

Host Print Set-up Guide

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MPI Tech A/S Vadstrupvej 35 2880 Bagsvaerd Denmark Tel: +45 44 36 60 00 Fax: +45 44 36 61 11 www.mpitech.com

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1 PSF/MVS AFP Printing Using TCP/IP

This chapter provides information on how to create MVS definitions for printing from PSF/MVS via TCP/IP. The following topics are addressed:

JES printer statements PSF Start-up procedure

Once these parameters have been configured, and the basic TCP/IP installation of the PrintServer with IPDS has been completed, direct AFP / IPDS from PSF / MVS will be possible.

MTU size:

The Maximum Transmission Unit (MTU) of the IP packet for the MVS system is recommended to be set up to 2000.
 NOTE: The MTU size should not exceed the maximum size sent through the control unit. Failure may lead to transmission problems.

1.1 PSF/MVS direct attachment

Sample PSF/MVS JES2 initialisation statements

FSSDEF(FSS1)PROC=PSF4,HASPFSSM=HASPFSSM

```
PRT420 FSS=FSS1,MODE=FSS,PRMODE=(LINE,PAGE),
CLASS=A,UCS=0,SEP,NOSEPDS,CKPTPAGE=100,DRAIN,WS=(R,Q/FCB)
```

Example of PSF/MVS JES2 printer definition

1.2 **PSF/MVS** start-up procedure

```
//PSF4
    PROC
//STEP01 EXEC PGM=APSPPIEP,REGION=1750K
                                   */
*/
                                   */
                                   */
*/
//*
//*
    THIS PROC. IS TO BE USED FOR 300 DPI DEVICES
//*
                 ----
//FONT01 DD DSN=SYS1.FONTLIBBB,DISP=SHR /* FONTS - 300 DPI */
// DD DSN=SYS1.FONT300,DISP=SHR /* SYSTEM FONTS - 300 DPI */
//PSEG01 DD DSN=SYS1.PSEGLIB,DISP=SHR /* SYSTEM PAGE SEGMENTS */
//OLAY01 DD DSN=SYS1.OVERLIB,DISP=SHR /* SYSTEM MEDIUM OVERLAYS
                                  */
//*-----
//PDEF01 DD DSN=SYS2.PDEFLIB,DISP=SHR /* SYSTEM PAGEDEFS
// DD DSN=SYS1.PDEFLIB,DISP=SHR /* SYSTEM PAGEDEFS
                                  */
                                  */
//*
      STANDARD
                  PRINTDEV
                                  */
```

//PRT420	CNTL		
//PRT420	PRINTDEV FONTDD=*.FONT01,	/*	FONT LIBRARY DD */
11	OVLYDD=*.OLAY01,	/*	OVERLAY LIBRARY DD */
11	PSEGDD=*.PSEG01,	/*	SEGMENT LIBRARY DD */
11	PDEFDD=*.PDEF01,	/*	PAGEDEF LIBRARY DD */
11	FDEFDD=*.FDEF01,	/*	FORMDEF LIBRARY DD */
11	JOBHDR=*.JOBHDR,	/*	JOB HEADER SEPARATOR OUTPUT */
11	JOBTRLR=*.JOBTLR,	/*	JOB TRAILER SEPARATOR OUTPUT*/
11	DSHDR=*.DSHDR,	/*	DATA SET HEADER SEPERATOR */
11	MESSAGE=*.MSGDS,	/*	MESSAGE DATA SET OUTPUT */
11	PAGEDEF=A06462,	/*	DEVICE PAGEDEF DEFAULT */
11	FORMDEF=A10110,	/*	DEVICE FORMDEF DEFAULT */
11	CHARS=(GT10,	/*	DEVICE */
11	GT12,GT15,GT10),	/*	DEFAULT FONT SET */
11	PIMSG=YES,	/*	ACCUMULATE DATA SET MESSAGES*/
11	DATACK=BLOCK,	/*	REPORT ALL DATA-CHECK ERRORS*/
11	TRACE=NO,	/*	CREATE INTERNAL TRACE */
11	FAILURE=WCONNECT,	/*	ACTION ON PRINTER FAILURE */
11	TIMEOUT=REDRIVE,	/*	PSF ACTION ON TIMEOUT */
11	DISCINTV=0,	/*	DISCONNECT INTERVAL IN SECS.*/
11	MGMTMODE=IMMED,	/*	ACTIVATE PRINTER AT STARTUP */
11	IPADDR=`192.0.110.21'	/*	IP ADDRESS */
11	PORTNO=5001	/*	IP ADDRESS */
//PRT420	ENDCNTL		

Using IP address 192.0.110.21 and port number 5001

The IP address of the *PrintServer* (IPDS) should be programmed in the IPADDR statement. The PORTNO 5001 is the default port number of the first IPDS port on the *PrintServer* (IPDS). Use a value of 5002 to address the second IPDS port if required.

2 z/OS SCS Printing Using TN3270e

This chapter provides examples of how to set up SCS printing using TN3270e.

2.1 TN3270E Setup using z/OS Communication Server

The IBM z/OS is capable of supporting TN3270e sessions communicating directly. The following describes the required mainframe definitions for a LinkCom or DocOut. It is assumed that the TN3270e service is already active on the mainframe.

