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z/OS Version 1 Release 5 Infoprint Server Enhancements



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eNetwork	DFSMS/MVS	IMS	RACF
geoManager	DFSMSdfp	IMS/ESA	RMF
AD/Cycle	DFSMSdss	IP PrintWay	RS/6000
ADSTAR	DFSMSshm	IPDS	S/390
AFP	DFSMSrmm	Language Environment	S/390 Parallel Enterprise Server
APL2	DFSORT	Multiprise	SecureWay
APPN	Enterprise System 3090	MQSeries	StorWatch
BookManger	Enterprise System 4381	MVS/ESA	Sysplex Timer
BookMaster	Enterprise System 9000	Network Station	System/390
C/370	ES/3090	NetSpool	SystemView
CallPath	ES/4381	OfficeVision/MVS	SOM
CICS	ES/9000	Open Class	SOMobjects
CICS/ESA	ESA/390	OpenEdition	SP
CICS/MVS	ESCON	OS/2	VisualAge
CICSPlex	First Failure Support Technology	OS/390	VisualGen
COBOL/370	FLowMark	Parallel Sysplex	VisualLift
DataPropagator	FFST	Print Services Facility	VTAM
DisplayWrite	GDDM	PrintWay	WebSphere
DB2	ImagePlus	ProductPac	3090
DB2 Universal Database	Intelligent Miner	PR/SM	3890/XP
DFSMS/MVS	IBM	QMFr	z/OS
			z/OS.e

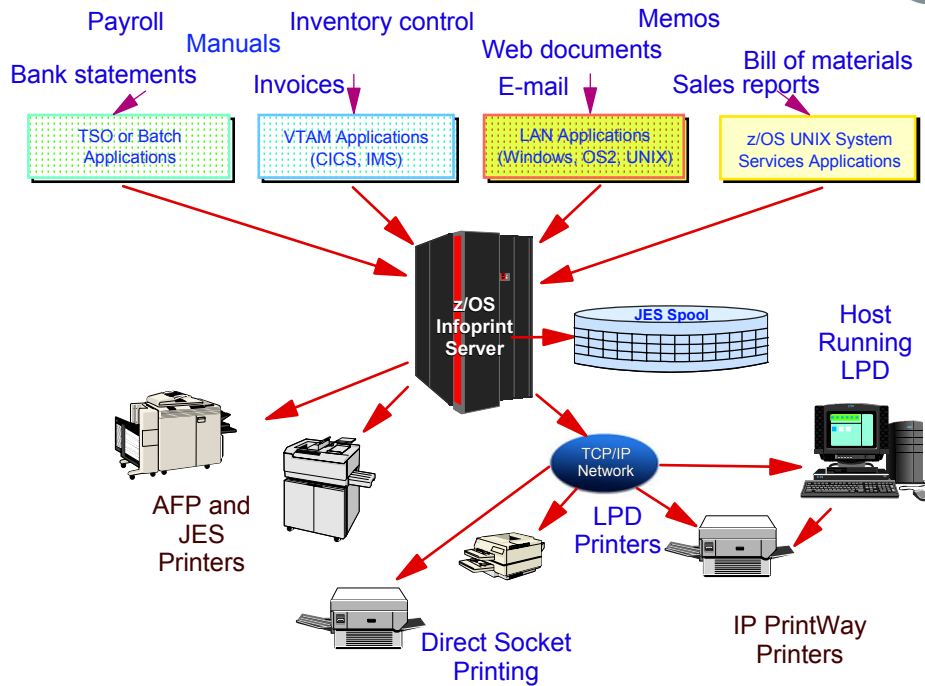
Domino (Lotus Development Corporation)
DFS (Transarc Corporation)
Java (Sun Microsystems, Inc.)
Lotus (Lotus Development Corporation)

Tivoli (Tivoli Systems Inc.)
Tivoli Management Framework
(Tivoli Systems Inc.)
Tivoli Manger (Tivoli Systems Inc.)

UNIX (X/Open Company Limited)
Windows (Microsoft Corporation)
Windows NT (Microsoft Corporation)

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z/OS Infoprint Server



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Infoprint Server



- ❑ Infoprint Server is an optional feature of z/OS
 - Uses z/OS UNIX System Services
- ❑ Feature is the basis for a total print serving solution
 - z/OS environment - OS/390 environment
- ❑ Can consolidate your print workload from many servers
 - To a central z/OS print server

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Infoprint Server Major Components



- ❑ **IP PrintWay** - Fast access to TCP/IP-connected printers and to VTAM-controlled printers
 - IP PrintWay extended mode (New with z/OS v1R5)
- ❑ **NetSpool** - Automatically directs VTAM application data to JES spool without requiring application changes
- ❑ **Infoprint Central** - Allows help desk operators and other authorized users or job submitters work with print jobs, printers, and NetSpool logical units (LUs); display printer definitions; and check system status
 - Infoprint Central is a Web-based print management system available with **z/OS V1R5**

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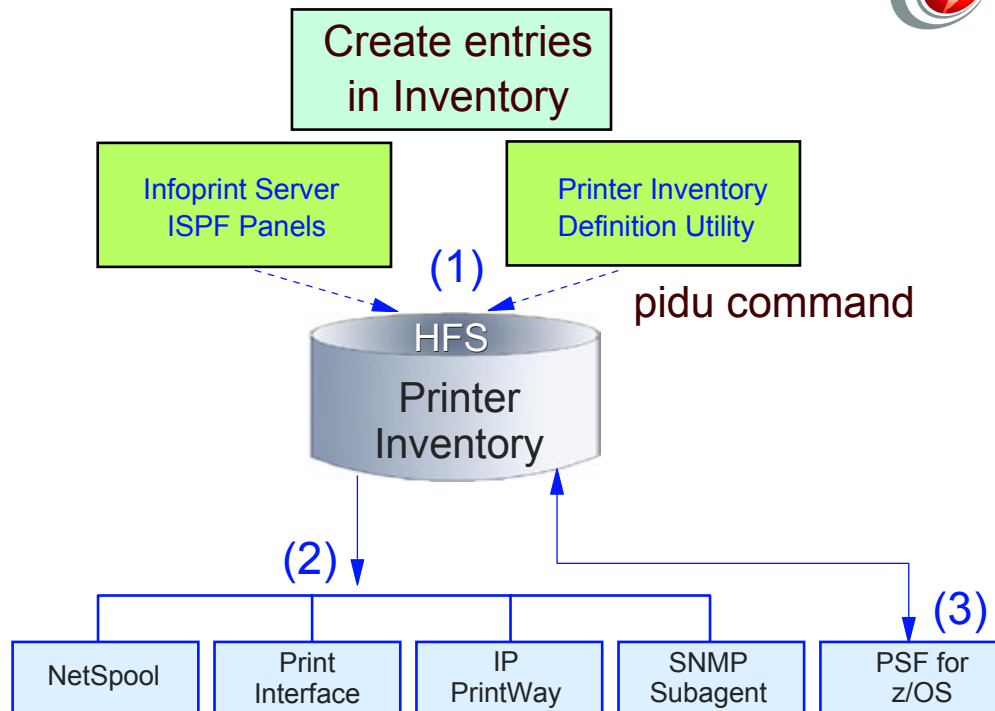
z/OS V1R5 Enhancements



- ❑ New daemons
- ❑ IPP Server now supports Java 1.4
- ❑ Security Enhancements
 - Read-only access to the printer inventory
 - Control access to Infoprint Central functions
 - New profiles in RACF PRINTSRV class
- ❑ IP PrintWay - miscellaneous enhancements
 - SMF Type 6 enhancements
 - IP PrintWay support for large files > 2 GB
 - IPv6 support
- ❑ NetSpool enhancements
- ❑ Common Message Log
- ❑ E-mail enhancements

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Printer Inventory Manager



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Printer Inventory Manager Panel



☐ New option changes:

- Option 4 - Job selection definitions (rules) for IP PrintWay extended mode
- Options 5 and 6 now say basic mode

```

Infoprint Server: Printer Inventory Manager
Option ===> _____

Printer Definitions
 1 Add          Add a printer definition
 2 List        List printer definitions
 3 Select      Select printer definitions to list

Other Functions
 4 Other Definitions  Manage FSS, FSA, pool, and job selection definitions
 5 PrintWay Queue    View IP PrintWay basic mode transmission queue
 6 PrintWay Message  View IP PrintWay basic mode message log
 7 Configure        Change panel configuration
    
```

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Infoprint Server Configuration File



/etc/Printsrv/aopd.conf

```
# default aopd configuration
server-port      = 515
start-daemons   = {lpd xfd ippd subd ssid outd netd}
base-directory   = /var/Printsrv
ascii-codepage   = ISO8859-1
ebcdic-codepage  = IBM-1047
job-prefix       = PS
ipp-port-number  = 631
snmp-community   = public
smf-recording    = no
log-retention    = 2
console-name     = prtcon
max-historical-inventory-size = 1
inventory        = AOP1
```

outd starts extended mode daemons (z/OS V1R5)

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New Daemons with z/OS V1R5



start-daemons = {lpd xfd ippd subd ssid outd netd}

- ☐ **netd** - The NetSpool daemon, **aopnetd**
- ☐ **outd** - The IP PrintWay extended mode daemons, **aopoutd** and **aopwsmd**
 - When you start IP PrintWay again, any IP PrintWay printers that were stopped return to the started state, and any printers that were redirected to other printers are no longer redirected
- ☐ **ssid** - The Infoprint Central daemon, **aopssid**

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Other Changes to AOPD.CONF



- ❑ New attributes in **aopd.conf** configuration file:
 - **log-retention** - how long to retain messages and historical information
 - **max-historical-inventory-size** - limits the size of the /var/Printsrv/hinv directory
 - **smf-recording** - specifies whether IP PrintWay extended mode is to write SMF type 6 records

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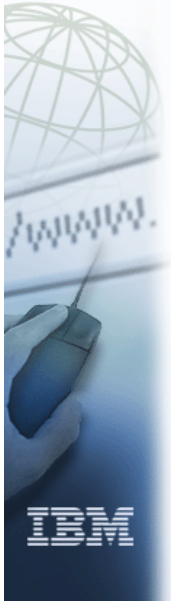
Update to AOPD.CONF



- ❑ Specify name of the extended MCS console
 - Default console name is AOPAOP1C
 - Default name AOPnnnnC
 - nnnn is the name of the Printer Inventory
 - console-name = INFOPRT
- ❑ Specify how long to keep information on historical jobs
 - Limits historical print jobs and messages that Infoprint Central can display
 - log-retention = 2
- ❑ Specify maximum size of historical inventory (optional)
 - Limits the size of the historical inventory
 - max-historical-inventory-size = 80

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Security Enhancements with the PRINTSRV Class z/OS V1R5



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New RACF Class (PRINTSRV)



- ❑ General resource class - Profile names up to 64 characters
- ❑ Ensure PRINTSRV class is active and profiles in storage:
 - SETROPTS CLASSACT(PRINTSRV) RACLIST(PRINTSRV)
- ❑ Use to protect:
 - Printer Inventory - AOP.ADMINISTRATOR
 - Common message log
 - Operator commands
 - Infoprint Central
 - Infoprint Server daemons - AOP.DAEMON

RDEFINE PRINTSRV (AOP.ADMINISTRATOR) UACC(READ)
SETROPTS RACLIST(PRINTSRV) REFRESH

(Replaces the AOPADMIN profile in the FACILITY class)

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Read-only Access to Printer Inventory

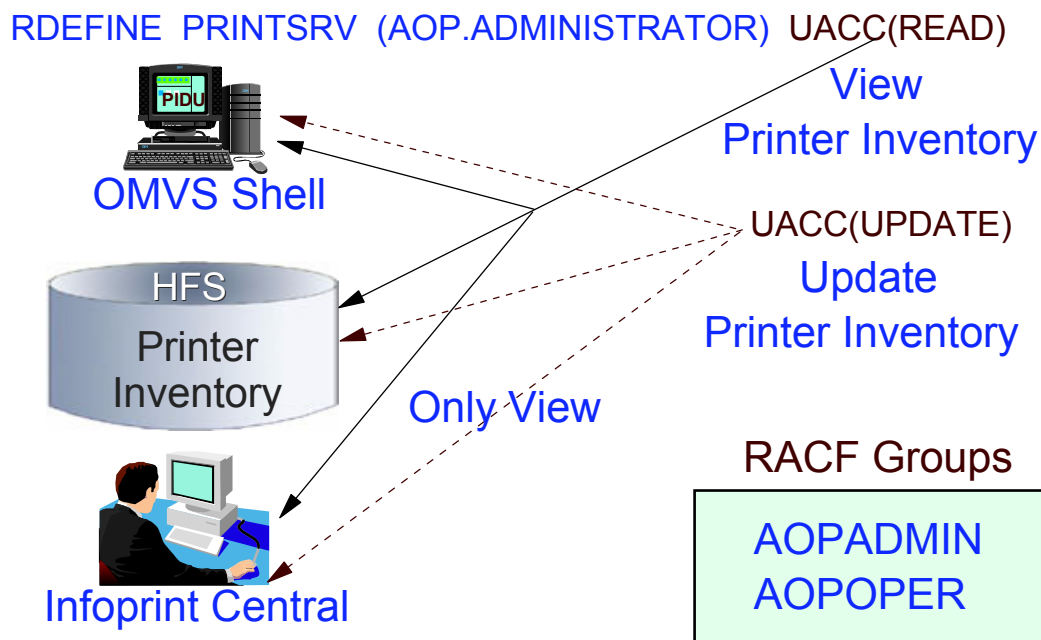


- ❑ PRINTSRV class is checked first
 - If AOP.ADMINISTRATOR profile exists
 - It will be used for access checking
 - If AOP.ADMINISTRATOR profile not defined
 - AOPADMIN profile in FACILITY class will be checked (Current profile)
 - Compatibility with previous releases



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Provide Users Access to Inventory

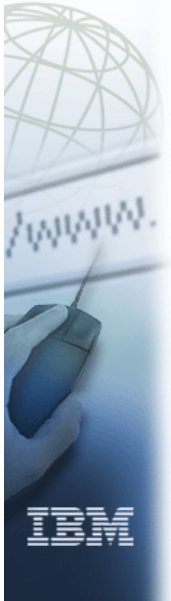


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Infoprint Central z/OS V1R5



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Infoprint Central Overview



☐ **Problem Statement / Need Addressed:**

- Managing distributed print is a difficult, frustrating task
 - End users can not find their output
 - Print queues get backed up and jobs do not print
- Multiple customers requested print management functions from Infoprint Server

☐ **Solution:**

- Web-based user interface to perform help desk tasks related to print management
 - Manage printers
 - Obtain status of print jobs
 - Diagnose printing problems

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Infoprint Central Overview



- ❑ Infoprint Central primarily for:
 - Help desk operators
 - Other authorized users or job submitters
- ❑ Only with IP PrintWay extended mode
- ❑ Single point of control for print management on z/OS
- ❑ No installation required on client workstation
- ❑ Easy to use - "Point and click"
- ❑ Reduces training required for help desk operators
- ❑ Allows end users to check status of their print jobs

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Infoprint Central Requirements



- ❑ Infoprint Central requires:
 - The z/OS HTTP Server and a Web browser
- ❑ For English version to connect, use:
 - http://hostname:port/Infoprint/En_US/IPS.html
 - hostname - host name of the z/OS system where the HTTP Server is running
 - port - port number where the HTTP Server receives requests
 - Can omit the port number if using default port 80
- ❑ To access Infoprint Central from a workstation, Enter:

http://wtsc65oe.itso.ibm.com/Infoprint/En_US/IPS.html

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Web Browsers Supported



☐ Infoprint Central supports these Web browsers:

- Microsoft Internet Explorer 5.5 (or a higher level)
- Netscape Navigator 7.0 (or a higher level)
- IBM Home Page Reader 4.0 (or a higher level) for users with disabilities

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z/OS HTTP Server Configuration File



