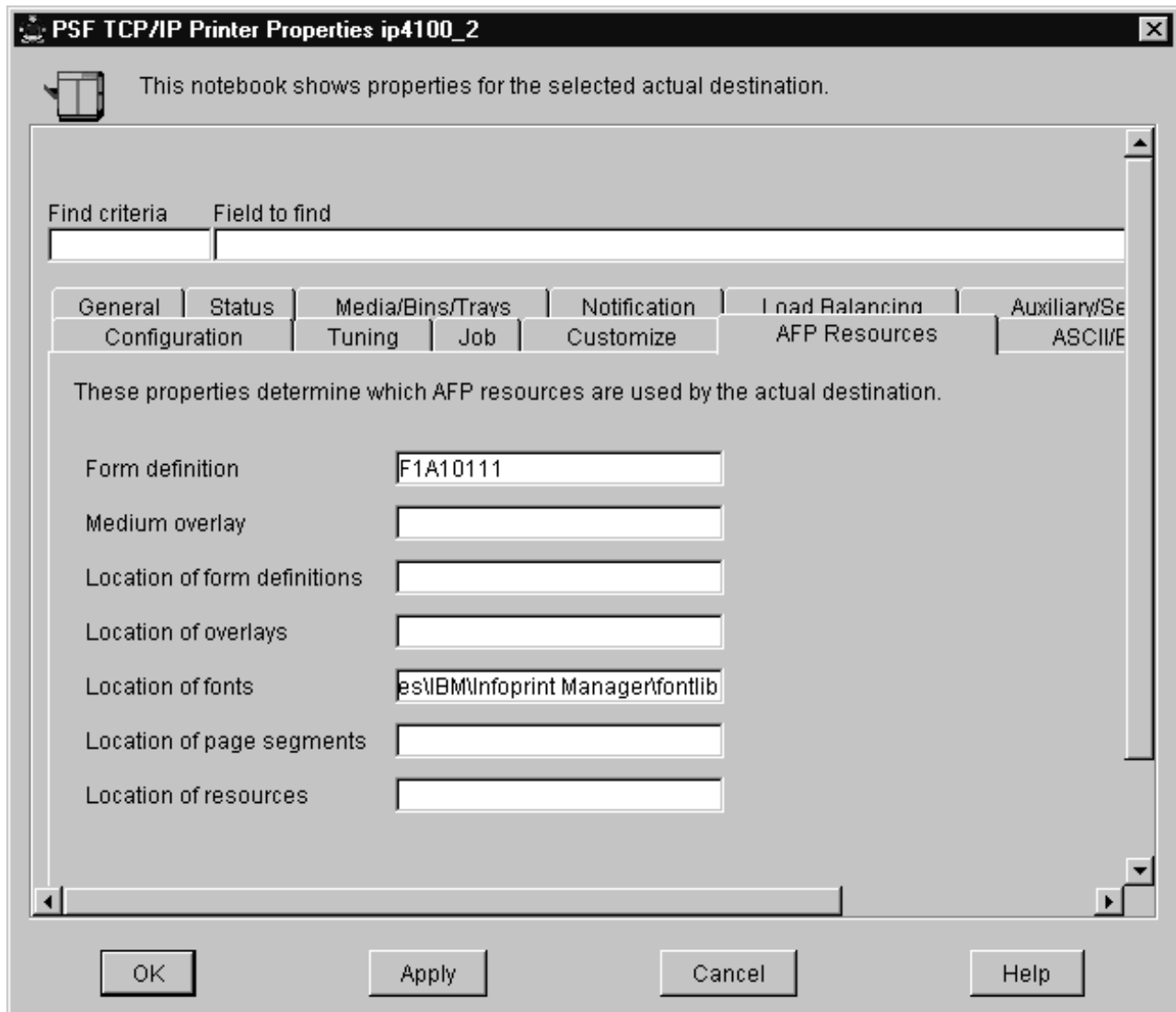


Figure 59. Printer Properties window for specifying the Fonts Path on Windows.

Enabling Korean character sets on an Infoprint Manager AIX server

To support the printing of box characters, IBM provides a customized conversion files with the `sap2afp` transform: **IBM-933-SAP2AFP**, which extends the **IBM-933** conversion file.

In addition, Infoprint provides the following resources in the `/usr/lpp/psf/sap2afp/koreanfonts` directory:

- **C0H0GW72.240** (dpi Korean Gothic character sets)
- **C0H0GW96.240** (dpi Korean Gothic character sets)
- **C0H0MW72.240** (dpi Korean Myengjo character sets)
- **C0H0MW96.240** (dpi Korean Myengjo character sets)
- **T1H01150**

With both dpi Korean Gothic character sets and dpi Korean Myengjo character sets at either 7.2 point size or 9.6 point size, you can print with both box characters and the check box on/off characters.

Note: To use this support, copy the contents of the `/sap2afp/koreanfonts` directory into the `/usr/lpp/psf/fontlib` directory.

To enable Korean character sets on an Infoprint Manager AIX server, an 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.
2. Create a backup copy of the current `/usr/lpp/psf/sap2afp/defcp.tab` file.
3. Copy the `/usr/lpp/psf/sap2afp/defcp.tab.korea` 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.korea` file to the `/usr/lpp/psf/sap2afp/pagedef.tab` file.
6. Obtain the fonts needed for printing.