2.1.1 Mainframe TCPIP profile definitions:

PRTGROUP PRTGRP1 LU08 TCPPRT01 TCPPRT02 TCPPRT03 TCPPRT04 TCPPRT05 TCPPRT06 TCPPRT07 TCPPRT08 TCPPRT09 TCPPRT10 TCPPRT11 TCPPRT12 TCPPRT13 TCPPRT14 TCPPRT15 ENDPRTGROUP

IPGROUP IPGRP1 255.255.0.0:128.0.0.0 ENDIPGROUP LUMAP LUGRP1 IPGRP1 SPECIFIC PRTGRP1 PRTMAP PRTGRP1 IPGRP1 *********

2.1.2 SNA Definitions:

TCP VBUILD TYPE=APPL

LU08	APPL EAS=1, ESTIMATED CONCURRENT SESSIONS	*	
	AUTH=ACO.		*
	VPACING=3		*
	MODETAB=RSCSTAB, SESSLIM=YES		*
TCPPRT*	APPL EAS=1, ESTIMATED CONCURRENT SESSIONS	*	
	AUTH=ACQ,		*
	VPACING=3,		*
	MODETAB=RSCSTAB,		*
	SESSLIM=YES		

3 Mainframe Printing Using SNA

This chapter provides:

Note: The descriptions below appear in Ethernet and Token Ring versions respectively, and the sections are marked accordingly. Be sure to select the right section.

- sample LU1 printer logmode definitions: 3.1 Logmode
- sample definitions for installation in association with a locally attached 3174 and 3745:
 3.2 Ethernet PS PU definition for 3174
 2.2 Ethernet PS PU definition for 3174
 - 3.3 Ethernet PS PU definition for 3745
 - 3.4 Token Ring PS PU definition for 3174
 - 3.5 Token Ring PS PU definition for 3745

Once these definitions have been configured, performing direct printing via SNA will be possible.

Requirements:

- PrintServer with SCS feature for 3270 printing .
- PrintServer with IPDS feature for IPDS printing.

3.1 Logmode

The PrintServer uses standard IBM LU1 printer logmodes. Please refer to your IBM VTAM documentation for particular configurations that best meet your network requirements. Two sample definitions are listed below:

IPDS printer:		SCS printer:	
IPDSPSF1 MODEENT	LOGMODE=IPDSPSF1,	RSCSPRT1 MODEENT	LOGMODE=RSCSPRT1,
FMPROF=X'03',	Х	FMPROF=X'03',	Х
TSPROF=X'03',	Х	TSPROF=X'03',	Х
PRIPROT=X'B1',	Х	PRIPROT=X'B1',	Х
SECPROT=X'B0',	Х	SECPROT=X'30',	Х
COMPROT=X'7080',	Х	COMPROT=X'7080',	Х
SRCVPAC=X'02',	Х	SSNDPAC=X'00',	Х
RUSIZES=X'85C7',	Х	SRCVPAC=X'00',	Х
SSNDPAC=X'00',	Х	RUSIZES=X'8787',	Х
PSNDPAC=X'02',	Х	PSNDPAC=X'80',	Х
PSERVIC=X'0140000100000000000000000'		PSERVIC=X'0100000	0E1000000000000000'

3.2 Ethernet - PS PU definition for 3174

Sample definition for installation in association with a locally attached 3174.

3174 VTAM definition

```
V1SNA1C2 VBUILD TYPE=LOCAL
* LOCAL SNA 3174
V1LS1C2 PU
               CUADDR=3C3,
                                                                          х
               DLOGMOD=D4A32782,
                                                                          х
                                                                         х
               PACING=3,
               VPACING=3
                                                                          х
               MAXBFRU=10,
                                                                          х
               SSCPFM=USSSCS,
                                                                          х
               USSTAB=VUSSTAB,
                                                                          х
               LOGTAB=VMODETAB,
                                                                          х
               MODETAB=VMODETAB
 SINGLE ETHERNET DEVICE WITH ID=40005A0001C2
*
               LOCADDR=02, DLOGMOD=RSCSPRT1, PACING=0, MODETAB=RSCSTAB,
IDS1C2P1 LU
                                                                         х
               USSTAB=VUSSTAB1,VPACING=3
```

3174 Definition

```
LOCAL ETHERNET DEFINITION 3174
 CHANNEL ADDRESS 1C1-1C8
*
*
 3174 /11L Microcode EC=A78831 ML=90095
                                    * Ethernet Gateway Address
*
 Prompt 900 - 400031740001
*
*
 Prompt 940
                              * Ethernet Assignment
        C1 - 40005A0001C1
C2 - 40005A0001C2
*
        C3 - 40005A0001C3
*
*
 Prompt 941
                              *
                               Ethernet Address Configuration
*
                           SAP
                                  F
                                        W
*
        C1 - 40005A00001C1
                                  3
                                        3
                            4
        C2 - 40005A00001C2
*
                            4
                                  3
                                        3
        C3 - 40005A00001C3
*
                            4
                                  3
                                         3
```

PrintServer Definition file extract

&&??##N1,0# ; Start of file - Don't remove this !			
;			
; Configuration	n for the Etherne	t PrintServer	
; (This is an	example. Please m	odify the parameters to match	
; your configu	ration).		
; 00824001			
;			
END			
;***************	*****	· · · · · · · · · · · · · · · · · · ·	
;		PU	
;*****************	*****	***#************	
BEGIN_CONFIGURATION	I PU		
BLOCKNUMBER	05D	; Fill in your Block number	
IDNUMBER	00000	; Fill in your ID number	
REMOTE_MAC	400031740001	; Fill in HOST / GW MAC address	
LOCAL_SAP	4	; Fill in your local SAP value	
REMOTE_SAP	4	; Fill in your HOST SAP value	
END			
&&??			