☐ Update the configuration file

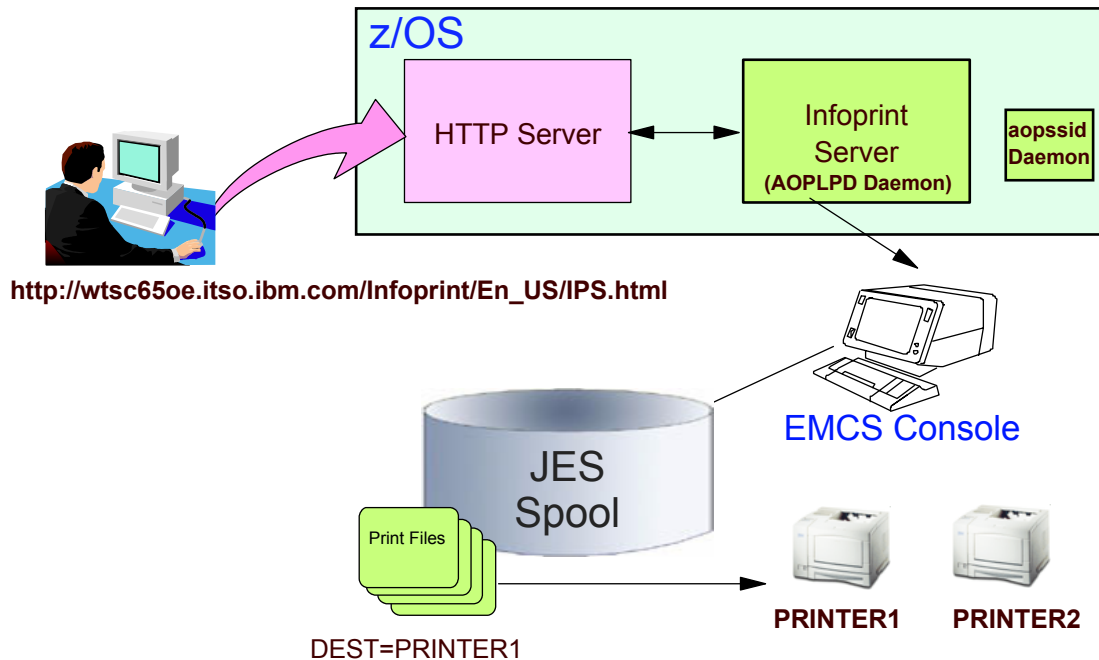
- /usr/lpp/Printsrv/samples/httpd.conf.updates

☐ Add the Pass directives before the ServerInit and Service directives and before the generic Pass directive, Pass /*

```
Pass /Infoprint/Scripts/* /usr/lpp/Printsrv/InfoprintCentral/Scripts/*
Pass /Infoprint/Images/* /usr/lpp/Printsrv/InfoprintCentral/Images/*
Pass /Infoprint/help/En_US/* /usr/lpp/Printsrv/InfoprintCentral/help/En_US/*
Pass /Infoprint/En_US/*.html /usr/lpp/Printsrv/InfoprintCentral/html/En_US/*.html
```

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Infoprint Central and Infoprint Server



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EMCS Console for Infoprint Central



- ☐ Used to issue commands and receive responses
 - JES2 commands
 - JES3 commands
 - MVS MODIFY and VARY commands
- ☐ Receives responses only to commands issued by Infoprint Server
- ☐ Console name configurable in aopd.conf file
 - Default name based on printer inventory name - (AOP1)

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Infoprint Central Security Considerations



- ❑ What you can protect:
 - Who can use Infoprint Central
 - Which printers a user can control
 - IP PrintWay extended mode printers
 - PSF printers
 - Which jobs a user can see
 - What actions the user can perform
 - On jobs and on printers
 - Who can start and stop
 - Printers
 - Job selection rules
 - NetSpool LUs
 - Who can display status of Infoprint Server daemons

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Infoprint Central Users Access



- ❑ To Printer Inventory for viewing:
 - PSF printers
 - Printer definitions
 - Printer pool definitions
 - IP PrintWay job selection rules



```
RDEFINE PRINTSRV (AOP.ADMINISTRATOR) UACC(NONE)
PERMIT AOP.ADMINISTRATOR CLASS(PRINTSRV)
ACCESS(UPDATE) ID(AOPADMIN)
```

```
SETROPTS RACLIST(PRINTSRV) REFRESH
```

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Special Access to Resources



RDEFINE PRINTSRV (AOP.ADMINISTRATOR) UACC(NONE)

For Users

PERMIT AOP.ADMINISTRATOR CLASS(PRINTSRV)
ACCESS(READ) ID(userid or group)

SETROPTS RACLIST(PRINTSRV) REFRESH

For Administrators

PERMIT AOP.ADMINISTRATOR CLASS(PRINTSRV)
ACCESS(UPDATE) ID(AOPADMIN)

SETROPTS RACLIST(PRINTSRV) REFRESH

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Protecting Printer Access with RACF



☐ PRINTSRV class

- This new RACF class in z/OS V1R5 is used by Infoprint Server to create profiles to restrict who can work with IP PrintWay and PSF printers

☐ OPERCMDS class

- Profiles in the OPERCMDS class restrict who can work with PSF printers using operator commands

- ☐ **Note:** If you define profiles in both classes, users must have access to both profiles to do actions on PSF printers

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User Access to Infoprint Central



- ❑ Two requirements for access to Infoprint Central
 - RACF user ID and password
 - Unauthenticated users not allowed access
 - Must be a z/OS UNIX user -TSO segment not required
 - READ access to Printer Inventory
 - PERMIT AOP.ADMINISTRATOR CLASS(PRINTSRV) ACC(READ)

http://wtsc65oe.itso.ibm.com/Infoprint/En_US/IPS.html



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Security for Infoprint Server Daemons





- ❑ Who can display daemons
- ❑ Define resource profile in the PRINTSRV class
 - AOP.DAEMON
 - RDEFINE PRINTSRV (AOP.DAEMON) UACC(NONE)
- ❑ Give users access to AOP.DAEMON resource profile
 - PERMIT AOP.DAEMON CLASS(PRINTSRV) ACCESS(READ) ID(userid or groupid)
 - SETROPTS RACLIST(PRINTSRV) REFRESH

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Infoprint Central Daemons and Tasks






System Daemons and Tasks

The status of Infoprint Server daemons and NetSpool started tasks.

Printer Inventory AOP1

Component	Daemon or task name	Defined	Status
Printer Inventory Manager	Printer inventory daemon (aopd)	N/A	<input checked="" type="checkbox"/> Started
	Message logging daemon (aoplogd)	N/A	<input checked="" type="checkbox"/> Started
Print Interface	Line printer daemon (aoplpd)	Yes	<input checked="" type="checkbox"/> Started
	IPP Server daemon (aopipdd)	Yes	<input checked="" type="checkbox"/> Started
	Print Interface subsystem daemon (aopsd)	Yes	<input checked="" type="checkbox"/> Started
IP PrintWay	Output daemon (aopoutd)	Yes	<input checked="" type="checkbox"/> Started
	Job selection daemon (aopwsmd)	N/A	<input checked="" type="checkbox"/> Started
Transform Manager	Transform manager daemon (aopxtd)	Yes	<input checked="" type="checkbox"/> Started
SNMP Subagent	SNMP subagent daemon (aopsnmpd)	No	
Infoprint Central	Command daemon (aopssid)	Yes	<input checked="" type="checkbox"/> Started
	Inventory search database daemon (aopsdbd)	N/A	<input checked="" type="checkbox"/> Started
	Historical job daemon (aophinvd)	N/A	<input checked="" type="checkbox"/> Started
NetSpool	NetSpool daemon (aopnetd)	Yes	<input checked="" type="checkbox"/> Started

 IP PrintWay Job Selection Rules

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IP PrintWay Update with z/OS Version 1 Release 5



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IP PrintWay Extended Mode - z/OS V1R5

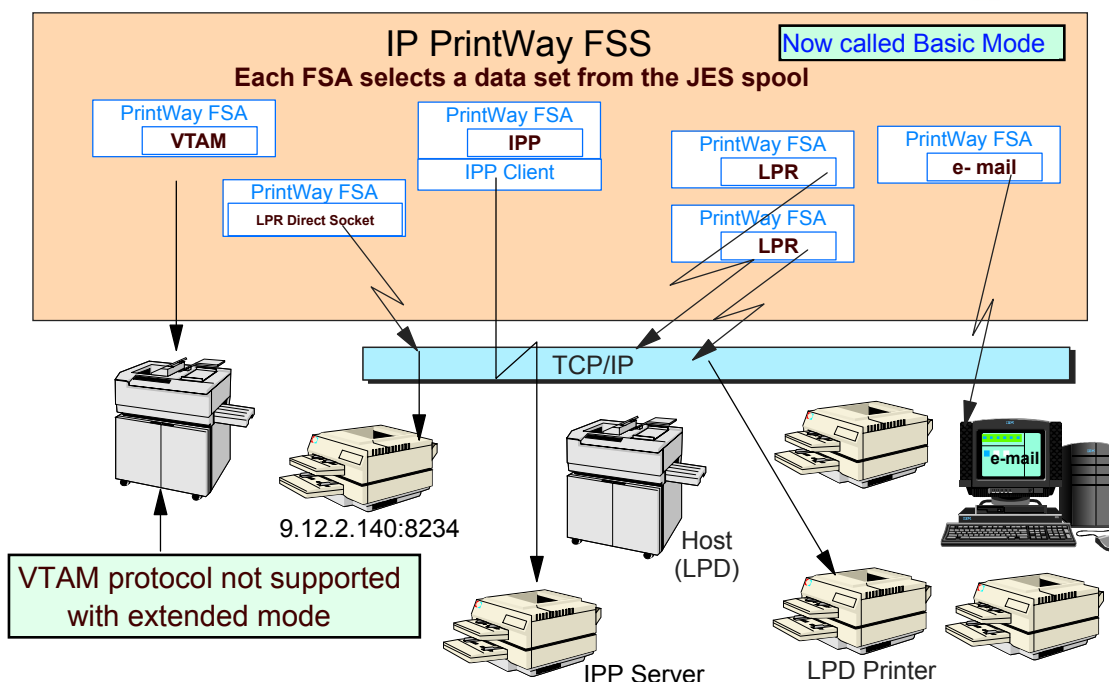


2 modes for IP PrintWay

- ❑ New IP PrintWay Extended Mode: (1)
 - Uses the Process Sysout API (SAPI) to:
 - Obtain jobs from the JES spool and send them to remote TCP/IP-attached printers and e-mail destinations
- ❑ Provides better control of work selection criteria
- ❑ Enables administrators to more easily:
 - Cancel the currently printing job
 - Stop and restart printing to a printer
 - Restart retained jobs
- ❑ IP PrintWay Basic Mode (FSS): - Current mode (2)

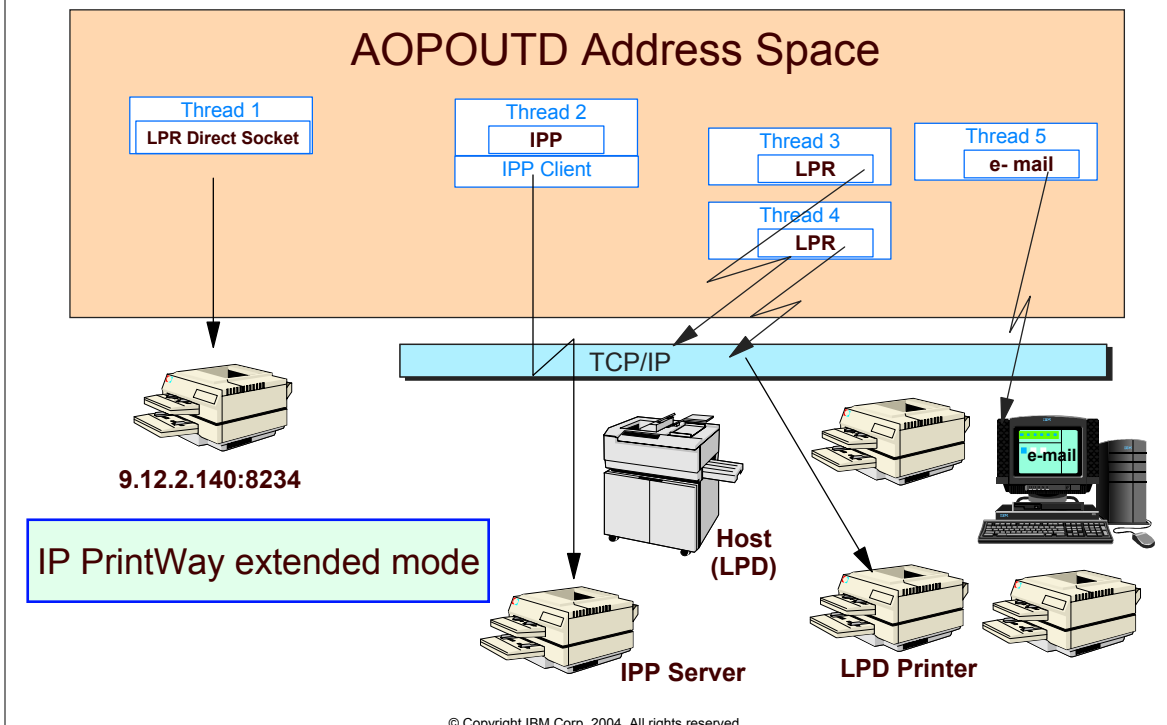
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Infoprint Server IP PrintWay Printing

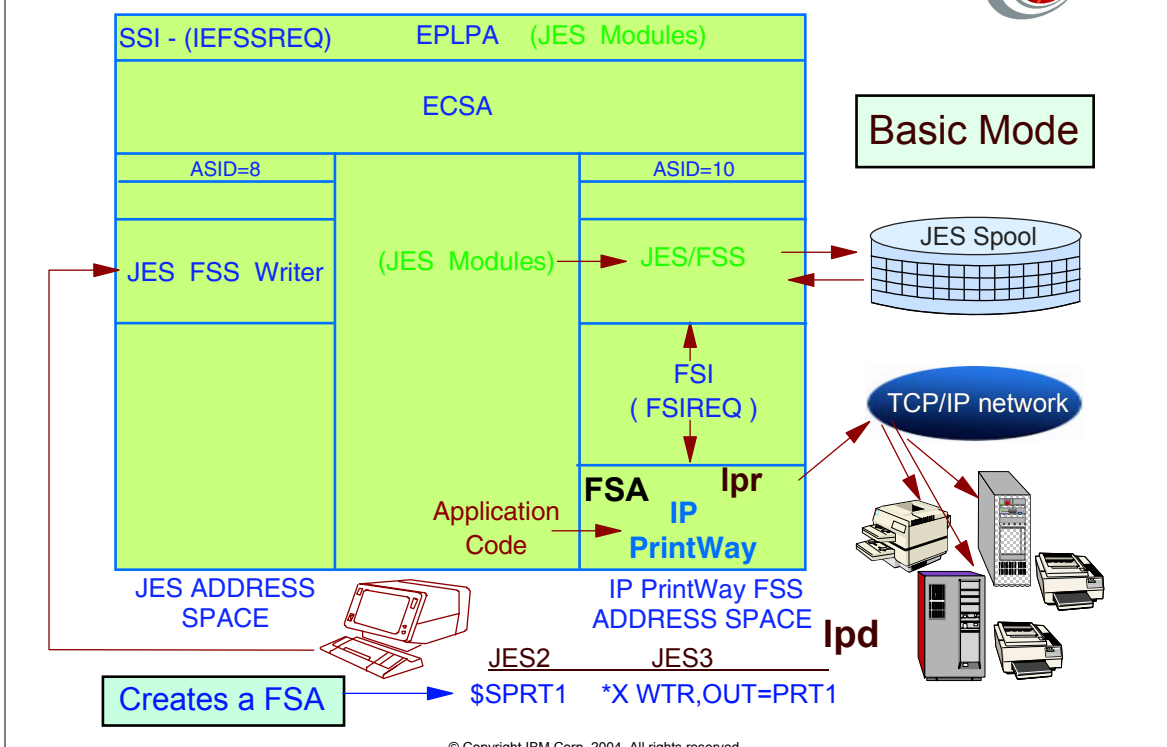


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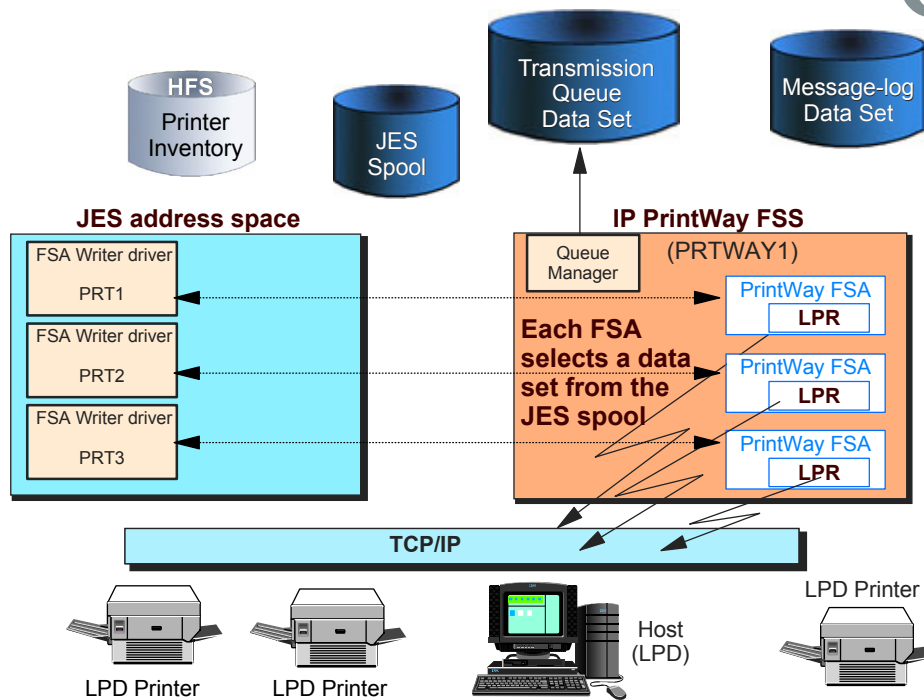
Infoprint Server IP PrintWay Printing