Font recommendations are given in both the files `fonts.tab` and `pagedef.tab`, which reside in the `/usr/lpp/psf/sap2afp` directory on an Infoprint Manager AIX server.

Enabling Korean character sets on an Infoprint Manager Windows server

To support the printing of box characters, IBM provides two customized conversion files with the `sap2afp` transform:

1. **IBM-9949-SAP2AFP:** which extends the **IBM-9949** conversion file.
2. **IBM-9932-SAP2AFP:** which extends the **IBM-9932** conversion file.

In addition, Infoprint provides the following resources in the `install_path\sap2afp\koreanfonts` directory:

- **C0H0GW72.240** (dpi Korean Gothic character sets)
- **C0H0GW96.240** (dpi Korean Gothic character sets)
- **C0H0MW72.240** (dpi Korean Myengjo character sets)
- **C0H0MW96.240** (dpi Korean Myengjo character sets)
- **T1H01150**

With both dpi Korean Gothic character sets and dpi Korean Myengjo character sets at either 7.2 point size or 9.6 point size, you can print with both box characters and the check box on/off characters.

Note: To use this support, copy the contents of the `install_path\sap2afp\koreanfonts` directory into the `install_path\fontlib` directory.

To enable this support on an Infoprint Manager Windows server, an administrator must perform the following procedure:

1. Create a backup copy of the current `install_path\sap2afp\defcp.tab` file. Ensure that the `iconv` utility is installed on the Infoprint Manager system where the `sap2afp` transform is running.
2. Copy the `install_path\sap2afp\defcp.tab.korea` file to the `install_path\sap2afp\defcp.tab` file.

3. Create a backup copy of the current *install_path\sap2afp\pagedef.tab* file.
4. Copy the *install_path\sap2afp\pagedef.tab.korea* file to the *install_path\sap2afp\pagedef.tab* file.
5. Obtain the fonts needed for printing.

Font recommendations are given in both the files *install_path\sap2afp\fonts.tab* and *install_path\sap2afp\pagedef.tab*.

Setting up your SAP R/3 system to support new OTF user fonts

Use the following procedure when using the **sap2afp** 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 Figure 60:

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 [dropdown arrow]
Replacement family 2	
Replacement family 3	
Character set	4001

Buttons: Continue, Cancel

Figure 60. SAPscript Font Maintenance: Create/Change Font Family window

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 shown in Figure 61 on page 141:

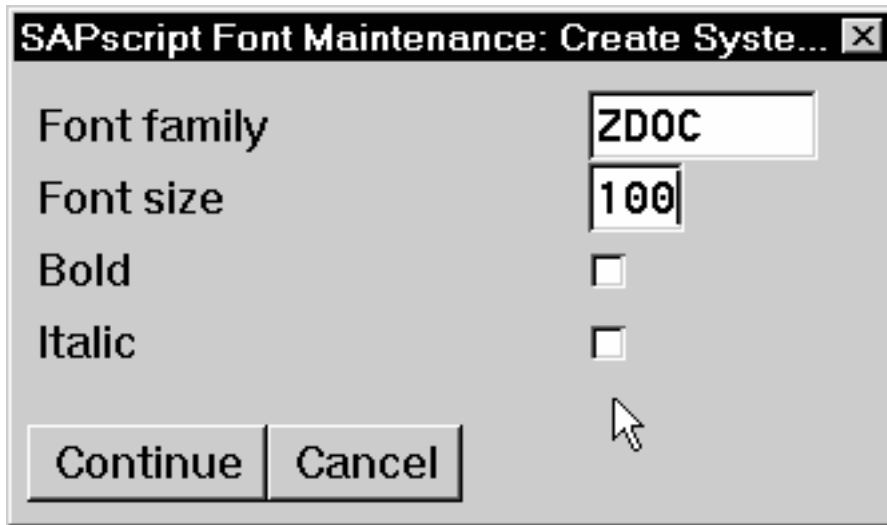


Figure 61. SAPScript Font Maintenance Create System... window

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 shown in Figure 62 on page 142, select the intended device type (ZDOC0GF) and fill in the remaining information:

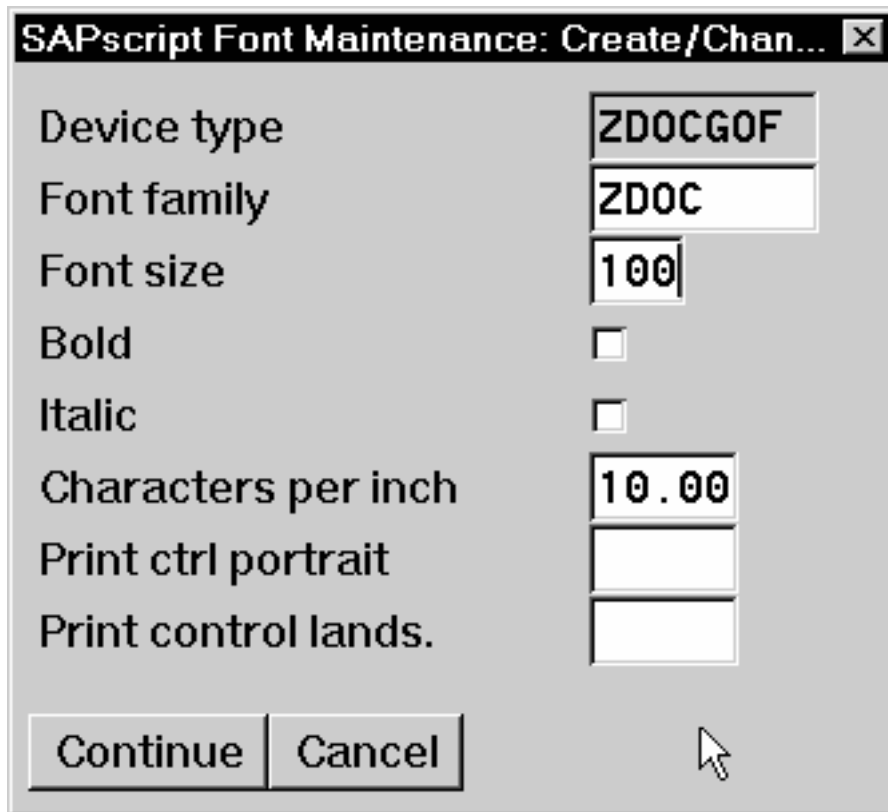


Figure 62. SAPScript Font Maintenance (Create/Change) window for OTF Fonts

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 server where your Infoprint actual destination resides.

Printing oversize characters on an IBM 6400 printer with SAP R/3

Infoprint Manager gives you the ability to resize Output Text Format (OTF) fonts on an IBM 6400 Printer. If your printer supports the graphics object content architecture (GOCA) feature, you can use the **6400fonts.tab** configuration file to alter the height and width of characters printed. The **SIZE=** parameter allows you to specify the height of a font (in points) and have it scaled appropriately. Since there are 72 points in an inch, **720** indicates a height of an inch. The **CPI=** (characters per inch) parameter defines the horizontal width to which the 6400 printer-resident fonts should be scaled. The smaller the number you specify, the wider the font you receive.

To ensure that a font prints one inch high, specify the following line in the **6400fonts.tab** configuration file:

```
FONT=TIMES SIZE=720 TYPE=3 CODEPAGE=T1V10273 CharSet=COS0ESTR DB=0
```

The **6400fonts.tab** configuration file resides in the **/usr/lpp/psf/sap2afp** directory on an Infoprint Manager AIX server and the **install_path\sap2afp** folder on an Infoprint Manager Windows server.

To ensure that a font prints one inch wide, specify the following line in the **6400fonts.tab** configuration file:

```
FONT=TIMES SIZE=360 TYPE=3 CODEPAGE=T1V10273 CharSet=C0S0ESTR DB=0 CPI=1
```

To ensure that a font prints one-half inch wide, specify the following line in the **6400fonts.tab** configuration file:

```
FONT=TIMES SIZE=360 TYPE=3 CODEPAGE=T1V10273 CharSet=C0S0ESTR DB=0 CPI=2
```

Once you have modified the **6400fonts.tab** file appropriately, access the **Print Screen List** window on the SAP R/2 graphical user interface and specify 6400 in the **Title** field of the **Spool request** pane, as shown in Figure 63:

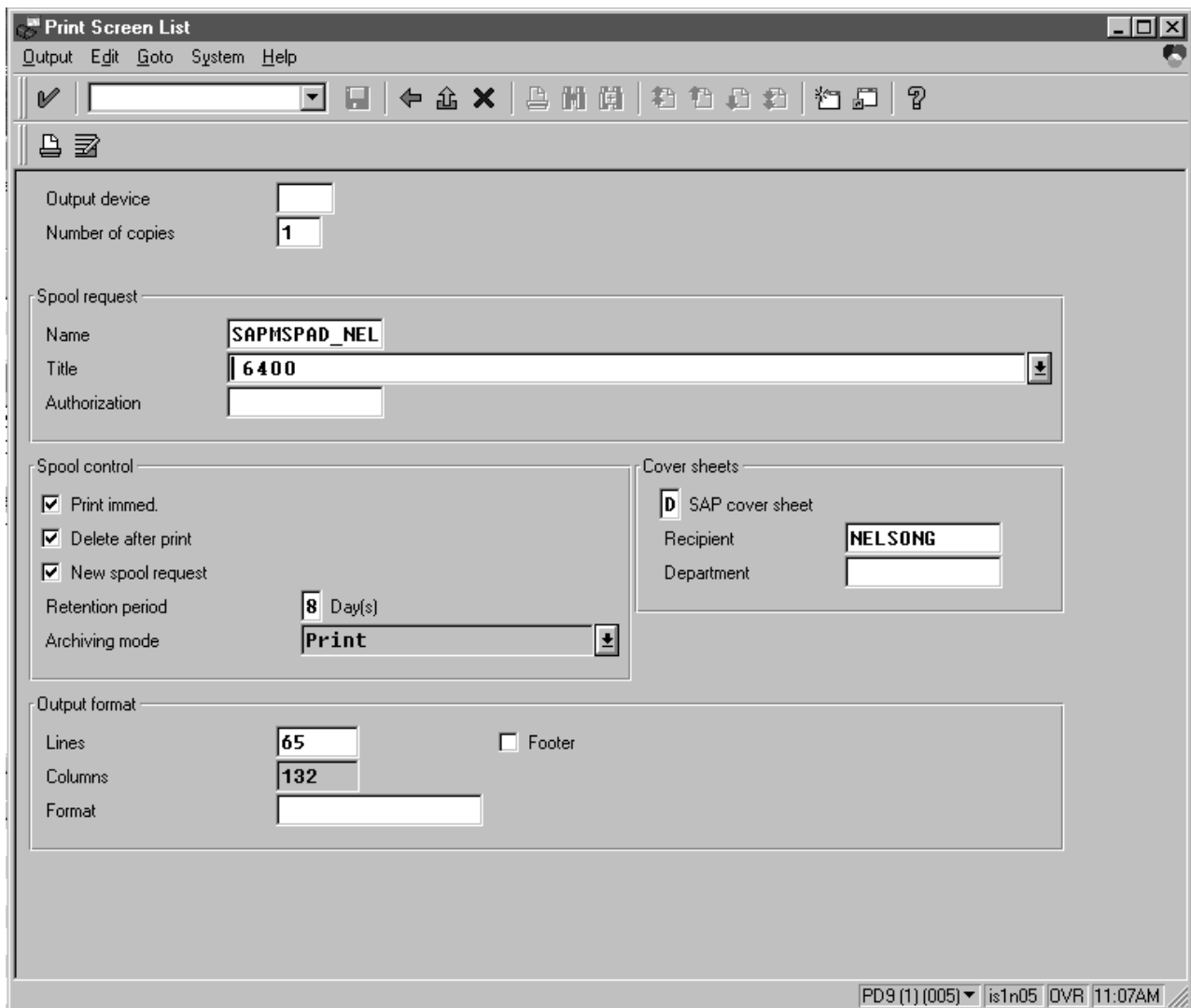


Figure 63. SAP R/3 Interface: Print Screen List window

Adding box shading values to printed output

Infoprint Manager supports both Output Text Format (OTF) shading values and border thickness values. The **BX OTF** command allows you 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.

The Infoprint Manager SAP transform recognizes the **BX OTF** command and creates graphics object content architecture (GOCA) output if passed the **-g** flag. Both the **ipm_submit** and **ipm_print** commands used by the OMS (see Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13) and access method **L** (see Part 3, "Infoprint Manager non-Output Management Support", on page 67) automatically pass the **-g** flag to the SAP transform through the **other-transform-options** attribute. For more information on the **other-transform-options** attribute and the **sap2afp** command, see the *Infoprint Manager: Reference* manual. For more information on the **BX** command values required to specify box shading, refer to your SAP R/3 documentation.

If you use this function with an IPDS Infoprint printer that is not enabled for GOCA, the file prints a presentation text object content architecture (PTOCA) box or boxes without shading and the following message sequence for each box at the end of the job:

```
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.
```

Chapter 17. Using bar codes with SAP R/3

The following topics describe the bar codes for printing that can be used when printing OTF and ABAP output from Infoprint Manager:

- “Bar codes supported by the Infoprint SAP (sap2afp) transform”
- “Setting up your SAP R/3 system to support new OTF user bar codes”
- “Bar codes and printing from SAP R/3 through Infoprint Manager” on page 147
- “Specifying width in SAP bar codes” on page 149.

Bar codes supported by the Infoprint SAP (sap2afp) transform

Some SAP R/3 applications require that data is printed as a bar code. If OTF specifies bar code data, the **sap2afp** transform converts it into Bar Code Object Content Architecture (BCOCA) data, which is understood directly by the control unit of the AFP printer. This bar code data can also be converted to the Printer Control Language (PCL) PCL4, PCL5, or PCL5c data streams. This allows Infoprint Manager to print to any printers that accept Printer Control Language data.

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)

Setting up your SAP R/3 system to support new OTF user bar codes

Use the following procedure when using the **sap2afp** 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 Figure 64:

SAPscript Font Maintenance: Create/Change System Bar Code	
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
<input type="button" value="Continue"/> <input type="button" value="Cancel"/>	

Figure 64. SAPscript Font Maintenance (Create/Change) System Bar Code window

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 (ZDOCG0F) and fill in the remaining information as shown in Figure 65 on page 147:

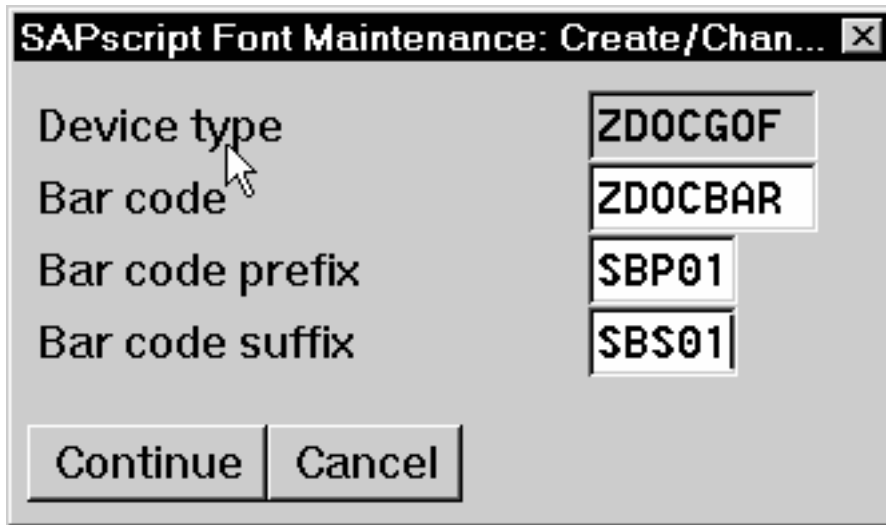


Figure 65. SAPScript Font Maintenance (Create/Change) window

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
```

For more information about the **barcode.tab** configuration file and how it relates to the Bar Code Object Content Architecture (BCOCA), see “Bar codes and printing from SAP R/3 through Infoprint Manager”.

Bar codes and printing from SAP R/3 through Infoprint Manager

Table 9, Table 10 on page 148, and Table 11 on page 149 map the Bar Code Object Content Architecture values with the SAP R/3 system values found in the **barcode.tab** configuration file, which resides in the **/usr/lpp/psf/sap2afp** directory on an Infoprint AIX system and the *install_path***sap2afp** folder on an Infoprint Windows system.

Table 9. Bar Code Type Field Values

Bar Code 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

Table 10. Bar Code Mode Field Values

Mode Field Values	Bar Code 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 is 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.

Table 11. Bar Code Flag Values

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

Specifying width in SAP bar codes

Infoprint Manager allows you to modify bar code width using the same command syntax provided with the Page Printer Formatting Aid (PPFA) product. By modifying the **barcode.tab** configuration file to use the **ModWidth** parameter, you can change the width of bar codes and the wide-to-narrow ratio.

ModWidth

Specifies the width of the smallest defined bar code element, using mils (thousandths of an inch). For bar code types that explicitly specify the module width (for example, **POSTNET** and **RM4SCC**), this field is ignored. The range of values allowed is 1–to-254. If **ModWidth** is not specified in the **barcode.tab** file, the **sap2afp** transform uses the defaulted bar code width.

n Specifies the width of each module, using thousandths of an inch (1/1000) as the unit of measure.

Ratio Specifies a percent value in the form *nnn*. For example, 200 represents a ration of 2.5 to 1. For most bar code symbols, the **Ratio** value should be between 200 and 300. For bar code types that explicitly specify the module width (for example, **POSTNET** and **RM4SCC**), this field is ignored. If **Ratio** is not specified, the default ratio for the bar code symbol is used. This value must be a three-digit character between 100 and 500.

To shorten an existing bar code, you can specify the following line in the **barcode.tab** file:

```
BarCode = BC_CD39 Type = 001 Mode = 001 Ratio = 2000 ModWidth = 10
```


Appendix A. SAPconnect fax-out configuration worksheet

While configuring the SAP system for fax-out, use the following worksheet to record the values that will be needed to configure and start the Infoprint Manager SAPconnect daemon.

Table 12. SAPconnect Configuration Worksheet Values

Parameter	Value	Used in /etc/rc.ipsap	Used in /var/pd/saprfc.ini
IPMLogicalDestinationName		x	
Logon User		x	
Logon Password		x	
Logon Client		x	
RFC Destination		x	x
Program ID			x
Gateway Host			x
Gateway Server			x
SAP System Name		x	x
SAP System Number			(for specific application server)
SAP Application Server Host			(for specific application server)
SAP Message Server			(for load balancing)
SAP Application Server Group			(for load balancing)

Appendix B. Alternate access methods for submitting SAP jobs to Infoprint Manager

To use Infoprint Manager as an SAP OMS you define your SAP devices to use access method E (see Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13). If you cannot use Infoprint Manager as an SAP OMS, IBM recommends defining your SAP devices to use access method L (see Part 3, "Infoprint Manager non-Output Management Support", on page 67). There are other access methods that can be used for submitting print jobs from SAP systems to Infoprint Manager. This topic describes some of those methods. These methods do not require an Infoprint SAP Client to be installed on your SAP system, but do not allow SAP job attributes to be passed with the job or provide for any status information regarding the job to be known on the SAP system. You can install and use the SAP transform with these methods.

Defining SAP devices using access method U

From your SAP system, you can submit jobs to either an Infoprint AIX or Infoprint Manager Windows server using LPD by defining your SAP device to use access method U.

This method is intended for Infoprint Manager users whose SAP R/3 applications run on non-AIX systems. This method is discouraged with SAP systems running on AIX because you must create AIX print queues to use it. For a preferred method of submitting jobs from SAP systems to Infoprint Manager that provides better feedback, see either Part 2, "Installing and Configuring Infoprint Manager's Output Management (OMS) Support", on page 13 or Part 3, "Infoprint Manager non-Output Management Support", on page 67.

To use access method U to send jobs to Infoprint Manager, you need to ensure that the LPD service is running on the Infoprint server. Use the procedure appropriate to your Infoprint Manager server operating system:

- "Verifying the Infoprint for Windows LPD service is started"
- "Verifying the LPD service is started on Infoprint AIX" on page 154

Verifying the Infoprint for Windows LPD service is started

In order to submit jobs to Infoprint Manager through the LPD service, the Infoprint Manager LPD service that comes with Infoprint Manager for Windows must be active. Note that this service is different from the LPD Windows service that comes with the base operating system. Use the following procedure to verify that the service is started on your Infoprint Manager Windows server, and if necessary, to activate the Infoprint Manager LPD service:

1. From the **Start** menu, click on the **Programs** → **Infoprint Manager** → **Management Console** path.
2. Click **File** → **Stop Server**.
3. Access the **Edit** → **Service Configuration...** path.
4. From the **Service Configuration** window, ensure that the **Run Infoprint Manager LPD service** check box has been checked (as shown in Figure 66 on page 154). Press **OK** to save this change.

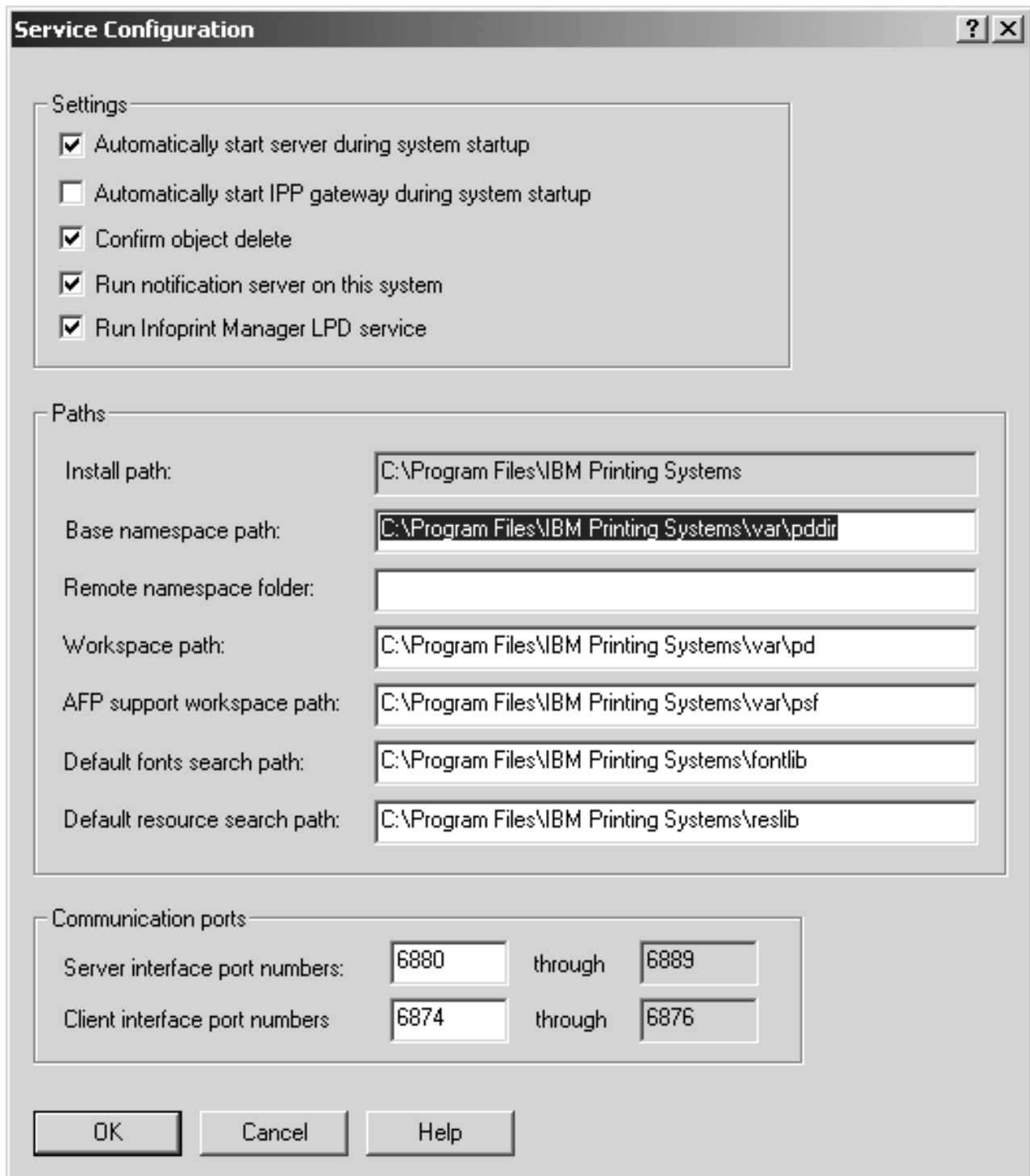


Figure 66. MMC Service Configuration window

5. Click **File** → **Start Server**.
6. Exit the **Infoprint Manager Management Console**.

Verifying the LPD service is started on Infoprint AIX

In order to submit jobs to Infoprint Manager through LPD, you must ensure that the AIX `lpd` daemon is active on your Infoprint Manager AIX server.

To either verify that the lpd daemon is active or to start it on your Infoprint Manager AIX server:

1. From an AIX command line, use either smit or smitty to access the System Management Interface Tool.
2. From the main menu, take the **Print Spooling** → **Manage Print Server** path.
3. From the **Manage Print Server** panel, scroll down and click on the **Show Status of the Print Server Subsystem** selection.

If the **lpd** subsystem displays an inoperative status, return to the Manage Print Server panel and click on the **Start the Print Server Subsystem (lpd daemon)** selection.

If the **lpd** subsystem displays an active status and shows a **PID** value, you can exit the SMIT interface and do not have to take any action.

4. From the **Start the Print Server Subsystem** panel, take the default values and press **Enter**.

The system responds with a message similar to the following:

```
0513-059 The lpd Subsystem has been started. Subsystem PID is 25550.
```

which indicates that the **lpd** daemon is now active.

5. Exit the SMIT interface.

Defining devices that use Infoprint Manager for access method U

To define SAP devices to use access method **U**, follow this procedure:

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	Explanation	Example Value
Output Device	Type the name that R/3 users need to access the printer.	ipm1pms
Device type	Select the device type that has been defined in the R/3 system for the printer model. For example, POST2 applies to any PostScript printer.	POST2
Spool server	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.	hrmssbx_SBX_00
Destination hosts	Type the hostname for the Infoprint server.	nwser

Host printer	Type the name of the Infoprint Manager logical destination.	prt1-lp
Device class	Enter a space so that this field accepts the default value of printer, which is P, or you can specify Standard printer, as in the example on Figure 67.	
Access method in host spool	Select the method that the spool work process uses to pass data to the host spool system.	U

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

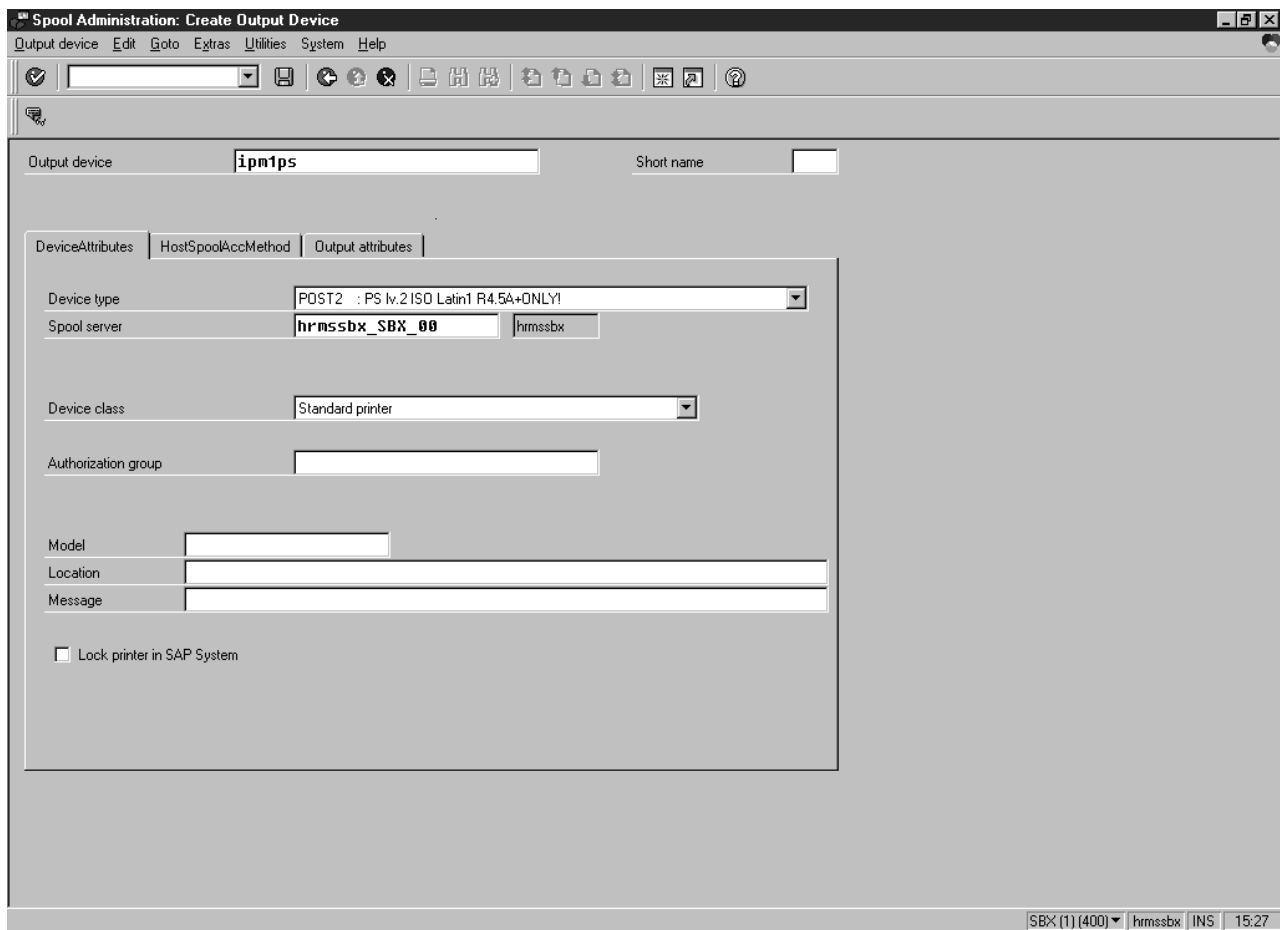


Figure 67. Sample printer definition for access method U from Spool Administration: Create Output Device window

Once you have completed this task, you can begin submitting jobs to Infoprint Manager.

Submitting jobs from Windows SAP systems to Infoprint Manager Windows with access method C

If your SAP system runs on a Windows system, you can submit jobs to a printer running on an Infoprint Manager Windows server through Access Method C. To configure your Windows SAP system to print through an Infoprint Manager Windows server, you must create a Windows gateway printer on that Infoprint Manager Windows server, and then define devices on your SAP system to use access method C.