3.3 Ethernet - PS PU definition for 3745

Sample definition for installation in association with a locally attached 3745.

Logmode

MTABPS *	MODETAB	
* *	MODE TABLE	
MODPS	MODEENT LOGMODE=MODPS, FMPROF=X'03', TSPROF=X'03',	x
	<pre>PRIPROT=X'B1',SECPROT=X'B0',COMPROT=X'7080',</pre>	x
	RUSIZES=X'85C6',	x
	<pre>PSNDPAK=X'02',SRCVPAC=X'02,SSNDPAC=X'00',</pre>	x
	PSERVIC=X'01400001000000000000000000000000000000	
*	MODEEND	
*		
	END	

PU/LU Definitions

SPPRKEN	VBUILD TYPE=SWNET, SWITCHED MAJOR NODE
	MAXNO=1,
	MAXGRP=1
*	STATOPT=`NN PRINTER'
PA01B91	PU ADDR=C1,
	IDBLK=017,
	IDNUM=E2961,
	DISCNT=NO,
	MAXOUT=1,
	MAXDATA=1033,
	MODETAB=MTABPS,
	PACING=3,
	VPACING=3,
	MAXPATH=1,
	PUTYPE=2,
	DLOGMOD=MODPS
*	PATH
B91PATH	DIALNO=020400036E0035C9,GRPNM=ZTOKEN,GID=1,PID=1
*	
TA01B911	LU LOCADDR=2, DLOGMOD=MODPS
*	-

PSF JCL

//PRTN	CNTL		
//PRTN	PRINTDEV FONTDD=*.FONT300,	/*FONT LIBRARY DD */	/
11	OVLYDD=*.OLAY01,	/*OVERLAY LIBRARY DD */	
11	PSEGDD=*.PSEG01,	/*SEGMENT LIBRARY DD */	
11	PDEFDD=*.PDEF01,	/*PAGEDEF LIBRARY DD */	
11	FDEFDD=*.FDEF01,	/*FORMDEF LIBRARY DD */	
11	JOBHDR=*.JOBHDR,	/*JOB HEADER SEPARATOR OUTPUT */	/
11	JOBTRLR=*.JOBTLR,	/*JOB TRAILER SEPARATOR OUTPUT */	/
11	DSHDR=*.DSHDR,	/*DATA SET HEADER SEPARATOR	*/
11	MESSAGE=*.MSGDS,	/*MESSAGE DATA SET OUTPUT */	
11	FORMDEF=A10110,	/*DEVICE FORMDEF DEFAULT	*/
11	PAGEDEF=P06683,	/*DEVICE PAGEDEF DEFAULT	*/
11	CHARS=GT57,	/*DEVICE FONT DEFAULT */	/

3.4 Token Ring - PS PU definition for 3174

Sample definition for installation in association with a locally attached 3174.

3174 VTAM definition

```
V1SNA1C2 VBUILD TYPE=LOCAL
* LOCAL SNA 3174
V1LS1C2 PU
               CUADDR=3C3,
                                                                          х
               DLOGMOD=D4A32782,
                                                                          х
                                                                          х
               PACING=3,
               VPACING=3
                                                                          х
               MAXBFRU=10,
                                                                          х
               SSCPFM=USSSCS,
                                                                          х
               USSTAB=VUSSTAB,
                                                                          х
               LOGTAB=VMODETAB,
                                                                          х
               MODETAB=VMODETAB
 SINGLE TOKEN RING DEVICE WITH ID=40005A0001C2
*
               LOCADDR=02, DLOGMOD=RSCSPRT1, PACING=0, MODETAB=RSCSTAB,
IDS1C2P1 LU
                                                                          х
               USSTAB=VUSSTAB1,VPACING=3
```

3174 Definition

```
LOCAL TOKEN RING DEFINITION 3174
 CHANNEL ADDRESS 1C1-1C8
*
 3174 /11L Microcode EC=A78831 ML=90095
                                    * Token-Ring Gateway Address
* Prompt 900 - 400031740001
*
*
 Prompt 940
                              * Token-Ring Assignment
        C1 - 40005A0001C1
C2 - 40005A0001C2
*
         C3 - 40005A0001C3
*
*
 Prompt 941
                              *
                               Token-Ring Address Configuration
*
                           SAP
                                  F
                                         ิพ
         C1 - 40005A00001C1
*
                                  3
                                         3
                            4
         C2 - 40005A00001C2
*
                            4
                                  3
                                         3
         C3 - 40005A00001C3
*
                            4
                                  3
                                         3
```

PrintServer Definition file extract

&&??##N1,0# ; S	tart of file - Don't remove this !
; Configuration ; (This is an o ; your configur ; 00824001	n for the Token Ring PrintServer example. Please modify the parameters to match ration).
; * * * * * * * * * * * * * * * * * * *	********************
;	P U
;*************	*****************
BEGIN_CONFIGURATION	PU
BLOCKNUMBER	05D ; Fill in your Block number
IDNUMBER	00000 ; Fill in your ID number
REMOTE MAC	400031740001; Fill in HOST / GW MAC address
LOCAL SAP	4 ; Fill in your local SAP value
REMOTE SAP	4 ; Fill in your HOST SAP value
END	
&&??	