Starting IP PrintWay FSS

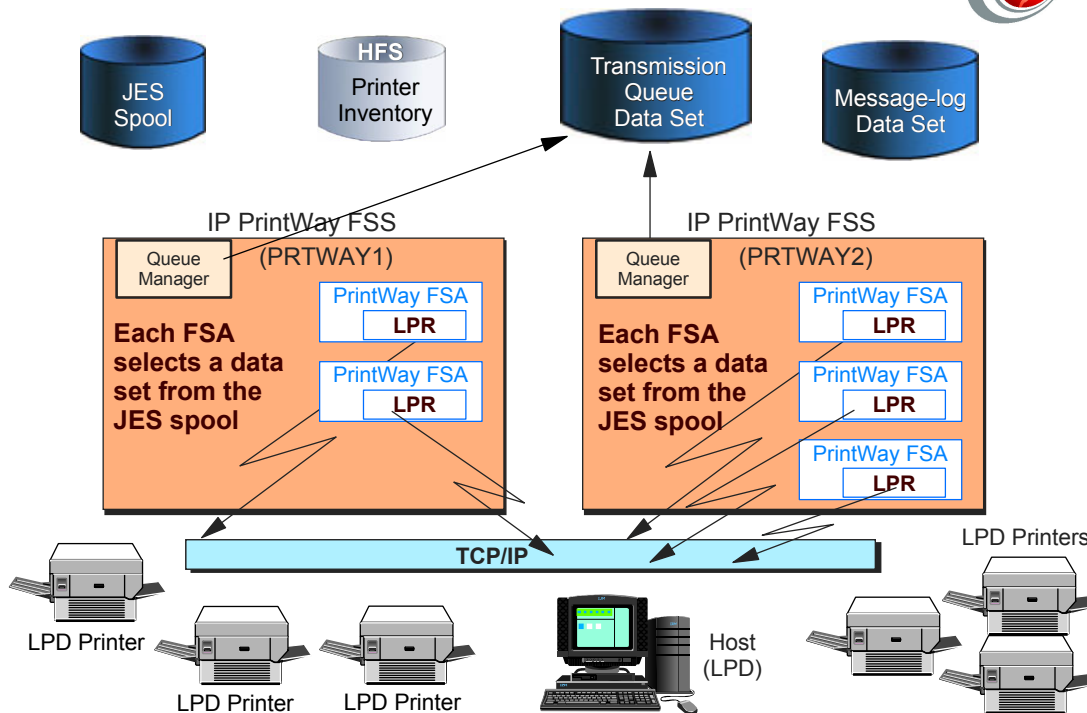


IP PrintWay and JES (Infoprint Server)



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IP PrintWay FSS Address Spaces



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JES Definitions for IP PrintWay



JES2

FSS(PRTWAY1),PROC=ANFWPROC

PRT1 FSS=PRTWAY1,MODE=FSS,START=NO,TRKCELL=YES,WS=(Q),CL=J

PRT2 FSS=PRTWAY1,MODE=FSS,START=NO,TRKCELL=YES,WS=(Q),CL=J

PRT3 FSS=PRTWAY1,MODE=FSS,START=NO,TRKCELL=YES,WS=(Q),CL=J

JES3

FSSDEF,TYPE=WTR,FSSNAME=PRTWAY1,PNAME=AFNWPROC,

DEVICE,DTYPE=PRTAFP1,JNAME=PRT1,FSSNAME=PRTWAY1,

JUNIT=(,SC50,UR,,,SC49,UR),MODE=FSS,WC=(J),WS=(CL)

DEVICE,DTYPE=PRTAFP1,JNAME=PRT2,FSSNAME=PRTWAY1,

JUNIT=(,SC50,UR,,,SC49,UR),MODE=FSS,WC=(J),WS=(CL)

DEVICE,DTYPE=PRTAFP1,JNAME=PRT3,FSSNAME=PRTWAY1,

JUNIT=(,SC50,UR,,,SC49,UR),MODE=FSS,WC=(J),WS=(CL)

With z/OS V1R5 - Not required with Extended Mode

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IP PrintWay Extended Mode



- ❑ Using IP PrintWay extended mode, you can
 - Manage all IP PrintWay printers and print jobs from the web using Infoprint Central
 - Redirect print jobs from one printer to another
 - Delete and hold jobs that IP PrintWay extended mode is currently processing
 - Retain any number of print jobs, up to the limits of the size of the JES spool
 - Call data stream transforms and other filters directly without resubmit for filtering
 - Process print jobs larger than 2 gigabytes

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Extended Mode Advantages



- ☐ Better Performance
- ☐ Increased reliability
- ☐ Improved usability
- ☐ New printer management functions
- ☐ New print job management functions
- ☐ All messages written to common message log
- ☐ Automatically detect data format and verify job will print on selected printer

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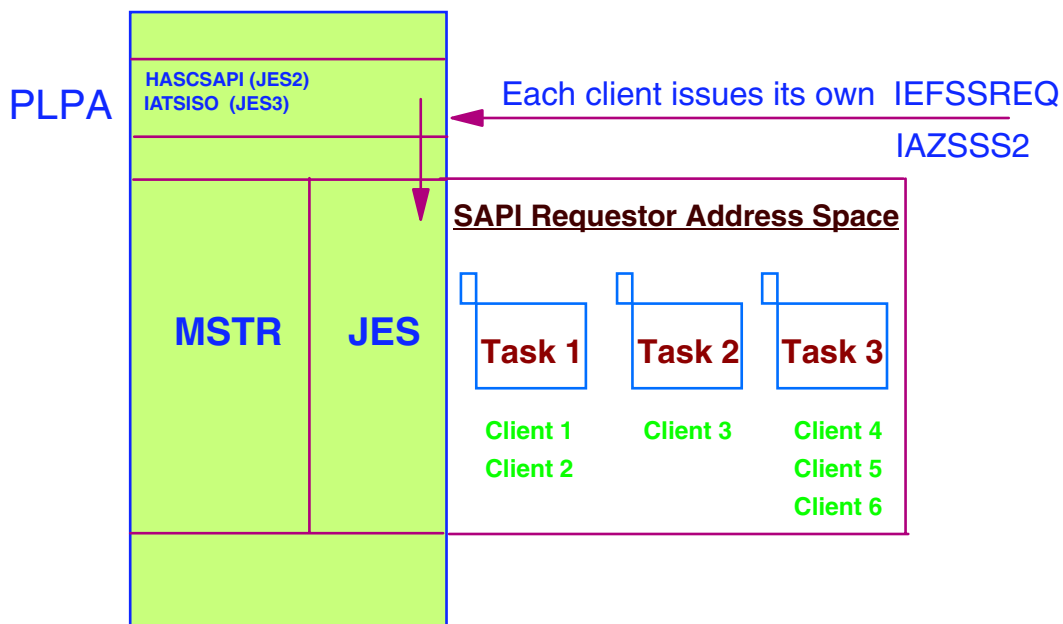
New Functions with Extended Mode



- ☐ Process and retain more data sets on the JES spool without running out of address space. This reduces the possibility of ending abnormally with an F02abend code
- ☐ Prints output data sets in priority order
- ☐ Print data sets larger than 2 gigabytes if space is available in the file system
- ☐ Print to printers that have IPv6 addresses
 - You must use the host name (instead of the colon-hexadecimal address) in the DEST=IP: JCL parameter, in Infoprint Server job attributes, and in printer definitions
- ☐ Writes the printer address for all protocol types in the SMF type 6 record

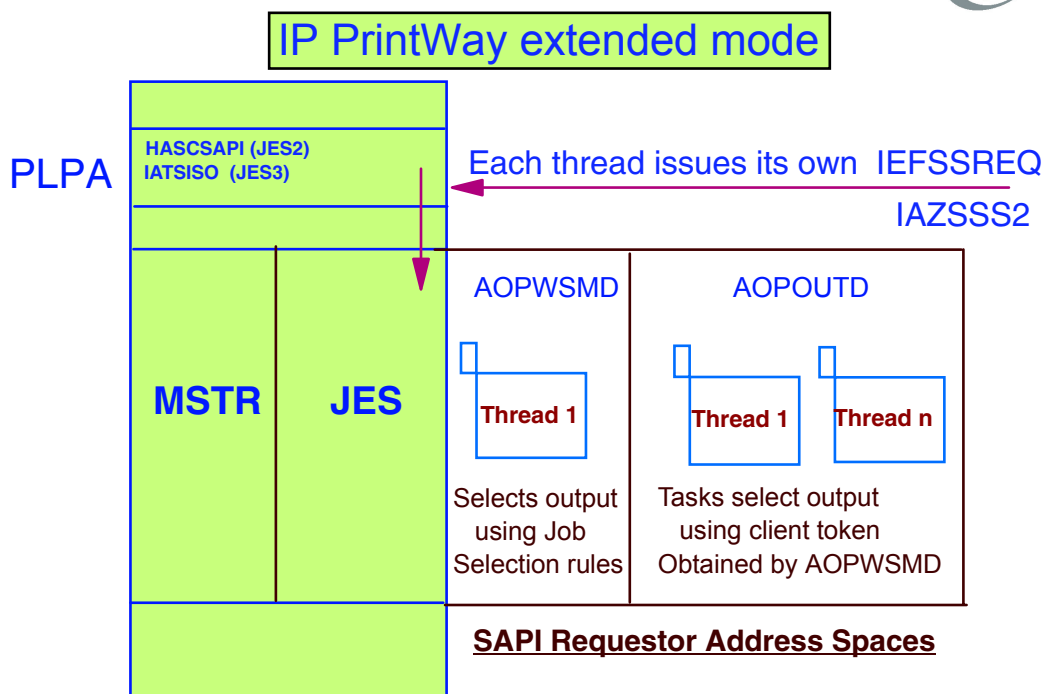
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SAPI Design - (OS/390 V2R3)



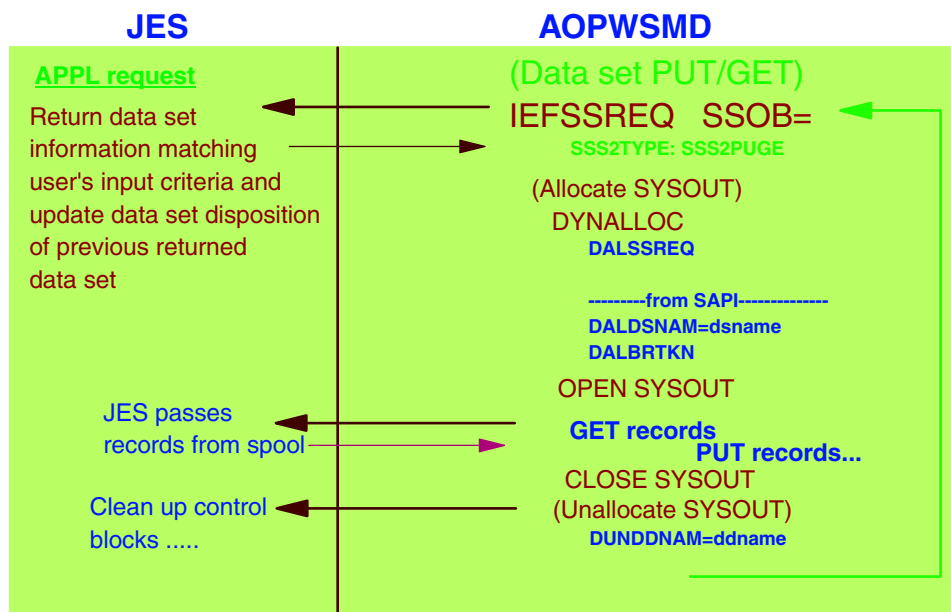
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Infoprint Server SAPI Requestors



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Client Request to JES



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Benefits of using SAPI



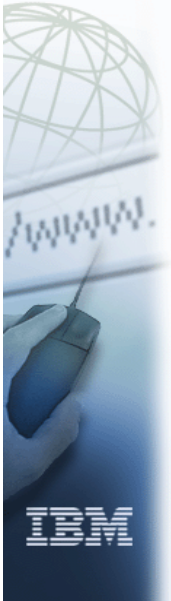
- ☐ Provide better control of work selection criteria
- ☐ Improve performance
- ☐ No defining of FSA printers to JES
- ☐ Currently, selected data sets may not be modified using SDSF because printway has acquired and owns the selected data set
- ☐ Current implementation allows a limited number of FSA's within an FSS
- ☐ Eliminate duplicate work currently done in Print Interface and Printway

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IP PrintWay Extended Mode Job Selection Rules



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Printer Inventory - Selection Rules



- ☐ ISPF panels to set job selection rules
- ☐ Create job selection rules based on:
 - DEST - CLASS - FORMS - CREATOR - WRITER
 - DEST IP Address: Include, Exclude, Ignore
 - DEST=IP parameter on the OUTPUT JCL statement
- ☐ Set up security profile for controlling job selection rules
- ☐ Enable SMF recording for Type 6 records
 - smf-recording = { yes | no } - (AOPD.CONF)

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Create Job Selection Rule Panel



☐ From the Infoprint Server primary panel

- Select Option 4 to then see
 - The FSA, FSS, Pool, and Job Selection Rule Management panel

➤ From this panel, select Option 10

RACF profile

```
Edit                                     Job Selection Rule
Command ==> _____

Rule name . . . SAPI
Description . Job Selection rule for SAPI interface_____ (extend)
Operator security profile
. . . . POK.JOBSEL_____

DEST. . . . *_____
CLASS . . . E _____
FORMS . . . STD _____
Creator . _____
WRITER. . _____

DEST IP address . 3 1. Include 2. Exclude 3. Ignore
```

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Operator Security Profile



☐ Operator security profile

- Define profiles to protect job selection rules
 - Otherwise, any Infoprint Central user who is authorized to read the Printer Inventory can display, start, and stop job selection rules
 - If you specify a profile name that is not defined to RACF, or if this field is blank, anyone can work with this printer

Do not use AOP

```
RDEFINE PRINTSRV POK.JOBSEL UACC(NONE)
RDEFINE PRINTSRV (AOP.ADMINISTRATOR) UACC(NONE)
```

Display	PERMIT AOP.ADMINISTRATOR CLASS(PRINTSRV) ACCESS(READ) ID(userid or group)
Start	PERMIT POK.JOBSEL CLASS(PRINTSRV) ACC(CONTROL) ID(userid or group)
Stop	PERMIT POK.JOBSEL CLASS(PRINTSRV) ACC(CONTROL) ID(userid or group)

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Listing the Job Selection Rules



From the Infoprint Server primary panel

- Select Option 4 to then see
 - The FSA, FSS, Pool, and Job Selection Rule Management panel
- From this panel, select Option 11 to list the defined rules

```

AOPIPWLI                                     Job Selection Rule List
Command ==>

Actions:
  A-Add  B-Browse  C-Copy  D-Delete  E-Edit
A Rule Name      DEST      Description
= =====
- FSHIFT          *          Printing during the first shift
- Night-Shift     *          Output selection for the night shift
- SAPI            *          Job Selection rule for SAPI interface
***** Bottom of data *****
    
```

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Daemons/Tasks - Job Selection Rules



System Status button to display this panel

System Daemons and Tasks

The status of Infoprint Server daemons and NetSpool started tasks.