A Windows gateway printer is the combination of a printer driver and a port. You can create a Windows printer using the Windows **Add printer** wizard. You can see these printers from the **Windows Printers** window, but you should never open and modify them from there.

To define SAP devices to use access method C, follow this procedure:

1. Ensure that you have a logical printer defined in Infoprint Manager that sends jobs to your actual destination 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	Explanation	Example Value
Output Device	Type the name that R/3 users will need to access the printer.	prt2
Device type	Select the device type that has been defined in the R/3 system for the printer model. HPLJ4 applies to a Hewlett-Packard LaserJet 4 printer.	HPLJ4
Spool server	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.	rt1_RT1_00
Host printer	Type the hostname of the Infoprint Manager Windows server (ANAKE), followed by the Windows shared printer name (EDPTEST).	\\ANAKE\EDPTEST
Device class	Enter a space so that this field accepts the default value of printer, which is P.	
Access method in host spool	Select the method that the spool work process uses to pass data to the host spool system.	C

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

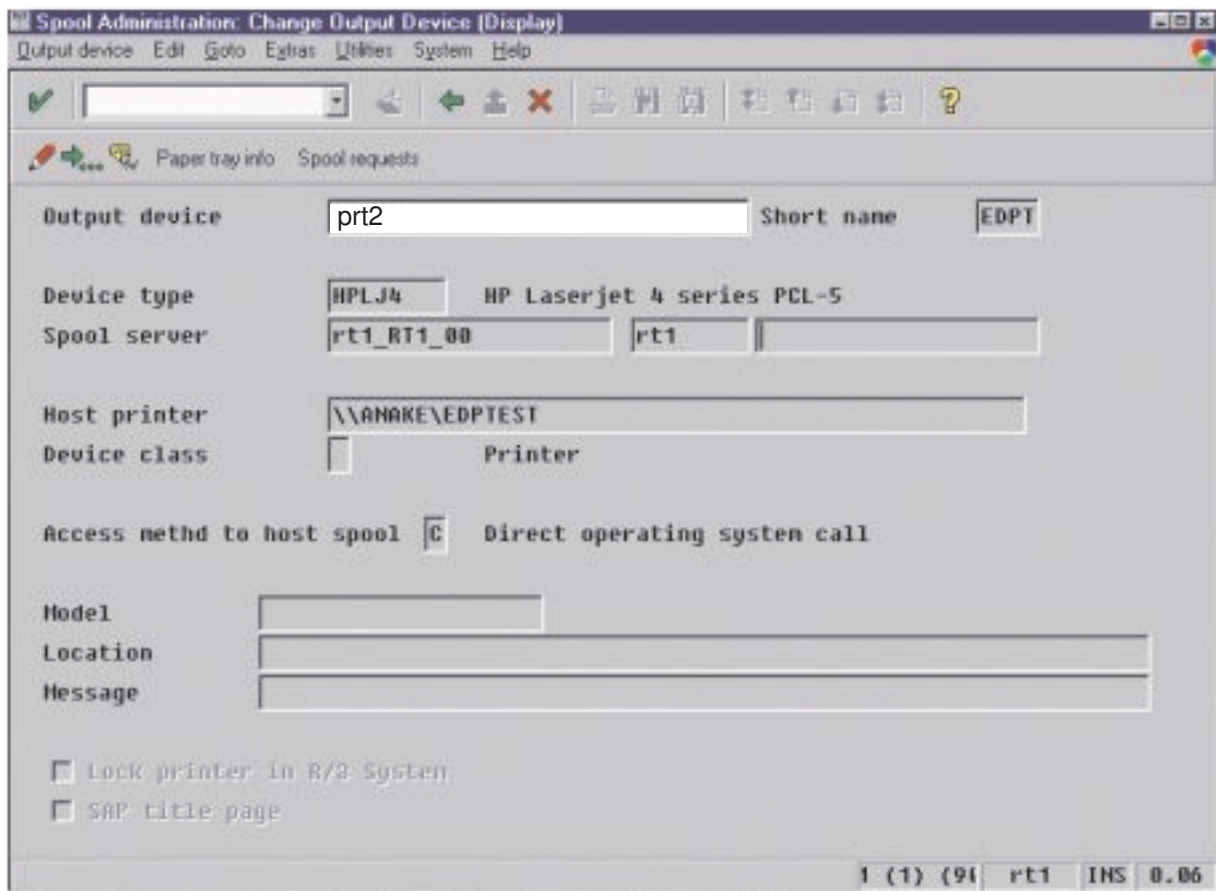


Figure 68. Sample printer definition for access method C from Spool Administration: Change Output Device window

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EuroReady

Infoprint Manager is capable of processing data containing the euro sign. Font character sets and code pages that contain and map the euro sign consistently with the application must be present either in a host library or in the printer. AFP fonts that support the euro sign are included in the AFP Font Collection (Program Number 5648-B33).

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Fold and Tape

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