3.5 Token Ring - PS PU definition for 3745

Sample definition for installation in association with a locally attached 3745.

Logmode

MTABPS *	MODETAB	
*	MODE TABLE	
MODPS	MODEENT LOGMODE=MODPS, FMPROF=X'03', TSPROF=X'03', x PRIPROT=X'B1', SECPROT=X'B0', COMPROT=X'7080', x RUSIZES=X'85C6', x PSNDPAK=X'02', SRCVPAC=X'02, SSNDPAC=X'00', x PSERVIC=X'01400001000000000000000000000000000000	
*	MODEEND	

PU/LU Definitions

SPPRKEN	VBUILD TYPE=SWNET, SWITCHED MAJOR NODE
	MAXNO=1,
	MAXGRP=1
*	STATOPT=`NN PRINTER'
PA01B91	PU ADDR=C1,
	IDBLK=017,
	IDNUM=E2961,
	DISCNT=NO,
	MAXOUT=1,
	MAXDATA=1033,
	MODETAB=MTABPS,
	PACING=3,
	VPACING=3,
	MAXPATH=1,
	PUTYPE=2,
	DLOGMOD=MODPS
*	PATH
B91PATH	DIALNO=020400036E0035C9,GRPNM=ZTOKEN,GID=1,PID=1
*	
TA01B911	LU LOCADDR=2, DLOGMOD=MODPS
*	

PSF JCL

//PRTN	CNTL	
//PRTN	PRINTDEV FONTDD=*.FONT300, /*FONT	LIBRARY DD */
11	OVLYDD=*.OLAY01,	/*OVERLAY LIBRARY DD */
11	PSEGDD=*.PSEG01,	/*SEGMENT LIBRARY DD */
11	PDEFDD=*.PDEF01,	/*PAGEDEF LIBRARY DD */
11	FDEFDD=*.FDEF01,	/*FORMDEF LIBRARY DD */
11	JOBHDR=*.JOBHDR,	/*JOB HEADER SEPARATOR OUTPUT
	*/	
11	JOBTRLR=*.JOBTLR,	/*JOB TRAILER SEPARATOR OUTPUT
	*/	
11	DSHDR=*.DSHDR,	/*DATA SET HEADER SEPARATOR
	*/	,
11	MESSAGE=*.MSGDS	/*MESSAGE DATA SET OUTPUT */
11	FORMDEF=A10110,	/*DEVICE FORMDEF DEFAULT
.,	*/	,
11	PAGEDEF=P06683	/*DEVICE PAGEDEF DEFAULT
· ·	*/	,
11	CHARS-GT57	/*DEVICE FONT DEFAILT
· ·	*/	, DECIDE FORT DEFROM
	··/	

4 Configuration of MS SNA/HIS Server

This chapter provides examples of how to set up SCS printing using TN3270e.

4.1 General setup

4.1.1 Adding DLC 802.2 protocol to your Windows Server / Workstation

In order to communicate via Token ring or Ethernet over SNA, you must add the DLC protocol to your Windows Server or Workstation running SNA Server.

🐼 Control Panel
Network ?X
Identification Services Protocols Adapters Bindings
Network Protocols:
Select Network Protocol
Click the Network Protocol that you want to install, then click OK. If you have an installation disk for this component, click Have Disk.
Network Protocol:
AppleTalk Protocol DLC Protocol NetBEUI Protocol NetBEUI Protocol NetBEUI Protocol
A ni Foint To Point Tunneling Protocol
Have Disk
OK. Cancel
OK Cancel

4.1.2 SNA Server configuration – Create a link

You must define the Server LAN card to be used to communicate with the host.

- Folder *Link Services*, make a right click and select Link Service. Select DLC 802.2 Link Service from the list.

🖻 💼 SNA Servers		Insert Link Service	×
Insert Delete Properties	<u>Connection</u> <u>APPC</u> <u>Link Service</u>	Select a Link Service to add: DIGI Sync/570i QLLC Link Service DIGI Sync/570i SDLC Link Service Distributed Link Service Eicon SDLC Link Service Eicon SDLC Link Service GSN Escon Channel Link Service IBM DFT Link Service IBM SDLC Link Service	▲ ▼ <u>C</u> ancel

- In the *DLC 802.2 Link Service Properties* window, select the LAN card you want to use.

4.1.3 SNA Server configuration – Create a connection

You must define a connection (PU Emulation) with attributes matching the VTAM PU Definitions

- Folder Connections, make a right click and select 802.2 from the list:

E E Servers E E WEREWOLF Link Services E ∰ SNA Service	Start Stop Pause Resume		
	Insert 🕨 🕨	Connection 🕨	SDLC
	Delete	APPC 🕨	802.2
	Properties	Link Service	X.25 Channel
			DFT TwinAx

Connections : General

PU Properties					
General Address Sys	tem Identification 802.2 D	LC)			
Name: PU Link Service: SnaDlc	1 T Ethernet				
Comment: Host PL	J for SNA	1			
Remote End Host System Peer System Downstream PU Passthrough	Allowed Directions O Outgoing Calls O Incoming Calls O Both Directions	Activation On Server Startup On Demand O By Administrator			
Passthrough via Connection: <none></none>					
Supports Dynamic	Remote APPC LU Definitio	'n			
	OK Car	ncel Help			