Printer Inventory AOP1

Job Selection Rules

Component	Daemon or task name	Defined	Status
Printer Inventory Manager	Printer inventory daemon (aopd)	N/A	Started
	Message logging daemon (aoplogd)	N/A	Started
Print Interface	Line printer daemon (aoplpd)	Yes	Started
	IPP Server daemon (aoppipd)	Yes	Started
	Print Interface subsystem daemon (aopsubd)	Yes	Started
IP PrintWay	Output daemon (aopoutd)	Yes	Started
	Job selection daemon (aopwsmd)	N/A	Started
Transform Manager	Transform manager daemon (aopxtd)	Yes	Started
SNMP Subagent	SNMP subagent daemon (aopsnmpd)	No	
Infoprint Central	Command daemon (aopssid)	Yes	Started
	Inventory search database daemon (aopsdbd)	N/A	Started
	Historical job daemon (aophinvd)	N/A	Started
NetSpool	NetSpool daemon (aopnetd)	Yes	Started

IP PrintWay Job Selection Rules

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Activating Job Selection Rules



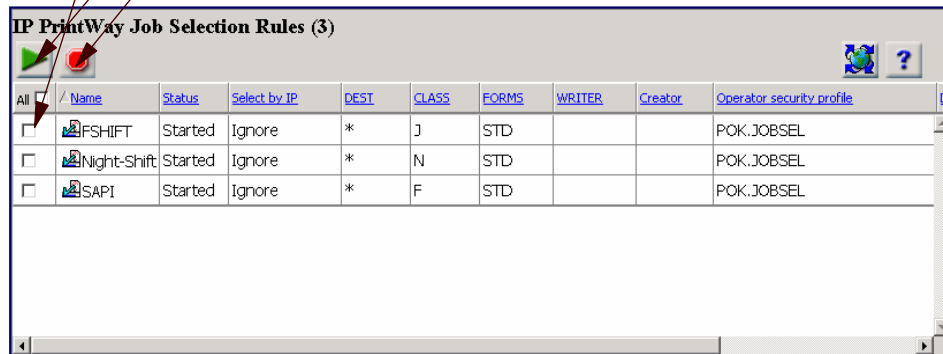
To work with all rules in the list, select All or click the rule box for a single rule - Then:

To start (enable) a rule - Select the green button

To stop (disable) a rule - Select the red button

IP PrintWay Job Selection Rules

The job selection rules defined in the Printer Inventory. IP PrintWay only selects print jobs whose properties match all of the criteria in a started job selection rule.



All	Name	Status	Select by IP	DEST	CLASS	FORMS	WRITER	Creator	Operator security profile
<input type="checkbox"/>	FSHIFT	Started	Ignore	*	J	STD			POK.JOBSEL
<input type="checkbox"/>	Night-Shift	Started	Ignore	*	N	STD			POK.JOBSEL
<input type="checkbox"/>	SAPI	Started	Ignore	*	F	STD			POK.JOBSEL

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Infoprint Central Security for Printers



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Infoprint Central Security for Printers



- ❑ **PRINTSRV class:** Profiles in this class restrict who can work with IP PrintWay and PSF printers
- ❑ **OPERCMDS class:** Profiles in the OPERCMDS class restrict who can work with PSF printers
- ❑ Define profiles in the PRINTSRV class
 - Who can work with printers
 - Define a separate profile to protect each printer
 - Define one profile to protect a group of printers
 - Define a profile for all printers
- ❑ Define profiles in Printer Inventory
 - IP PrintWay printers - Protocol panel
 - PSF printers - FSA definition panel

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Profiles in PRINTSRV Class



- ❑ A separate profile to protect each printer, as follows:
 - RDEFINE PRINTSRV (POK.PRINTER1) UACC(READ)
- ❑ One profile to protect a group of printers or all printers
 - RDEFINE PRINTSRV (POK.ROOM1) UACC(READ)
- ❑ A profile for all users to use all printers
 - RDEFINE PRINTSRV (POK.ITSO) UACC(READ)
- ❑ Or --- define a profile UACC(NONE)
 - RDEFINE PRINTSRV (POK.ROOM1) UACC(NONE)
 - PERMIT POK.ROOM1 CL(PRINTSRV) ID(user ID or group ID) ACC(READ)

(READ,UPDATE,CONTROL)

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Protecting Printers



- ❑ Each printer definition needs a security profile
- ❑ One profile to protect a group of printers or all printers
 - For printers groups - define same profile for each printer
 - RDEFINE PRINTSRV (POK.ROOM1) UACC(READ)

```
Edit                                     LPR Protocol
Command ==> _____
Printer definition name . POK45ANE _____
Operator security profile
. . . POK.ROOM1 _____

Printer IP address . 9.12.6.3 _____ (extend)
Print queue name . . afccu2 _____ (extend)
```

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PIDU Command and Security Profiles



- ❑ Use PIDU command to specify the name of the same RACF profile in all IP PrintWay printer definitions that do not already contain a profile name
 - Names piped to "awk" program
 - awk program writes modify commands to modify the printer definitions to file /tmp/defs
 - Inspect the /tmp/defs file to make sure the modify commands are acceptable
 - Enter this command to update the Printer Inventory:
 - pidu < /tmp/defs

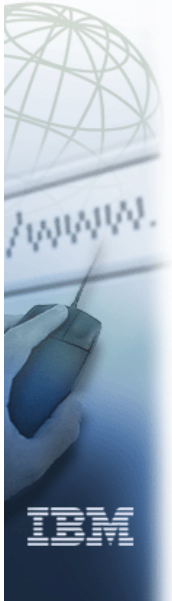
```
pidu -qc "list printer where printer-type=ip-printway and
operator-security-profile=null;" | awk '{print "modify printer
" operator-security-profile = \"PRINTERS.DENVER\";"}' > /tmp/defs
```

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Infoprint Central Working with Printers



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Infoprint Central Options



Work with Printers

Select whether you want to work with IP PrintWay printers, PSF printers, or both types of printers. Then enter one or more values to limit the number of printers displayed.

☐ IP PrintWay Printers

☐ PSF Printers

☒ Both

Show only exact matches ☐

Printer name	Location	Host name or IP address	Queue or port
IP			

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Printer Information Window



Select to display Properties

IBM. IP PrintWay Printer Information

Select an action, or expand a section to see information about the printer.

[Back to Work with Printers](#) > [Refresh IP PrintWay Printer Information](#)

Last refresh: Thu Jul 15 17:54:29 EDT 2004

+

- Properties
- Print Job Queue
- Printer Definitions
- Printer's Web Page

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Displaying Printers (Infoprint Central)



Start
Stop
Ping
Redirect
View log

IBM. IP PrintWay Printer Information

Select an action, or expand a section to see information about the printer.

[Back to Work with Printers](#) > [Refresh IP PrintWay Printer Information](#)

Last refresh: Thu Jul 15 16:44:06 EDT 2004

+

Properties

The properties of this printer.

Name	POK1228
Status	Idle
Location	POK 2-A30
Active job count	0
Type	LPR
Printer host name or IP address	pokip1228.itso.ibm.com
Print queue name	afccu2
Port number	
Printer URL	
Operator security profile	POK.ITSO

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Infoprint Central Security Access



Using Infoprint Central, the user can

1. Find and display printers - READ
2. Ping printer - READ
3. Redirect job to other printer IP PrintWay - CONTROL
4. Restore IP PrintWay printers - CONTROL
5. Start and Stop printers - CONTROL
6. View log - IP PrintWay printers - READ
7. View properties - READ
8. Space, Repeat, Pause, Interrupt - (PSF) - CONTROL
9. Change forms, job selection - (PSF) - UPDATE

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Working with Printers



Select Printer name or Host name or IP address
Select chosen option

IBM. Back to search

IP PrintWay Printers (5)

All	Name	Status	Location	Active job count	Type	Host name or IP address	Print queue name	Port number	Printer
<input type="checkbox"/>	poke.pokew.pokewp	Idle	2c-16	0	LPR	pok3130e.itso.ibm.com	afccu2		
<input checked="" type="checkbox"/>	POK1218	Idle	POK 2-A30	0	LPR	pokip122a.itso.ibm.com	afccu2		
<input type="checkbox"/>	POK45AN.POK45AWE	Idle	POK 2-A30	0	LPR	9.12.6.15	afccu2		
<input type="checkbox"/>	POK45ANE	Idle	POK 2-A30	0	LPR	pokip1145b.itso.ibm.com	afccu2		
<input type="checkbox"/>	POK45AW	Idle	POK 2-A30	0	LPR	9.12.6.15	PASS		

PSF Printers (0)

All	Name	Status	Location	Active job count	Type	Host name or IP address	Port number	LU Name	DEST	CLASS	FORMS	WRITER	Process mode (PRMODE)
No objects were found that meet the specified criteria or you are not authorized to view the objects.													

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Printer Information Window



IP PrintWay Printer Information ?

Select an action, or expand a section to see information about the printer.

[Back to Work with Printers](#) > [Refresh IP PrintWay Printer Information](#)

Last refresh: Thu Jul 15 17:54:29 EDT 2004

▶ ◻ ◻ ◻ ◻ ◻

+

- + Properties
- + Print Job Queue
- + Printer Definitions
- + Printer's Web Page

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Working with Printers (POK1228)



IP PrintWay Printer Information ?

Select an action, or expand a section to see information about the printer.

[Back to Work with Printers](#) > [Refresh IP PrintWay Printer Information](#)

Last refresh: Thu Apr 22 17:45:02 EDT 2004

▶ ◻ ◻ ◻ ◻ ◻

+

- + Properties
- + Print Job Queue
- + Printer Definitions
- + Printer's Web Page

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Using the Stop Button



- ❑ Stop IP PrintWay from sending more data to printer
 - The printer is stopped until you restart it or IP PrintWay is restarted
 - Stops the selected printers so that IP PrintWay does not process any more print jobs for the printer
 - Data already transmitted to a printer and is already in the printer's buffer continues to print
 - Infoprint Server and JES continue to accept print requests for stopped printers and add print jobs to the printers' queues
- ❑ On the Stop Printer panel, you can select whether to stop the printer immediately or wait until the current print job completes printing. If you stop the printer immediately, the current print job is deleted

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Stop a Printer with Options



Select printer to stop

Select stop printer button

Select action to take

ACC(CONTROL)

Back to search

IP PrintWay Printers (5)

All	Name
<input type="checkbox"/>	poke.pokew.pokewp
<input checked="" type="checkbox"/>	POK1228
<input type="checkbox"/>	POK45AN.POK45AWE
<input type="checkbox"/>	POK45ANE
<input type="checkbox"/>	POK45AW

PSF Printers (0)

All	Name	Status	Location	Ad
-----	------	--------	----------	----

Stop Printer -- Web Page Dialog

Select the action to take for any print job that might be processing.

☒ Complete the current print job

☐ Delete the current print job

OK Cancel Help

No objects were found that meet the specified criteria or you are not authorized to view the objects.

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View Log ... (for stopped printer)



IBM.

View log

Properties

The properties of this printer.

Name	ILPODIP,JUSTST
Status	Idle
Location	Finland
Active job count	0
Type	LPR
Printer host name or IP address	dyn-9-134-109-105.hel.fi.ibm.com
Print queue name	pcl2inf
Port number	
Printer URL	
Operator security profile	FI.IGS

Print Job Queue

Printer Definitions

Printer's Web Page

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View Log (1)



IBM.

IP PrintWay Printer Log

Enter one or more values to change the number of messages displayed.

Back to Work with Printers > Back to IP PrintWay Printer Information > Refresh IP PrintWay Printer Log

Last refresh: Mon Apr 26 11:51:48 EDT 2004

IP PrintWay Printer: ILPODIP,JUSTST

Issued within: 1 Days

Maximum messages to return: 50

Message	User ID	Job ID	Job name
AOP3505I IP PrintWay stopped the printer.	VAINI		
AOP3012I IP PrintWay accepted the request to stop the printer.	VAINI		
AOP3613I The print job was completed.	HAIMO	PS009716	VAINI.VAINI.JC
AOP3011I IP PrintWay accepted the request to start the printer.	VAINI		
AOP3609I IP PrintWay has started to process the print job.	HAIMO	PS009716	VAINI.VAINI.JC
AOP3504I IP PrintWay started the printer.	VAINI		
AOP3402I IP PrintWay added the print job to the printer's queue.	VAINI	PS009716	VAINI.VAINI.JC
AOP3012I IP PrintWay accepted the request to stop the printer.	VAINI		
AOP3505I IP PrintWay stopped the printer.	VAINI		
AOP3502I The administrator added printer definition JUSTST for this printer.	HAIMO		

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View Log (2)



IBM.

IP PrintWay Printer Log

Enter one or more values to change the number of messages displayed.

[Back to Work with Printers](#) > [Back to IP PrintWay Printer Information](#) > [Refresh IP PrintWay Printer Log](#)

Last refresh: Mon Apr 26 11:51:48 EDT 2004

IP PrintWay Printer

ILPODIP,JUSTST

Issued within:

1

Days

Maximum messages to return

60

Message	User ID	Job ID	Job name
AOP3609I IP PrintWay has started to process the print job.	HAIMO	PS009720	VAINI.VAINI.JC
AOP3504I IP PrintWay started the printer.	VAINI		
AOP3011I IP PrintWay accepted the request to start the printer.	VAINI		
AOP3402I IP PrintWay added the print job to the printer's queue.	VAINI	PS009720	VAINI.VAINI.JC
AOP3505I IP PrintWay stopped the printer.	VAINI		
AOP3012I IP PrintWay accepted the request to stop the printer.	VAINI		
AOP3613I The print job was completed.	HAIMO	PS009718	VAINI.VAINI.JC
AOP3609I IP PrintWay has started to process the print job.	HAIMO	PS009718	VAINI.VAINI.JC
AOP3504I IP PrintWay started the printer.	VAINI		
AOP3011I IP PrintWay accepted the request to start the printer.	VAINI		
AOP3402I IP PrintWay added the print job to the printer's queue.	VAINI	PS009718	VAINI.VAINI.JC

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Messages from the OPERLOG




```
+AOP3505I IP PrintWay stopped the printer. - VAINI
+AOP3012I IP PrintWay accepted the request to stop the printer. - VAINI
AOPD00I VAINI1 (JOB31082) Prt: ILPODIP - WTSCPLX4 VAINI
PS009716 LIST#AA# from: VAINI / SC65
+AOP120I Job 9716 //u.clist(aa) started spooling to ILPODIP with
transform afp2ps.dll -c ed duplex=yes. - JOB31082 - VAINI P
+AOP119I Job 9716 //u.clist(aa) completed spooling with status
"pending". - JOB31082 - VAINI PS009716
+AOP3504I IP PrintWay started the printer. - VAINI
+AOP3011I IP PrintWay accepted the request to start the printer. - VAINI
+AOP3613I Job 9716 was completed. - JOB31082 - HAIMO PS009716
+AOP3012I IP PrintWay accepted the request to stop the printer.
+AOP3505I IP PrintWay stopped the printer. - VAINI
AOPD00I VAINI1 (JOB31083) Prt: ILPODIP - WTSCPLX4 VAINI
PS009718 LIST#AA# from: VAINI / SC65
+AOP120I Job 9718 //u.clist(aa) started spooling to ILPODIP with
transform afp2ps.dll -c ed duplex=yes. - JOB31083 - VAINI P
+AOP119I Job 9718 //u.clist(aa) completed spooling with status
"pending". - JOB31083 - VAINI PS009718
+AOP3011I IP PrintWay accepted the request to start the printer. - VAINI
+AOP3504I IP PrintWay started the printer. - VAINI
+AOP3613I Job 9718 was completed. - JOB31083 - HAIMO PS009718
```

Redirect a Printer



Redirect IP PrintWay Printer -- Web Page Dialog

 Enter either the printer definition name or the host name for the alternate printer. If you enter a host name, also enter either a print queue name or port number.

Redirect to:

☒ Printer definition

☐ Host name or IP address

 Queue


OK Cancel Help



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Ping a Printer



Ping Printer -- Web Page Dialog

 The test of the printer connection returned the following information.

Connection status	Command	Response
	Ping	CS V1R5: Pinging host pokip1228.itso.ibm.com (9.: Ping #1 response took 0.000 seconds.
	LPQ	No entries

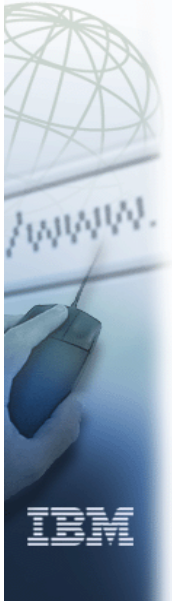
OK Help

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Infoprint Central Working with Print Jobs



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Working with Output Data Sets



IP PrintWay
extended mode



Infoprint Central



JES
Spool

IP PrintWay
basic mode

ISPF panels



Transmission
Queue
Data Set

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Working with Print Jobs



- ❑ Using Infoprint Central, you can:
 - Delete a print job
 - Place the job in hold
 - Release the job if it was held or is waiting to be retried so that it prints immediately
 - Change the job's priority
 - Check the status of a print job
 - Move a print job
- ❑ JES spool has two types of jobs
 - Infoprint server print jobs
 - Jobs created by Print Interface or NetSpool
 - JES print jobs

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Infoprint Central - Work with Print Jobs



Work with Print Jobs

Work with Print Jobs

Select whether you want to work with Infoprint Server or JES print jobs. Then enter one or more values to limit the number of jobs displayed.

☒ Infoprint Server Print Jobs ☐ JES Print Jobs Show only exact matches ☐

Job name	Job ID	Owner	Submitted to:	Submitted within
	ps			Hours
DEST	CLASS	FORMS	WRITER	

Job ID = ps

Hit Find button

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Print Jobs Request (Using Job ID - PS)



Release Hold Move Delete

Back to search

Infoprint Server Print Jobs (4)

All	Job ID	Job name	Status	Owner	Printer definition	NetSpool LU name	Printer	Submit time
<input type="checkbox"/>	PS000597	VAINI	Completed with errors	VAINI	ILPOD			Wed Sep 3 11:36:1
<input type="checkbox"/>	PS000598	VAINI	Completed with errors	VAINI	ILPOD			Wed Sep 3 11:40
<input type="checkbox"/>	PS000600	VAINI	Completed with errors	VAINI	ILPO			Fri Sep 5 05:55:35
<input type="checkbox"/>	PS000605	VAINI	Completed with errors	VAINI	ILPOD			Tue Sep 9 09:55:2

Infoprint Server Print Job History (3)

Job ID	Job name	Status	Completion time	Owner	Printer definition	NetSpool LU name
PS009704	CONWAY02	Completed successfully	Wed Apr 14 17:24:13 EDT 2004	CONWAY02	SYSLAB45	
PS009706	ippprint user	Deleted	Thu Apr 15 07:41:53 EDT 2004	ippprint user	ILPO	
PS009707	ippprint user	Deleted	Thu Apr 15 09:29:49 EDT 2004	ippprint user	ILPO	

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Infoprint Server Print Jobs



Select print job Click on any highlighted field

Back to search

Infoprint Server Print Jobs (8)

All	Job ID	Job name	Status	Owner	Printer definition	NetSpool LU name	Printer	Submit time
<input type="checkbox"/>	PS000597	VAINI	Completed with errors	VAINI	ILPOD			Wed Sep 3 11:36:52
<input type="checkbox"/>	PS000598	VAINI	Completed with errors	VAINI	ILPOD			Wed Sep 3 11:40:30
<input type="checkbox"/>	PS000600	VAINI	Completed with errors	VAINI	ILPO			Fri Sep 5 05:55:35
<input type="checkbox"/>	PS000605	VAINI	Completed with errors	VAINI	ILPOD			Tue Sep 9 09:55:26
<input checked="" type="checkbox"/>	PS009972	ROGERS03	Not spooled	ROGERS03	POK1228			Mon Jul 19 14:06:33
<input type="checkbox"/>	PS009973	ROGERS03	Not spooled	ROGERS03	POK1228			Mon Jul 19 14:58:27

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View properties

IBM.

Printer Definition Information
Printer Definition

[Back to Find Printer Definitions](#) > [Refresh Printer Definition Information](#)

Last refresh: Tue Jul 20 09:14:00 EDT 2004

[+](#)

[+](#) Properties

[+](#) IP PrintWay Printer

[+](#) Print Jobs

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IBM.

Printer Definition Properties
Printer Definition Properties

[Back to Find Printer Definitions](#) > [Back to Printer Definition Information](#) > [Refresh Printer Definition Properties](#)

Last refresh: Tue Jul 20 09:45:04 EDT 2004

[+](#)

[+](#) General Properties

[+](#) Allocation

[+](#) NetSpool End Of File Rules

[+](#) NetSpool Options

[+](#) IP PrintWay Options

[+](#) Processing

[+](#) Protocol

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Infoprint Server Print Job Information



Release Change priority Hold Delete View properties View Log

Infoprint Server Print Job Information

Select an action, or expand a section to see information about the print job.

Back to Work with Print Jobs > Refresh Infoprint Server Print Job Information

Last refresh: Mon Jul 19 18:56:40 EDT 2004

+

+- Properties

+- Documents

+- Printer Definition

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JES Print Job Information



Back to Work with Print Jobs > Refresh JES Print Job Information

Last refresh: Wed Apr 21 19:36:57 EDT 2004

+

Release Hold Change priority Delete View properties

+- Properties

The basic properties of the print job. To see all properties, select the View properties action.

Job ID	JOB30785
Job name	ROGERSK
Status	Pending
Hold reason	
Owner	ROGERS
Size	4 (lines)
Submit time	Wed Apr 21 18:44:01 EDT 2004
DEST	ANYLOCAL
CLASS	J
FORMS	STD
WRITER	
Process mode (PRMODE)	LINE
Priority (0 - 255)	1

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Protect Changing Priority



- ❑ Define AOP.PRIORITY profile - PRINTSRV class
 - RDEFINE PRINTSRV (AOP.PRIORITY)
UACC(NONE)
- ❑ Give users UPDATE access to the AOP.PRIORITY
 - PERMIT AOP.PRIORITY CLASS(PRINTSRV)
ACCESS(UPDATE) ID(userid or groupid)
 - SETROPTS RACLIST(PRINTSRV) REFRESH

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Change Priority



The screenshot shows the 'JES Print Job Information' web page. A dialog box titled 'Change Job Priority -- Web Page Dialog' is open, prompting the user to 'Enter a new priority number. The priority can affect how soon the job will print. 0 is the lowest priority; 255 is the highest priority.' The dialog includes a text input field with the value '1' and buttons for 'OK', 'Cancel', and 'Help'. In the background, the web page shows a sidebar with icons and a main area with a table of print jobs. A red arrow points to the 'Select' button in the sidebar.

Job ID	Job name	Status	Hold reason	Owner
		Pending		ROGERS

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IBM. Back to search

Infoprint Server Print Jobs (2)

	Job ID	Job name	Status	Owner	Printer definition	NetSpool LU name	Printer	Submit time
<input type="checkbox"/>	JOB04875	ROGERSW	Rejected	ROGERS	DFLTNTRY			Tue Jul 20 13:09:21 EDT
<input type="checkbox"/>	PS009976	ROGERS03	Not spooled	ROGERS03	POK122B			Tue Jul 20 08:59:38 EDT

IBM. Back to Work with Print Jobs > Refresh Infoprint Server Print Job Information

Last refresh: Tue Jul 20 13:52:11 EDT 2004

Move button

Properties

The basic properties of the print job. To see all properties, select the View properties action.

Job ID	JOB04875
Job name	ROGERSW
Status	Rejected

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JES Print Jobs - (all information)



When View properties button selected

Printer Selection section.

IBM. Back to Work with Print Jobs > Back to JES Print Job Information > Refresh JES Print Job Properties

Last refresh: Thu Apr 22 11:51:02 EDT 2004

This button opens all sections

- General Properties
- Printer Selection
- Status
- Documents
- Notification
- General Processing
- AFP Resources
- AFP Processing
- AFP Paper Handling
- Separator Page
- E-mail

JES Print Job Information (with Error)



JES Print Job Information
Select an action, or expand a section to see information about the print job.

Back to Work with Print Jobs > Refresh JES Print Job Information

Last refresh: Tue Apr 27 10:21:55 EDT 2004

Error Messages

- The action you requested was not done or some attributes are not displayed because the print job is in an unsupported hold state. If you requested an action on a JES print job which has a corresponding Infoprint Server print job, you might be able to do the action on the Infoprint Server print job. Otherwise, you must use a z/OS system command to do the action.
 - JOB31152

Properties

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Viewing General Properties



The action you requested was not done or some attributes are not displayed because the print job is in an unsupported hold state. If you requested an action on a JES print job which has a corresponding Infoprint Server print job, you might be able to do the action on the Infoprint Server print job. Otherwise, you must use a z/OS system command to do the action.

- JOB31152

General Properties

The basic properties of the print job.

Job ID	JOB31152
Job name	ROGERSF
Status	Held
Hold reason	(002) FSI error
Owner	ROGERS
Size	13 (lines)
Submit time	
Output group (GROUPID)	
DD name	
Originating JES node	WTSCPLX4

Printer Selection

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Printer Selection Options



Printer Selection

The properties that determine which printer selects the print job and when the print job prints. You can change some of the properties in this section. To change a property, enter a new value and select OK or Apply. Select Clear to restore values that you changed but do not want to apply.

DEST	PR3287
CLASS	J
FORMS	STD
Priority (0 - 255)	1
WRITER	
Process mode (PRMODE)	LINE
JES node	WTSCPLX4
Print queue name	
Port number	

OK Apply Clear

Status

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JES Print Jobs (Status and Documents)



Status

The status of the print job.

Status	Pending
Submit time	Wed Apr 21 18:44:01 EDT 2004
Hold reason	
Output disposition (OUTDISP)	
Successful retention period	
Failure retention period	
Retry limit	
Retry time	

Documents

The documents in the print job.

Name	DD name	Status	Copies	Size
ROGERS.ROGERSK.JOB30785.D0000009.?	SYSPRINT	Pending	1	4 (lines)
ROGERS.ROGERSK.JOB30785.D000000A.?	SYSUT2	Pending	1	9 (lines)

Notification

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General Processing and AFP Resources



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General Processing

The properties that control how Infoprint Server processes the print job.

Forms control buffer (FCB) STD3

Print options (PRTOPTNS)

User data

AFP Resources

The Advanced Function Presentation (AFP) resources that PSF uses to format data for an AFP printer. The AFP transforms (AFP to PostScript, AFP to PDF, and AFP to PCL) also use these properties.

Form definition

Page definition

Overlay front

Overlay back

Resource libraries

Resource directories

Universal character set (UCS) ANY

Character sets (CHARS) GT15

Table reference characters No

Save AFP statistics

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AFP Processing and Paper Handling



IBM



AFP Processing

The properties that control how PSF processes data for an AFP printer. The AFP transforms (AFP to PostScript, AFP to PDF, and AFP to PCL) also use these properties.

Image shift x-direction back

Image shift x-direction front

Image shift y-direction back

Image shift y-direction front

JES form length

Color map

Security label

AFP Paper Handling

The properties that control how PSF handles paper on an AFP printer. The AFP transforms (AFP to PostScript, AFP to PDF, and AFP to PCL) also use these properties.

Duplex

Input tray number

Output bin number

Burster, trimmer, stacker (BURST) No

COM setup member

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Separator Page and E-mail Info



AFP Paper Handling

Separator Page

The name and location information for the printer's separator sheet.

Address

Name

Title

Department

Building

Room

E-mail

The properties that IP PrintWay uses to send the print job to an e-mail destination instead of to a printer.

E-mail to addresses

E-mail CC addresses

E-mail BCC addresses

E-mail reply address

E-mail from name

E-mail file name

**New with
z/OS V1R5**

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JES Print Jobs (Using v in Jobname)



[Back to search](#)

JES Print Jobs (16)

☐ All

	Job ID	Job name	Status	Owner	Submit time	Size	DEST	CLASS	FORMS	WRITER
<input type="checkbox"/>	JES JOB24684	VAINISO	Held	VAIN	Thu Feb 12 03:40:14 EST 2004	2 (lines)	ANYLOCAL	T	STD	
<input type="checkbox"/>	JES JOB28181	VTAM44	Pending	STC	Sun Mar 28 10:52:08 EST 2004	38 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28181	VTAM44	Pending	STC	Thu Apr 1 02:33:39 EST 2004	20 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28551	VTAM44	Pending	STC	Sun Mar 28 10:47:10 EST 2004	40 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28841	VTAMAPPL	Pending	STC	Sun Mar 28 10:48:59 EST 2004	124 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28842	VTAM44	Pending	STC	Sat Apr 17 10:53:54 EDT 2004	40 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28929	VTAMAPPL	Pending	STC	Sun Mar 28 10:53:43 EST 2004	154 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB28935	VTAM44	Pending	STC	Wed Apr 7 16:33:06 EDT 2004	40 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB29754	VTAMAPPL	Pending	STC	Wed Apr 7 16:34:36 EDT 2004	154 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB29764	VTAM44	Pending	STC	Sat Apr 17 10:53:53 EDT 2004	40 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB30385	VTAMAPPL	Pending	STC	Sat Apr 17 10:55:27 EDT 2004	97 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES JOB30399	VTAMAPPL	Pending	STC	Sat Apr 17 10:55:53 EDT 2004	124 (lines)	ANYLOCAL	A	STD	
<input type="checkbox"/>	JES PS000597	VAINI	Pending	VAINI	Wed Sep 3 11:36:52 EDT 2003					
<input type="checkbox"/>	JES PS000598	VAINI	Pending	VAINI	Wed Sep 3 11:40:30 EDT 2003					
<input type="checkbox"/>	JES PS000600	VAIN	Pending	VAIN	Fri Sep 5 05:55:35 EDT 2003					
<input type="checkbox"/>	JES PS000605	VAINI	Pending	VAINI	Tue Sep 9 09:55:26 EDT 2003					

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Working with Print Jobs



Work with Print Jobs

Select whether you want to work with Infoprint Server or JES print jobs. Then enter one or more values to limit the number of jobs displayed.

☒ Infoprint Server Print Jobs Show only exact matches ☐

☐ JES Print Jobs

Job name: Job ID: Owner: Submitted to: Submitted within: Hours

DEST: CLASS: FORMS: WRITER:

[Back to search](#)

Infoprint Server Print Jobs (2)

All <input type="checkbox"/>	Job ID	Job name	Status	Owner	Printer definition	NetSpool LU name	Printer	Submit time
<input type="checkbox"/>	JOB31309	ROGERSX	Rejected	ROGERS	DPLTNTY			Tue Apr 27 13:39:18 EDT 2004
<input type="checkbox"/>	JOB31309	ROGERSX	Rejected	ROGERS	DPLTNTY			Tue Apr 27 14:00:19 EDT 2004

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Selected JOB31309



Infoprint Server Print Job Information

Select an action, or expand a section to see information about the print job.

[Back to Work with Print Jobs](#) > [Refresh Infoprint Server Print Job Information](#)

Last refresh: Tue Apr 27 14:55:52 EDT 2004

Buttons:

Release-Hold-Change priority-Move>Delete-View properties-View log

Properties

The basic properties of the print job. To see all properties, select the View properties action.

Job ID	JOB31309
Job name	ROGERSX
Status	Rejected
Hold reason	
Retention status	
Owner	ROGERS
Size (bytes)	4084
Submit time	Tue Apr 27 14:00:19 EDT 2004
DEST	ANYLOCAL
CLASS	F

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Move Window



Infoprint Move Print Job -- Web Page Dialog

Select an action

Back to Work with Print

Last refresh: Tue Apr 27 14:00:19 EDT 2004

Properties

The basic properties of the print job are shown here.

Property	Value
Job ID	4084
Job name	Tue Apr 27 14:00:19 EDT 2004
Status	ANYLOCAL
Hold reason	F
Retention status	
Owner	
Size (bytes)	
Submit time	
DEST	
CLASS	

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Infoprint Server Printer Processing



- ❑ Temporary files are created when:
 - LPR protocol
 - IPP or direct-sockets protocol
 - AND printer definition specifies either:
 - Copies
 - Maximum document size
- ❑ In these cases, IP PrintWay has to read the entire file before it can begin processing
 - Reads entire file into a hiperspace (Max size is 2 GB)
- ❑ With z/OS V1R5
 - Temporary files now stored in subdirectory under /var
 - /var/Printsrv/printway

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/var/Printsrv Directory



- ❑ **Significantly larger space requirements**
 - Mount a separate file system at /var/Printsrv mount point (can be zFS or HFS)
- ❑ **New subdirectories:**
 - /var/Printsrv/hinv - contains internal historical information
 - /var/Printsrv/logdb - contains internal log information
 - /var/Printsrv/logs - Contains internal representation of common message log
 - /var/Printsrv/printway - contains temporary data files used by
- ❑ **IP PrintWay**
 - /var/Printsrv/searchdb - contains internal search information

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IP PrintWay and the JSPA



- ❑ **The Infoprint begin-dataset-exit - (banner-exit)**
 - Can extract the name and number of the job that created the data set to be printed from the JSPA pointed by XTPJSPAP in IP Printway basic mode
 - The JSPA control block is especially useful to the Begin Data Set Exit and End Data Set Exit in building header and trailer pages
 - **IP PrintWay exit parameter area (ANFUEXTP) has field XTPJSPAP - points to JSPA**
 - In IP Printway extended mode the address of the JES job separator page data area is not passed to exits in field XTPJSPAP - This field contains zeroes if IP PrintWay extended mode calls this exit

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IP PrintWay JSPA Control Block



- ❑ APAR OA07390 has been opened to create a "PrintWay JSPA" control block
 - Can be used for IP PrintWay extended mode exits to provide information used on separator pages
- ❑ PTF UA10629 is in process and should be closed by Monday, May 10
 - More information can be found in the APAR text

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APAR OA07390











- ❑ The partial JSPA can contain values for control fields and for the following data fields :
 - - JSPAJBNM
 - - JSPAJBID
 - - JSPJGRPN
 - - JSPJGRPD
 - - JSPJRMNO
 - - JSPJPNAM
 - - JSPJDSNM
 - - JSPJSOCL
 - - JSPJPRIOR
 - - JSPCEUID
 - - JSPCEDSN
 - - JSPCESEG

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IP PrintWay Printer Log (2)



IP PrintWay Printer Log

Enter one or more values to change the number of messages displayed.