Connections : Address

PU Properties	
General Address System I	Identification 802.2 DLC
Remote Network Address: Remote SAP Address:	02000000088 0x04 v
Local SAP Address:	0x04
	OK Cancel Help

Note : Remote Network Address must match the Host MAC Address (TIC)

Connections : System Identification

- Local Node Name	1 1 Contraction 802.2 DE	
Network Name:	APPN	
Control Point Name:	WEREWOLF	XID Type
Local Node ID:	05D 00000	 Format U Format 3
Remote Node Name-		
Network Name:		Peer DLC Role
Control Point Name:		C Primary C Secondary
Remote Node ID:		C Negotiable
Compression Type:	None 💌	

 \underline{Note} : **Iocal Node ID** must match the **ID_NUM** and **ID_BLOCK** parameters of the VTAM PU Definition

Connections : System Identification

<u>Note</u> : **MAX BTU Length** must match the **MAX_DATAD** parameter of the VTAM PU Definition

4.2 SNA Server configuration – Create a Printer LU

Attached to the connection, you must create your printer LU. In order to run with MPI Router, you must define a LUA LU.

- Make a right click on your connection and select Application LU (LUA).



- This new window appears:

PSNA201 Propert	ies	
General		
	LU Number LU Name Connection Pool Comment Comment Vse Comp V High Prior	1 PSNA201 PU <none> LUA for BS Router SCS3270 aression ity Mode</none>
		JK Cancel Help

 \underline{Note} : The number specified for \pmb{LU} must match the $\pmb{LOCADDR}$ parameter of the VTAM LU Definition

4.3 Configuring BlueServer for SNA communication

4.3.1 Setup Connection tab

Setup Printer			×
Printer : PSNA201		Server Profile	JMD sample
Information Connection	IPDS Settings Paper Controls SCS Se	ettings Trace Options	
LU Name	PSNA201	the SNA LU	
		must be set to PARSER	
Destination Type	Parser	•	
QueueName		IP address of the Blue Server installation	
<u>P</u> rinter IP Address	192.168.31.64	IP port number	
IP Port	5001		
Apply	Cancel		Help

Notes:

- The other tabs "IPDS Settings", "Paper Controls", are not used in this case.
- The SCS Settings tab is only used only for SCS printout.

4.4 Loading the Router Mainframe and Parser

4.4.1 Microsoft SNA/HIS status indication

The PSNA201 is SSCP

💼 Microsoft SNA Manager						×
∫ 💼 ⊆onsole <u>W</u> indow <u>H</u> elp					_ 8	×
Δ ction <u>V</u> iew <u>T</u> ools $4 \Leftrightarrow \Rightarrow 1$	📧 🖻 💼 🗙	🗳 🖗	8	19 ⇒ ⇒ ► ■		
Tree	PU LUs on connec	tion 'PU' (199)				
SNA Service [Active]	LU Name 🔺	Status	LU #	User	Client	
Connections	PSNA201	SSCP	1	NT AUTHORITY/ ANONYM	JMD	F
PU [Active]	PSNA202	Available	2	<not in="" use=""></not>	n/a	
MPI3 [OnDemand/Incomir	P5NA203	Available	3	<not in="" use=""></not>	n/a	
🖓 PU1 [OnDemand/Incomin	PSNA204	Available	4	<not in="" use=""></not>	n/a	-
	1				•	

4.4.2 Blue Server status indication

BLUE SERVER						
<u>C</u> onfig <u>V</u> iew <u>T</u> ools ? V7.50.0						
`\$\$′≜′₀′₃ ≸\$≜∱	a 🎸 💁 💷	🍸 🛝 🥏	\$			
WPI Blue Server	Se printers	SERVICES SERVICES				
🖻 🐺 MPI Printers	🗘 🗘 Name 🗘 Config Status	s 🗘 Host 🕴 Host Status	Target Printer	Printer Status	Product +	Group 🔺
	PSNA201 A Loaded	PSNA201 👫 SSCP	192.168.31.64:5001	💕 Inactive	SNA MainFrame	
PARSER	PSNA201 🔺 Loaded	IPDS Port 5001 🛛 📅 Available	192.168.31.158:9100	💕 Inactive	PARSER	
SNA MainFrame						-
	•					
2 Printers	<u>II '</u>	24/01/2005 17:	20:19 NUM			

With this configuration, you are now able to print SCS or IPDS jobs from your Mainframe IBM host.

4.5 Configuring DocOut for SNA communication

4.5.1 Setup LUA(LU1) tab

or

Select AFP/IPDS (PSF) using SNA (LU1/LUA)

SCS (S/390) using SNA (LU1/LUA)



Check Configuration:



Select: Save Configuration

4.5.2 Microsoft SNA/HIS status indication

The PSNA201 is SSCP

💼 Microsoft SNA Manager					
] 📆 ⊆onsole <u>W</u> indow <u>H</u> elp					_ Ð ×
_ <u>A</u> ction ⊻iew <u>T</u> ools ⇐ ⇒ 主	📧 🖻 💼 🗙	😭 🔮 🗟	8	19 1⇒ ト ■	
Tree	PU LUs on connect	tion 'PU' (199)			
SNA Service [Active]	LU Name 🔺	Status	LU #	User	Client 🔺
	PSNA201	SSCP	1	NT AUTHORITY/ ANONYM	JMD
PU [Active]	PSNA202	Available	2	<not in="" use=""></not>	n/a
MPI3 [OnDemand/Incomir	PSNA203	Available	3	<not in="" use=""></not>	n/a
PU1 [OnDemand/Incomin	PSNA204	Available	4	<not in="" use=""></not>	n/a 🖵
	1				
	,				