[Back to Work with Printers](#) > [Back to IP PrintWay Printer Information](#) > [Refresh IP PrintWay Printer Log](#)

Last refresh: Tue Apr 27 18:01:31 EDT 2004

IP PrintWay Printer: ILPODIP,JUSTST

Issued within: Days

Maximum messages to return:

	User ID	Job ID	Job name	Process
	HAIMO	PS009727	VAINI.VAINI.JOB31237.D0000009.LIST#AA#	aopoutd
s the print job.	HAIMO	PS009727	VAINI.VAINI.JOB31237.D0000009.LIST#AA#	aopoutd
to the printer's queue.	VAINI	PS009727	VAINI.VAINI.JOB31237.D0000009.LIST#AA#	aopoutd
	HAIMO	PS009727	VAINI.VAINI.JOB31221.D0000009.LIST#AA#	aopoutd
s the print job.	HAIMO	PS009727	VAINI.VAINI.JOB31221.D0000009.LIST#AA#	aopoutd
	VAINI			aopoutd
to start the printer.	VAINI			Infoprint_Central
to the printer's queue.	VAINI	PS009727	VAINI.VAINI.JOB31221.D0000009.LIST#AA#	aopoutd
	VAINI			aopoutd
to stop the printer.	VAINI			Infoprint_Central

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E-mail Protocol - Enhancement made to z/OS V1R2 Release of Infoprint Server



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Infoprint Server Sendmail Support



- ❑ Before you begin using e-mail: Customize sendmail as described in z/OS Infoprint Server Customization

```
//ROGERSZ JOB (POK,999),MSGCLASS=A,NOTIFY=ROGERS
//PRINT EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSUT2 DD SYSOUT=J,DEST=EMAIL10
//SYSUT1 DD DISP=SHR,DSN=ROGERS.SAPI.LIST3820
//SYSIN DD DUMMY
//
```

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Processing Options for EMAIL10



Edit _____ Processing _____

Command ==> _____

Printer definition name . EMAIL10 _____ **AFP output**

Document code page . . _____

Printer code page . . IBM-1047 _____ **Send to Print Interface for transform to PDF**

Print Interface Supported Data Formats and Associated Filters:

Data format:	Filter:	
/ Line data	afp2pdf.dll %filter-options	(extend)
/ M0:DCA-P	afp2pdf.dll %filter-options	(extend)
/ PostScript	ps2pdf.dll %filter-options	(extend)
/ Text	aopfilter.so	(extend)
/ PCL	pcl2pdf.dll %filter-options	(extend)
- PDF		(extend)
- SAP		(extend)
- XML	xml2pdf.dll %filter-options	(extend)
- Other		(extend)

/ Resubmit for filtering

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e-mail Protocol Panel

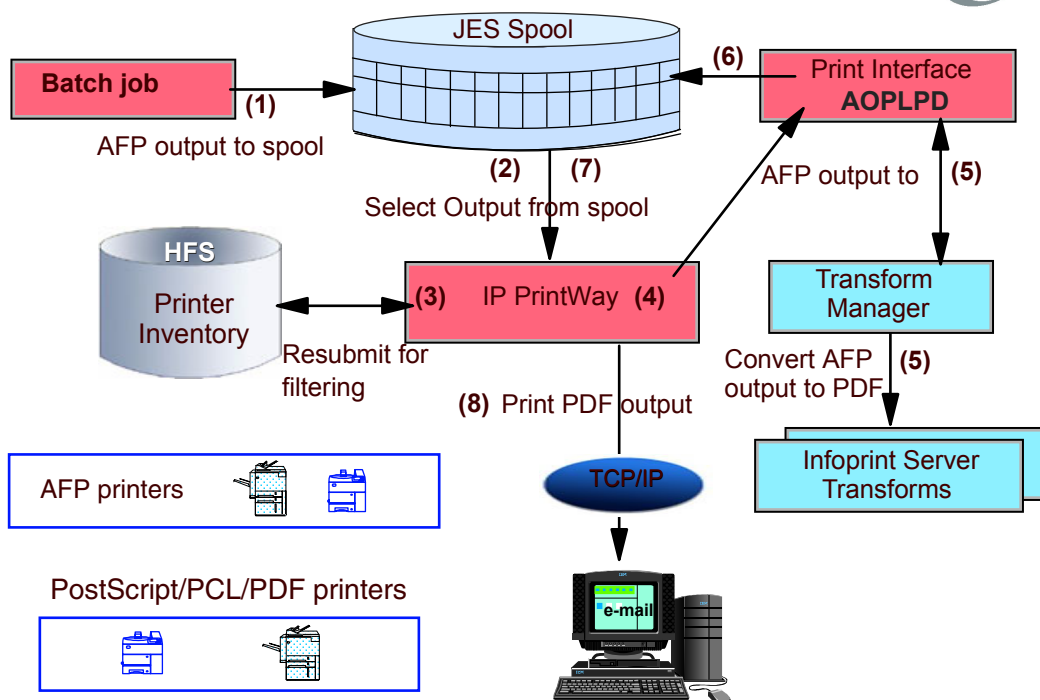


The addresses of the e-mail recipients. You can specify real e-mail addresses or alias names that are defined to sendmail. An alias name represents one or more e-mail addresses. This field is required in a printer definition with the e-mail protocol. To extend the length of this field, place your cursor on the word "extend" and press Enter.

```
Edit                                     E-mail Protocol
Command ==> _____
Printer definition name . EMAIL10_____
To addresses                             (more)
    . . . haimo@us.ibm.com
CC addresses                             (more)
    . . .
BCC addresses                             (more)
    . . .
From name . . .
Reply address . . .
```

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Flow for Batch Output



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Data received at Lotus Notes ID



ROGERS@WTSC430E.ITS0.IBM.COM on 06/12/2002 02:45:28 PM

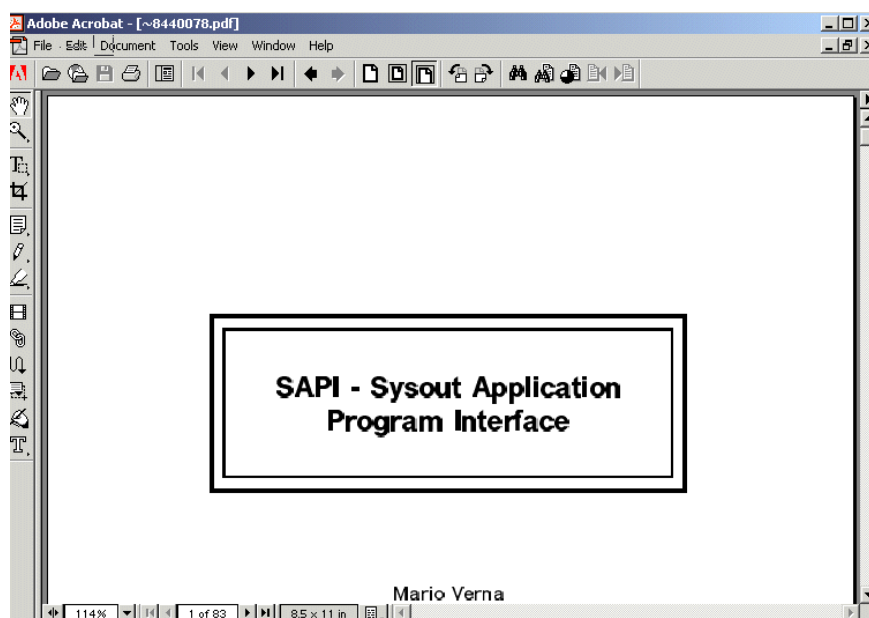
To: Paul Rogers/Poughkeepsie/IBM@IBMUS
cc:
Subject: WTSCPLX9.ROGERS.ROGERSZ.JOB29203.D000000A.?



-#0000A##.pdf

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Adobe Acrobat Reader

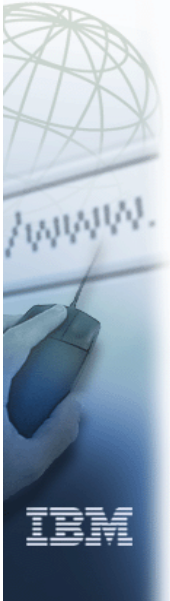


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E-mail Protocol - Enhancement made to z/OS V1R5 Release of Infoprint Server



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z/OS V1R5 Support for E-mail Protocol



- ☐ Provide the capability for the end user to control how a file is sent to an E-mail destination
- ☐ Provide job attributes and JCL keywords for the following functions:
 - E-mail addresses of the recipients of the e-mail
 - File name of the attachment to the e-mail
 - Descriptive name or other identifier of the sender of the e-mail
 - Blind copy (bcc) recipients of the e-mail
 - Copy (cc) recipients of the e-mail
 - E-mail address that recipients of the e-mail can reply to

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Sending a Job to an E-mail Destination



```
//PW    OUTPUT MAILTO=username
        'username@domainname'
        (username,'username@domainname',...)
//      MAILFROM=sendername
        'sender name'
//      REPLYTO=username
        'username@domainname'
//      MAILFILE=nameofattachment
        'name of attachment'
//      MAILCC=username
        'username@domainname'
        (username,'username@domainname',...)
//      MAILBCC=username
        'username@domainname'
        (username,'username@domainname')
```

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Specifying New JCL Keywords



JCL Keyword	Characteristics	Symbolic Key
MAILBCC	1- 32 value fields Each value 1-60 characters	x'0049'
MAILCC	1- 32 value fields Each value 1-60 characters	x'004A'
MAILFILE	1 value of 1-60 characters	x'004B'
MAILFROM	1 value of 1-60 characters	x'004C'
MAILTO	1- 32 value fields Each value 1-60 characters	x'004D'
REPLYTO	1 value of 1-60 characters	x'004E'

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Infoprint Central E-mail Display



AFP Paper Handling

Separator Page

E-mail

The name and location information for the printer's separator sheet.

Address

Name

Title

Department

Building

Room

The properties that IP PrintWay uses to send the print job to an e-mail destination instead of to a printer.

E-mail to addresses

E-mail CC addresses

E-mail BCC addresses

E-mail reply address

E-mail from name

E-mail file name

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Creating an Alias File



- ☐ Create a file using the name defined by your administrator, for example create file
 - OUTPUT statement: MAILTO=branches
- ☐ /etc/aliases file:
 - branches: "include:/u/myuserid/branches.list"
- ☐ /u/myuserid/branches.list file:
 - branch01@xyz.com,branch02@xyz.com,
 - ...
 - branch56@xyz.com,branch57@xyz.com

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E-mail Enhancements Rollback



- ❑ Support in BCP (new JCL keywords) - Infoprint Server
 - Rollback to z/OS V1R2 planned
 - BCP PTFs UA01836, UA01837, UA01838
 - Infoprint Server APARs
 - OW55583 - IP PrintWay
 - OA04343 - Print Interface

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AOPPRINT JCL Procedure



- ❑ Provided in SYS1.PROCLIB
 - Submit print requests from z/OS
 - Procedure allows use of all features of Infoprint Server
 - You can specify job attributes
 - Allows use of Infoprint Server Transforms or another optional transform product to transform jobs from one data format to another
 - Infoprint Server validates that data can print on the selected printer
 - You can send a file to an e-mail destination

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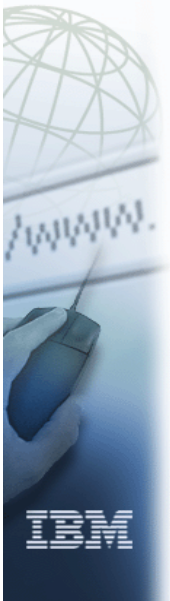
Using AOPPRINT



```
//JOBA      JOB   HJF, 'ROGERS '  
//EMAIL     EXEC  AOPPRINT, PRINTER='EMAIL10',  
//          OPTIONS='attribute=//DD:MYATTR'  
//SYSIN     DD    DSNAME=FILE1.AFP, DISP=SHR  
//MYATTR    DD    *  
mail-to-addresses={ 'user1@xyz.com' }  
mail-cc-addresses={ 'user2@xyz.com' }  
mail-bcc-addresses={ 'user3@xyz.com' }  
mail-from-name="John Q. Sender"  
mail-reply-address='secretary@xyz.com'  
mail-file-name="January report"  
title-text="Monthly Report"  
form-definition=F1MYDEF  
/*
```

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z/OS V1R5 Infoprint Server; Infoprint Central



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IP PrintWay Extended Mode










- ☐ Manage all IP PrintWay printers/jobs from the Web
- ☐ Ping IP PrintWay printers
- ☐ View a printer's web page
 - See if printer is out of paper or toner
- ☐ Start/stop printing to IP PrintWay-controlled printers
- ☐ Cancel/hold/delete print jobs currently processing
- ☐ Restart retained print jobs immediately
- ☐ Change priority of a print job that IP PrintWay has already selected from the spool to print
- ☐ Move print jobs from one IP PrintWay printer to another IP PrintWay printer, including the print job that is currently processing
- ☐ View all messages in the common message log for selected printers or print jobs

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Launch Printer Web Page








**Properties**

The properties of this printer.

Name	SYSLAB45
Status	Idle
Location	POK SYSLAB
Active job count	0
Type	LPR
Printer host name or IP address	syslab1145.itso.ibm.com
Print queue name	afccu2
Port number	
Printer URL	
Operator security profile	POK.ITSO

**Print Job Queue**

**Printer Definitions**

**Printer's Web Page**

Use this link to obtain additional printer status. Not all printers support this function.

[Launch the printer's web page](#)

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Look at Printer Home Page



Printer Home Page

Printer Not Ready

Operator Panel Message
 Error
 200 Paper Jam. Follow the instructions on the operator panel.

Printer Status		Capabilities
Name:	IBM Infoprint 2105	Maximum speed: 105
IP address:	9.99.96.51	Maximum resolution: 600
E-mail address:	Not Set	Duplex installed: Yes
Location:	002/K6 Lab	IPDS installed: Yes
Contact:		PS installed: Yes
Jobs waiting:	1	PCL installed: Yes
Toner:	OK	Stapler installed: Yes
		Punch installed: Yes

Paper				
Tray	Status	Size	Type	Form Name
1	OK	8 1/2 x 11 Long Edge	Plain	FORM13
2	OK	8 1/2 x 14 Short Edge	Plain	None
3	OK	A4 Long Edge	Plain	None
4	Empty	8 1/2 x 11 Long Edge	Plain	FORM13
5	OK	5 1/2 x 8 1/2 Long Edge	Plain	None
6	OK	A4 Long Edge	Plain	None

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z/OS V1R5 NetSpool Enhancements



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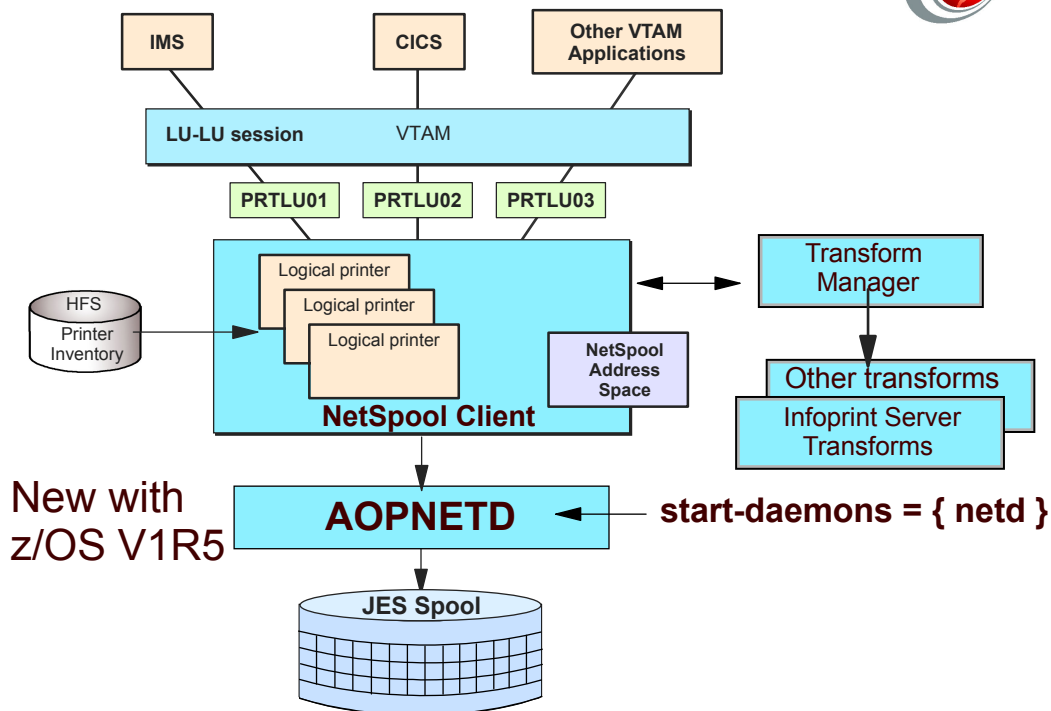
NetSpool Enhancements



- ❑ Further integration with the rest of Infoprint Server - NetSpool now has a daemon
- ❑ Ability to specify owner of a NetSpool print file
- ❑ Specify default owner in printer definition
- ❑ Embed owner job attribute in print data
- ❑ Can pass job attributes from VTAM application to NetSpool
- ❑ Diagnostic enhancements to DISPLAY LU command

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NetSpool Overview



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User Requirement Enhancement



- ☐ NetSpool output on JES spool can not be associated with user who created it
- ☐ Default Owner can now be specified
 - Now included in printer definition - NetSpool Options
 - Printer Pool definition
 - Using PIDU
 - owner=myname

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Default Owner



- ☐ Used for output data sets created for this NetSpool LU
- ☐ Helps you find jobs using Infoprint Central
- ☐ Used as the JES job name if no other owner or job name specified in print data
- ☐ Can be printed on job's separator page

```
Edit                                     NetSpool Options
Command ==> _____

Printer definition name . NS_____

Formatting . . . . 2  1. None  2. Convert to line  3. Convert to PCL
Record size . . . . . 1. VB   2. VBA  3. VBM
RECFM . . . . . -  1. VB   2. VBA  3. VBM

Default owner . . . . . _____
Embedded attributes prefix . . . . . _____
```

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Working with NetSpool LUs



Select Button

Work with NetSpool Logical Units ?

Enter the name of the NetSpool logical unit (LU).

Show only exact matches ☐

Name
sc65pr02

Find Clear Save

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NetSpool LUs



Back to search

NetSpool Logical Units (1) ?

All <input type="checkbox"/>	Name	Status	Session status	LU type	Printer definition	Printer pool definition	End of file method	Primary LU	LU classes
<input type="checkbox"/>	luSC65PR02	Unknown			IAZFSS				1

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NetSpool LU Information



NetSpool Logical Unit Information ?

Select an action, or expand a section to see information about the NetSpool logical unit.

[Back to Work with NetSpool Logical Units](#) > [Refresh NetSpool Logical Unit \(LU\) Information](#)

Last refresh: Tue Apr 27 16:26:53 EDT 2004

▶ ◻

+

?

Properties

The properties of the NetSpool logical unit (LU).

Name	SC65PR02
Status	Started
Session status	Inactive
LU type	
Printer definition	IAZFSS
Printer pool definition	
End of file method	
Primary LU	
LU classes	1

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NetSpool Modify Command Options



- ☐ Use NetSpool modify command with DISPLAY option
- ☐ Specific LU by LUNAME
 - F NETSPOOL, DISPLAY LUNAME=SC65PR02
- ☐ All LUs that are started
 - F NETSPOOL, DISPLAY STARTED
- ☐ All LUs that are selected for processing
 - F NETSPOOL, DISPLAY SELECTED

API1002I NETSPOOL SC65PR02 - LU is STARTED, SESSION = INACTIVE, PRINTERNAME = IAZFSS

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Command with Active Session



F NETSPOOL,DISPLAY SELECTED

```
API1008I Display of SELECTED LUs.  
API1002I LUPRT002 -- LU IS STARTED SESSION=ACTIVE  
          PRINTERNAME=MYPRINTER LUTYPE=1  
          PLU=IMS001 EOFRULE=EB.  
API1050I LUPRT000 -- LU IS PENDING CLOSE.  
API1002I LUPRT001 -- LU IS STARTED SESSION=INACTIVE  
          PRINTERNAME=YOURPRINTER LUTYPE=0  
          PLU=IMS002 EOFRULE=TIMER.  
API1003I LUPRT003 -- LU IS WAITING.
```

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Infoprint Server Common Message Log



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Common Message Log Overview



- ❑ Using the Infoprint Server common message log, the help desk operator can:
 - Infoprint Central to view all messages for print jobs
 - Use Infoprint Central to view all messages about a particular printer
- ❑ Using the Infoprint Server common message log, the print administrator can:
 - Extract all messages within a specific time period to a file using the aoplogu utility

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Common Message Log Implementation



- ❑ Common message log is disabled by default
- ❑ Common message log will be used if:
 - Infoprint Central daemon is started
 - `start-daemons = { ssid }`
 - Number of days of messages to keep is specified
 - `log-retention=x`
- ❑ Components still write messages to same locations as before
- ❑ Common message log not used by:
 - IP PrintWay basic mode
 - Infoprint Server transforms

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log-retention in AOPD.CONF



- ❑ How many days of information to keep:
 - Messages kept in common message log
 - Historical print jobs in historical inventory
- ❑ Defaults:
 - When ssid is not in start-daemons list
 - log-retention = 0
 - When ssid is in start-daemons list
 - log-retention = 1
 - Example: keep information for 2 days of jobs
 - log-retention = 2

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Log Utility - aoplogu



- ❑ Allows print administrator to look at common message log for a period of time
 - Can specify begin and end times
 - aoplogu -b [[[YY:]MM:]DD:]hh:]mm -e [[[YY:]MM:]DD:]hh:]mm
 - Example: Look at message log from 14:15 to 14:45
 - aoplogu -b 14:15 -e 14:45
 - Can also specify duration for most recent activity
 - aoplogu -l [[[YY:]MM:]DD:]hh:]mm
 - Example: Look at messages for last 10 minutes
 - aoplogu -l 10

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Selected Jobs with Jobname (rogers)



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Infoprint Server Print Jobs (6)

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All <input type="checkbox"/>	Job ID	Job name	Status	Owner	Printer definition	NetSpool LU name	Printer	Submit time
<input type="checkbox"/>	JOB30844	ROGERSF	Rejected	ROGERS	DFLTNTRY			Thu Apr 22 19:54:04 EDT 2004
<input type="checkbox"/>	JOB31249	ROGERSW	Rejected	ROGERS	DFLTNTRY			Tue Apr 27 11:02:06 EDT 2004
<input type="checkbox"/>	JOB31250	ROGERSW	Rejected	ROGERS	DFLTNTRY			Tue Apr 27 11:06:34 EDT 2004
<input type="checkbox"/>	JOB31251	ROGERSW	Rejected	ROGERS	DFLTNTRY			Tue Apr 27 11:07:31 EDT 2004
<input type="checkbox"/>	JOB31306	ROGERSX	Rejected	ROGERS	DFLTNTRY			Tue Apr 27 13:39:18 EDT 2004
<input type="checkbox"/>	JOB31309	ROGERSX	Rejected	ROGERS	DFLTNTRY			Tue Apr 27 14:00:19 EDT 2004

Infoprint Server Print Job History (4)

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Job ID	Job name	Status	Completion time	Owner	Printer definition	NetSpool LU name
PS009754	ROGERS	Completed successfully	Tue Apr 27 13:36:16 EDT 2004	ROGERS	EBOB	
PS009756	ROGERS	Completed successfully	Tue Apr 27 13:39:22 EDT 2004	ROGERS	EBOB	
PS009760	ROGERS	Completed successfully	Tue Apr 27 14:00:20 EDT 2004	ROGERS	EBOB	
PS009764	ROGERS	Completed successfully	Tue Apr 27 14:33:50 EDT 2004	ROGERS	EBOB	

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Viewing Job Log (1)



IBM. **Infoprint Server Print Job Log** [?](#)

[Back to Work with Print Jobs](#) > [Refresh Historical Print Job Log](#)

Last refresh: Tue Apr 27 17:37:43 EDT 2004

Infoprint Server Print Job PS009764


Time	Severity	Message
Tue Apr 27 18:33:50 2004	i Information	AOP3406I IP PrintWay deleted the print job and did not retain it on the JES spool.
Tue Apr 27 18:33:50 2004	i Information	AOP3401I IP PrintWay deleted the document from the JES spool.
Tue Apr 27 18:33:50 2004	i Information	AOP3613I The print job was completed.
Tue Apr 27 18:33:49 2004	i Information	AOP3951I IP PrintWay is sending the files in an e-mail with the following information:
Tue Apr 27 18:33:49 2004	i Information	AOP3609I IP PrintWay has started to process the print job.
Tue Apr 27 18:33:49 2004	i Information	AOP3402I IP PrintWay added the print job to the printer's queue.
Tue Apr 27 18:33:49 2004	i Information	AOP3204I IP PrintWay received the document from JES.
Tue Apr 27 18:33:49 2004	i Information	AOP119I Job 9764 document //DD:SYSIN completed spooling with status OK.
Tue Apr 27 18:33:49 2004	i Information	AOP120I Job 9764 document //DD:SYSIN started spooling to EBOB with status OK.

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Viewing Job Log (2)



Infoprint Server Print Job PS009764	
Message	
AOP3406I	IP PrintWay deleted the print job and did not retain it on the JES spool.
AOP3401I	IP PrintWay deleted the document from the JES spool.
AOP3613I	The print job was completed.
AOP3951I	IP PrintWay is sending the files in an e-mail with the following information: From: "Paul C. Rogers"<ROGERS@wtsc65.itso.ibm.com> To:
AOP3609I	IP PrintWay has started to process the print job.
AOP3402I	IP PrintWay added the print job to the printer's queue.
AOP3204I	IP PrintWay received the document from JES.
AOP119I	Job 9764 document //DD:SYSIN completed spooling with status "pending".
AOP120I	Job 9764 document //DD:SYSIN started spooling to EBOB with transform afp2pdf.dll -c bh .




Infoprint Server Print Job PS009764

	User ID	Document name	Process
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
	HAIMO	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
Subject: Monthly Report .	HAIMO	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
	HAIMO	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopoutd
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	aopwsmd
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	lp
	ROGERS	ROGERS.ROGERS.JOB31310.D000000C.DD#SYSIN	lp

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IP PrintWay Printer Log (1)



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IP PrintWay Printer Log

Enter one or more values to change the number of messages displayed.

[Back to Work with Printers](#) > [Back to IP PrintWay Printer Information](#) > [Refresh IP PrintWay Printer Log](#)

Last refresh: Tue Apr 27 18:01:31 EDT 2004

IP PrintWay Printer

ILPODIP,JUSTST

Issued within:

1 Days

Maximum messages to return

50

Time	Severity	Message	User ID
Tue Apr 27 13:49:45 2004	i Information	AOP3613I The print job was completed.	HAIMO
Tue Apr 27 13:49:40 2004	i Information	AOP3609I IP PrintWay has started to process the print job.	HAIMO
Tue Apr 27 13:49:40 2004	i Information	AOP3402I IP PrintWay added the print job to the printer's queue.	VAINI
Tue Apr 27 05:32:41 2004	i Information	AOP3613I The print job was completed.	HAIMO
Tue Apr 27 05:32:39 2004	i Information	AOP3609I IP PrintWay has started to process the print job.	HAIMO
Tue Apr 27 05:32:39 2004	i Information	AOP3504I IP PrintWay started the printer.	VAINI
Tue Apr 27 05:32:39 2004	i Information	AOP3011I IP PrintWay accepted the request to start the printer.	VAINI
Tue Apr 27 05:29:21 2004	i Information	AOP3402I IP PrintWay added the print job to the printer's queue.	VAINI
Tue Apr 27 05:28:43 2004	i Information	AOP3505I IP PrintWay stopped the printer.	VAINI
Tue Apr 27 05:28:43 2004	i Information	AOP3012I IP PrintWay accepted the request to stop the printer.	VAINI

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Migration Considerations



- ❑ IP PrintWay extended mode will soon be providing a JSPA mapping to the exits as PrintWay basic
- ❑ Provide compatibility between PrintWay basic mode and PrintWay extended mode exits
 - PrintWay will simulate the JSPA area
 - You are able to use this area as before, as if JES provided it
- ❑ Available via APAR - OA07390 (Open)

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Infoprint Server Transforms



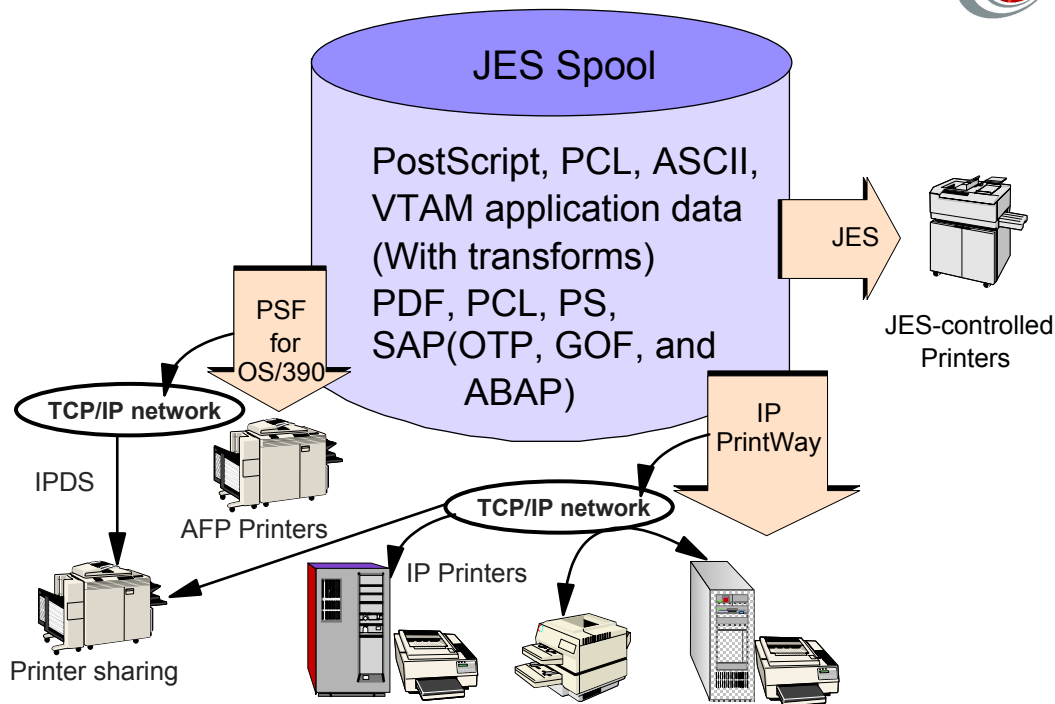
Redbooks

International Technical Support Organization



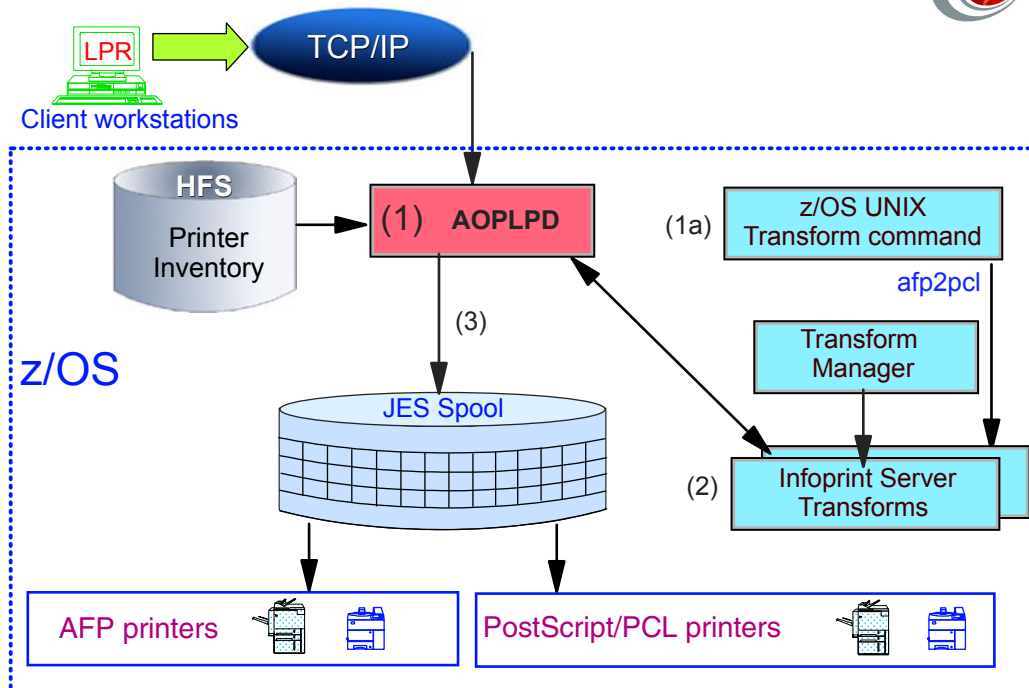
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Data Streams on JES Spool



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Datastream Transforms Overview