4.5.3 DocOut status indication

🎇 PrintGuide - [DocOut WSFM (Win XP) /FM	M Copenhagen]	- 🗆 🗵
File Search Monitor PrintServer Options H	Help	
📄 D 🖙 - 🗔 🏷 🔂 🔩 4	🔧 🔧 🕅 ; 🚯 🕲 🖉 🖓 🗟 ремо	•
Detected PrintServers:	Visible/Total: 1/1	
Name	Address Version Configured Status	Sec.
剧 DocOut WSFM (Win XP) /FM	127.0.1.1 063.040*26 Yes Ready	See 1
Logical Printers:	Active: 1	
Description	ID Status	
AFP/IPDS (PSF) using SNA (LU1,	I/LUA) 4 Ready	
Ready	Regiptocout working (win XP) /rm copenhagen - (Product: Docout 4)	1.

With this configuration, you are now able to print SCS or IPDS jobs from your Mainframe IBM host.

5 **PSF/AIX IPDS Printing Using TCP/IP**

This chapter provides details on:

Adding a TCP/IP attached printer Set up of the KEEPALIVE TCP/IP feature

The basic TCP/IP installation of the PrintServer (IPDS) must be completed before direct AFP / IPDS from PSF/AIX will be possible.

5.1 Adding TCP/IP attached printer

The port number is defined in the PSF/AIX SMIT Add a TCP/IP-Attached Printer panel.

- Enter Printer name PSF/AIX uses the printer name you specify. Enter a name of up to 8 characters.
- 2. Enter Internet address The address in the TCP/IP network where the PrintServer is installed. Enter a 32-bit dotted decimal notation (e.g. 192.0.2.1).
- 3. Enter Port number (5001) If the output device is attached to PARALLEL 1 of the print server, then select TCP/IP port number 5001. The value chosen must match the value defined for the session in the PrintServer (IPDS). 5001 is the default port number of the first IPDS port no. in the PrintServer (IPDS).

5.2 KEEPALIVE support for AIX

The TCP/IP components in AIX offer network attachment for printers. However, these TCP/IP components do not always detect connection failures if a point-to-point session between the AIX machine and the device has failed (e.g. in connection with a printer being abruptly powered off). This may result in serious problems for IPDS printers in sessions with PSF/AIX

Now, support for the TCP KEEPALIVE facility has been added to the TCP/IP components of AIX to detect all communication failures. PSF/AIX directs TCP to send a KEEPALIVE transmission on a TCP connection remaining inactive for an extended period. If the KEEPALIVE transmission is not acknowledged, the TCP assumes that the connection partner has been lost and subsequently reports a failure to PSF/AIX

The frequency of these transmissions depends upon the configuration of AIX TCP/IP environment. The default for AIX is two hours or more. This, however, can be adjusted. These values apply to all TCP applications that request KEEPALIVE transmissions.

In the following, you are provided with instructions for using the KEEPALIVE support facility added to the TCP/IP components for AIX

5.3 AIX KEEPALIVE support

The no (network options) command can be used by the root user to configure KEEPALIVE frequencies.

no -o tcp_keepidle=nnn

no -o tcp_keepintvl=nnn

when nnn is in half-seconds.

The command **tcp_keepidle** specifies the interval of inactivity causing the TCP to generate a KEEPALIVE transmission for an application that requests them. The default is 14400 (2 hours).

The command **tcp_keepintvl** specifies the interval between the nine retry attempts if a KEEPALIVE transmission is not acknowledged. The default is 150 (75 seconds).

The **no** commands must be run each time the AIX system is started. Adding the **no** commands to /etc/rc.net is a convenient way of automating this step.

Adding e.g.

no -o tcp_keepidle=480

no -o tcp_keepintvl=80

to /etc/rc.net causes the TCP to send a KEEPALIVE transmission if a TCP connection has been inactive for 4 minutes and the application requested KEEPALIVE transmissions, as AIX now does. AIX recommends these TCP configuration settings to customers who use TCP/IP attached printers and the device.

To view current settings enter

no -a

When the installation and configuration procedures for the PSF/AIX have been completed, you are ready for printing.

6 **PSF/400 AFP Printing Using TCP/IP**

This chapter provides configuration guidelines for AS/400 IPDS Printing over TCI/IP. These guidelines are applicable for OS/400 version 3.7, 4.X and 5.X.

The examples of completed screens given are for OS/400 version 4.X and 5.X and may contain some additional parameters not seen in version 3.7, these may be ignored.

Requirements:

Before IPDS printing using TCP/IP can be accomplished, the following points need to be checked:

- TCP/IP is installed and enabled
- IBM Print Services Facility/400 (PSF) is installed.

6.1 AS/400 Settings for Version 3.7, 4.X and 5.X

To configure IPDS printing on OS/400 3.7, V4RX and V5RX, it is necessary to create a Printer Device Description. It is also highly recommended to create a PSF configuration as this includes additional printer settings and e.g. media size information used with matrix printers. These are created using the following commands:

- CRTPSFCFG
- CRTDEVPRT

6.1.1 Creating the PSF configuration

On the AS/400 command line, enter a command in the form:

CRTPSFCFG PSFCFG(*AFP/NETWRKPRT*) IPDSPASTHR(*YES) RLSTMR(*SEC15) TEXT('<*Optional Text description>* ')

Where:

AFP is the name an existing library in which the PSF configuration is to be located and **NETWRKPRT** is the name given to the PSF configuration object. Any existing library and a name of choice for the object can be substituted here but the same values must be used in the creation of the Printer Device Description in the next step.

<*Optional Text description*> is an optional text description for the PSF configuration object.

A completed PSF Configuration looks like this:

PSF Configuration Informatio	n	Page 1
PSF configuration: NETWRKPH	RT Librar	ry: AFP
User resource library		: *JOBLIBL
IPDS pass through		: *YES
Activate release timer		: *NORDYF
Release timer		: *SEC15
Restart timer		: *IMMED
SNA retry count		: 2
Delay time between retries.		: 0
Blank page		: *YES
Page size control		: *YES
Resident fonts		: *YES
Resource retention		: *YES
Edge orient		: *NO
Remote location:		
Name or address		: *NONE
TCP/IP port		: *NONE
TCP/IP activation timer		: 170
PSF defined options:		*NONE
Text description		: <optional description="" text=""></optional>
Device resource library list	::	*DFT

6.1.2 Creating the Printer Device Description

On the AS/400 command line, enter a command in the form:

CRTDEVPRT DEVD(<*DeviceName*>) DEVCLS(*LAN) TYPE(*IPDS) MODEL(0) LANATTACH(*IP) AFP(*YES) PORT(*5001*) FONT(11) FORMFEED(*AUTOCUT) RMTLOCNAME('192.194.134.90') USRDFNOBJ(*AFP/NETWRKPRT* *PSFCFG) TEXT('<*Option Txt Description*> ')

Where:

<**DeviceName>** is the selected name for the printer Device Description which will also be used as the name for the Output Queue.

AFP is the name of the library in which the PSF configuration was created in the previous step.

NETWRKPRT is the name given to the PSF configuration in the previous step.

5001 is the port number to be used. For the LinkCom's and Host2Net this can be 5001, 5002 or 5003 depending how the LinkCom is communicating with the printer, please see the table below:

	PORT 5001	PORT 5002	PORT 5003
LinkCom III IPDS	Parallel Port or	USB Port	
	Network 1 Session		
LinkCom III IPDS	Parallel Port or	USB Port or Network	Network Session 3
with 3 Network	Network Session 1	Session 2	
session option			
LinkCom Xpress	Parallel Port 1	Parallel Port 2	
Host2Net	Network Session 1	Network Session 2	Network Session 3

<*Option Txt description*> is an optional text description for the Printer Device Description object.

A completed Device Description looks like this:

Display Device Description	Page 1	
5716SS1 V4R4M0 981108 BLDRB1	09/11/98 12:02:	59
Device description	DEVD </td <td>DeviceName></td>	DeviceName>
Option	OPTION *A	ALL
Category of device	*1	PRT
Device class	DEVCLS *I	LAN
Device type	TYPE *1	IPDS
Device model	MODEL 0	-
LAN attachment	LANATTACH *1	IP
User-defined object :	USRDFNOBJ NE	ETWRKPRT
Library	AI	FP
Object type	*1	PSFCFG
Data transform program :	USRDTATFM *N	NONE
User-defined driver program:	USRDRVPGM *1	NONE
Advanced function printing	AFP *Y	YES
Port number	PORT 50	001
Online at IPL	ONLINE *Y	YES
Font	FONT	
Identifier	011	
Point size	*1	NONE
Form feed	FORMFEED *AUTOCUT	
Separator drawer	SEPDRAWER *B	FILE
Separator program	SEPPGM *N	NONE
Library		
Printer error message	PRTERRMSG *1	INQ
Message queue	MSGQ QS	SYSOPR
Library	*1	LIBL
Activation timer	ACTTMR 17	70
Maximum pending requests :	MAXPNDRQS 6	
Print while converting :	PRTCVT *Y	YES
Print request timer	PRTRQSTMR *N	NOMAX
Form definition	FORMDF F1	1C10110
Library	*1	LIBL
Remote location	RMTLOCNAME	
Name or address	'192.194.134.90'	
Dependent location name	DEPLOCNAME *N	NONE
Text	TEXT <0	Option Txt Description>
User-defined options :	USRDFNOPT	
User-defined option	s	

Then do the following:

Ping the IP address to verify communication with the printer: **PING '192.194.134.90'**

Vary the printer on: VRYCFG < DeviceName> CFGTYPE(*DEV) STATUS(*ON)

Start the print writer: **STRPRTWTR** < *DeviceName*>

7 SCS/DCA Printing Using TN5250e

To set up TN5250, configure your PrintServer using PrintGuide (see the manual *Getting Started with PrintGuide*, doc. no. 60364 on the Utility Pack).

Start PrintGuide, select **Telnet Print Settings** (Figure 7), select TN5250e as **Connection Type** and enter the **Device Name** for your <PrintServer>.

On many AS/400 installations, a device is automatically set up on the AS/400 when the PrintServer is booted. For this to happen, the following conditions apply:

- Telnet must be started.
- The QUATOVRT SYSVAL parameter must be set to a value that is higher than the number of auto-configured virtual controllers currently running on the system. See section 6.3.1 for this procedure.