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Infoprint Server Transforms



❑ Provided Transforms:

- PCL5 to MO:DCA (AFPDS)
- PostScript L1, L2, L3 to MO:DCA (AFPDS)
- PDF to MO:DCA (AFPDS)
- SAP OTF and ABAP to MO:DCA (AFPDS)

❑ Infoprint Server Transforms

- Licensed program product (5697-F51)
- AFP to PDF, PCL5, and PostScript

❑ z/OS UNIX shell commands:

- pcl2afp - ps2afp - pdf2afp - sap2afp
- afp2pdf - afp2pcl - afp2ps

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Infoprint Server



❑ IBM Infoprint XML Extender for z/OS

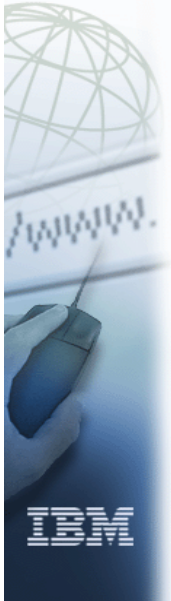
- Separate product (5655-J66)
- Transforms XML to AFP
- Supported on OS/390 V2R10 and all z/OS Releases
- Allows a transform Extensible Markup Language (XML) files to AFP or PDF format for printing or e-mailing

❑ IBM Infoprint XT Extender for z/OS

- Separate product (5655-J65),
- Lets you transform Xerox files to AFP format for printing or e-mailing
- The Xerox files can be line-conditioned data streams (LCDS) or metacode data streams
- XT is the IBM Xerox Transform technology

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Infoprint Server Components

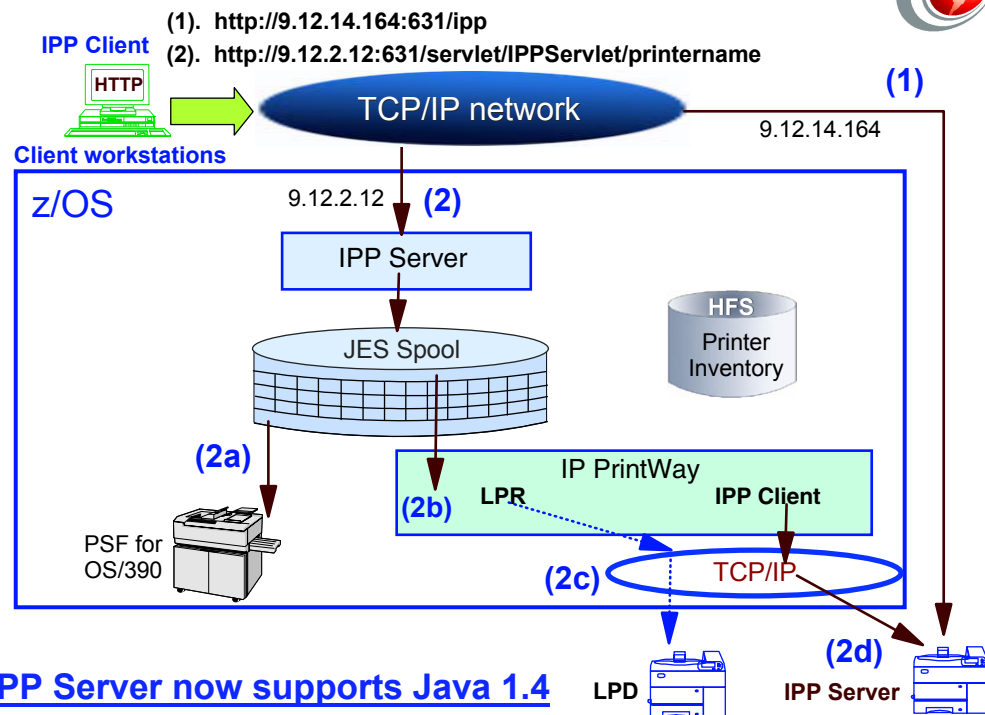


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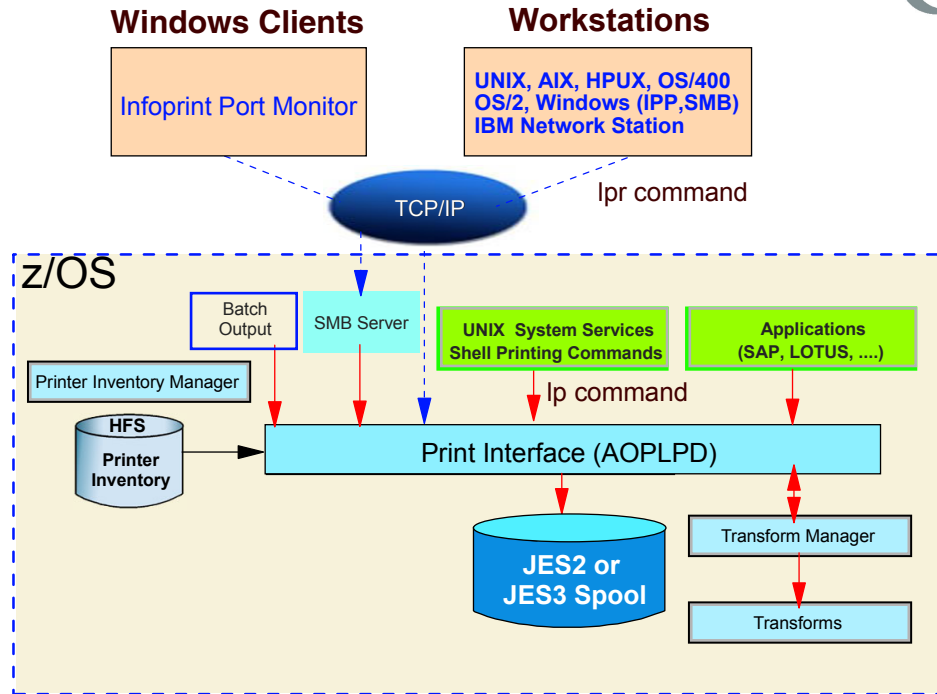
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Internet Printing Protocol (IPP)



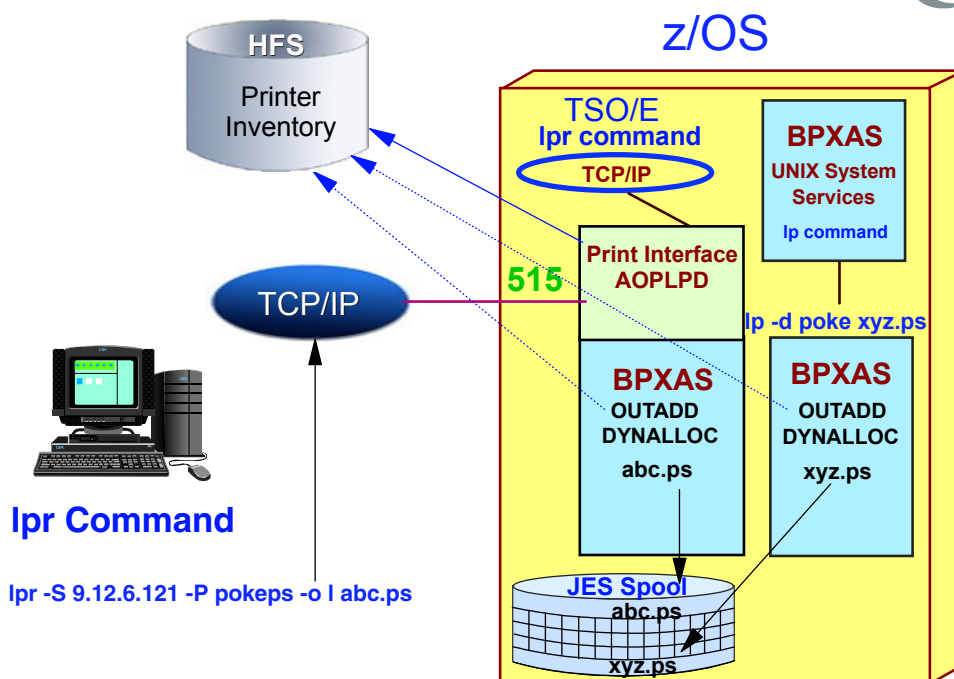
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Infoprint Server - Print Interface



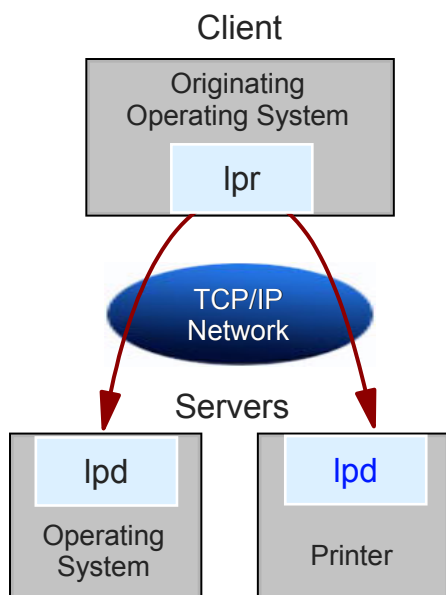
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Print Interface Processing Requests



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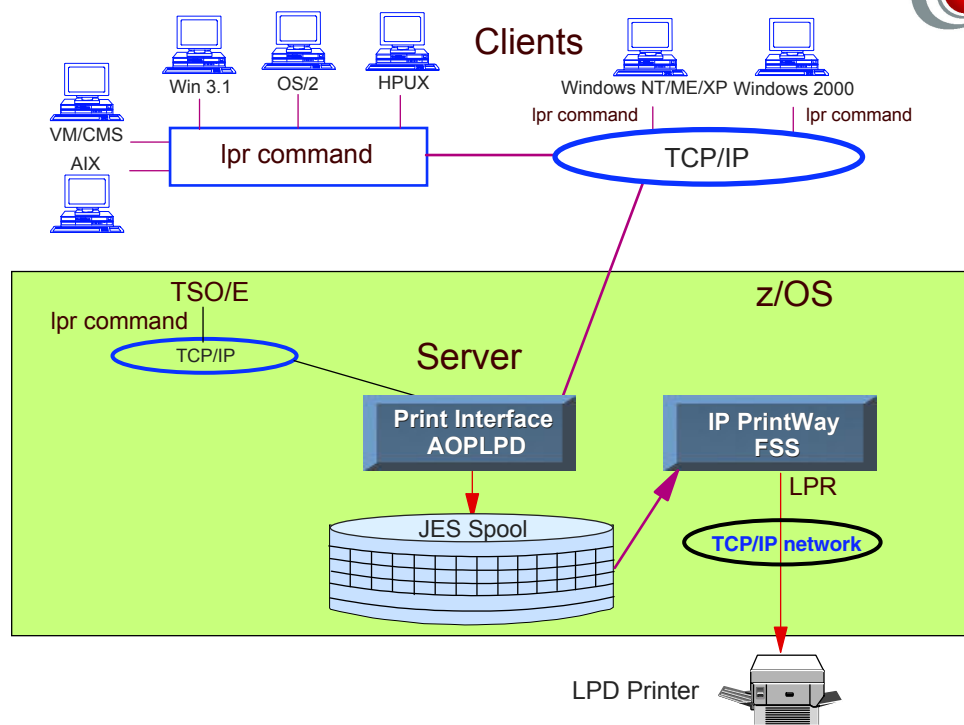
TCP/IP Printing - RFC1179



- ☐ **lpr** - command that requests printing
 - Standard lpr has required attributes:
 - file name, IP address, queue name
 - lpr command sends print data to a lpd via TCP/IP
- ☐ **lpd** - line print daemon is a destination
 - A daemon waits for the lpr command to be invoked
 - lpd receives the print data and sends it to a print queue
- ☐ **lpd** can reside in software or in printer hardware

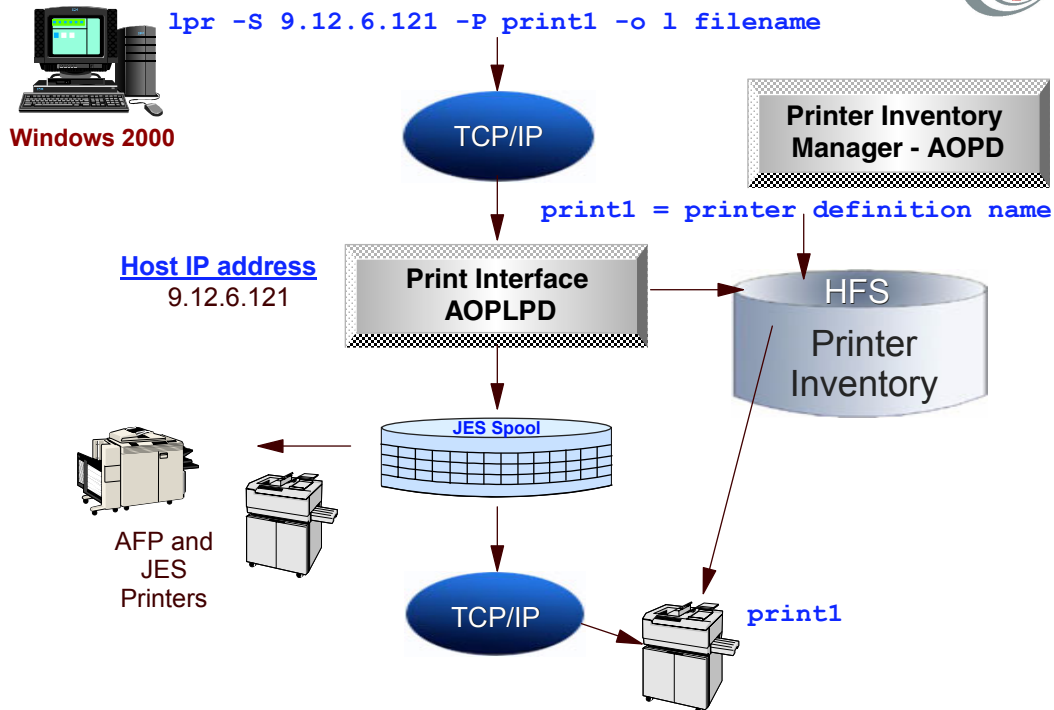
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Infoprint Server LPR-LPD Support



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Printer Inventory Example



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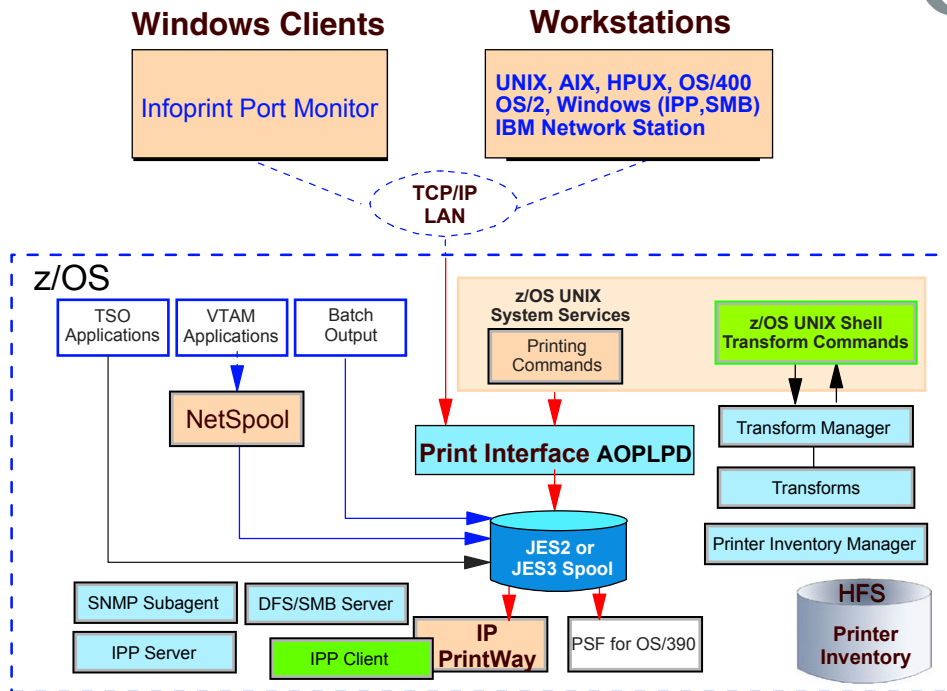
User Access to Infoprint Server



- ☐ Workstation users - (lpr command) - (IPP)
- ☐ Windows workstation users
 - lpr command - Native Windows SMB - Infoprint Port Monitor - IPP
- ☐ TSO/E - VM users - (lpr command)
- ☐ Users submitting batch JCL
 - AOPPRINT JCL EXEC - Standard JCL
- ☐ z/OS UNIX System Services users
 - lp command
- ☐ VTAM Application users
 - NetSpool
- ☐ SAP R/3

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Infoprint Server Component Summary



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