On some installations, the QAUTOVRT SYSVAL parameter is set to 0. This prevents any virtual controllers from being auto-created. In cases where QAUTOVRT SYSVAL cannot be changed from 0, devices must be configured manually. See section 6.3.2

7.1.1 Autoconfiguration of Devices

How to set up your AS/400 to auto-configure devices:

Issue the command:

WRKCTLD *VWS

This will determine the number of auto-configured Virtual Controllers on the system.

Issue the command:

DSPSYSVAL QAUTOVRT

If the system value of **QAUTOVRT** is zero, then use the procedure outlined in section 6.3.2

If the system value of **QAUTOVRT** is equal to the number of auto-configured Virtual Controllers, the **QAUTOVRT** value should be increased by the number of devices that will be configured.

7.1.2 Manual Configuration of Devices

This section describes how to create printer definitions on AS/400s that have the QAUTOVRT SYSVAL parameter set to 0.

Prerequisites:

- AS/400 is configured and running TCP/IP
- Firmware level* on the interface is at least S80 xxx.360
- Release of PrintGuide* being used is at least S42 065.100

* Latest versions can be obtained from the MPI Tech web page

1. Install the PrintServer using PrintGuide.

Define the IP Address, SubnetMask and Gateway values in The Network settings option.

Sample dialog: (The form of the panel may vary from product to product)

Network Settings		×
Network protocols:	AppleTalk	
TCP/IP SNMP MAC ida802.2 No	tification	
IP Address: Subnet Mask: Gateway: Automatically obtain IP address and DHCP R BOOTP R	related information using	172.16.6.142 255.255.240.0 172.16.1.254 g:
DNS Server Addresses: 172.16.1.10 172.16.1.18 Modify Remove Up Down Enable FTP	✓ WINS Settings: - Primary Server: Secondary Server: Scope ID:	172.16.1.10 172.16.1.18 gs (HTTP): Login Timeout:
ОК	Cancel	Help

2. Define the Telnet 5250e session

Using PrintGuide, locate the Telnet session and highlight it:

PrintGuide - [LinkCom III FM/Copenhage	n]					
File Search Monitor PrintServer Configuration	n Options Help	I.				
🛛 D 🖆 • 🖬 📎 🔂 🎎 4	î 🔸 Ħ	?	💐 🛞 dem	0	-	
General Settings:						
Print Server Name: LinkCom III	FM/Copenhagen	Current Name: LinkCom III	FM/Copenhager	n		3
Contact Person: FM / 211		Last Modified: 17-10-2007	+2 10:37:44			
PrintServer Location: Room C213		Last Modified by: fm				
Network Settings:						
TCP/IP 🍲 IPX/SPX 🍲 PU/	_U					
SNMP 🍯 NetBEUI 🍟 App	eTalk				Network	
Logical Printers:					Count: 39	i
Description		Input	Trans	Output	ID 🔺	
💾 🗳 LAN (ida MON) using 802.2		ida802.2		Printer 1	34	
SCS using TN3270e		Telnet	SCS	Printer 1	28	
DCA using TN5250e		Telnet	DCA	Printer 1	29	
SCS using TN3270e		Telnet	SCS	Printer 2	30	
🚆 🚔 DCA using TN5250e		Telnet	DCA	Printer 2	31	
TCP/IP port 9102 printer		TCP/IP [9102]		Printer 3	43 🚽	
TCP/IP port 9101 printer		TCP/IP [9101]		Printer 2	42	
TCP/IP port 9100 printer		TCP/IP [9100]		Printer 1	41	
📗 🚔 ⊘ AFP/IPDS (PSF) using SNA (LU1)		SNA	IPDS	Printer 1	7	
📲 🖉 AFP/IPDS (PSF) using SNA (LU1)		SNA	IPDS	Printer 2	8	
📲 🍄 SCS (S/390) using SNA (LU1) 👘		SNA	SCS	Printer 1	32	
🖺 🖉 SCS (S/390) using SNA (LU1) 👘		SNA	SCS	Printer 2	33	т п
🛛 📇 👘 AFP/ICDS (ida PSS) using TCP/II)	PPD [5007]	PSS	Printer 3	11	
🛛 📇 👘 AFP/ICDS (ida PSS) using TCP/II)	PPD [5006]	PSS	Printer 2	10	Ĕ,
AFP/ICDS (ida PSS) using TCP/II)	PPD [5005]	PSS	Printer 1	9 💌	<
					E dit	2
Ready	Select a Logical P	rinter to Configure				1.

3. Double-click on the highlighted session.

Configuration of [DCA using TN5250e]		×
Description: DCA using TN5250e		
Enabled		
Telnet Print DCA Physical Printer Strings C	Jutput Driver	
Connection Type:	TN5250e	Sharings: Settings are shared with following logical printers:
Device Name / LUNAME:	PRT213	(None)
Host IP Address:	172 . 16 . 6 . 220	
Host <u>P</u> ort:	23	
Host Message <u>Q</u> ueue:	QSYSOPR	
Host Message Queue <u>L</u> ibrary:	*LIBL	
	OK	Cancel Help

Type in the **Device Name**. This must be a unique name on the AS/400 that you wish to connect to. It can have up to 10 characters.

Type in the Host IP Address of the AS/400 you wish to connect to.

The standard Telnet port **23** is used for the **Host Port** and is predefined.

Click **OK** and then downlooad the settings to the PrintServer, selecting the option to restart the Server.

4. Configure AS/400.

Start TCP/IP if not already started by typing STRTCP on the command line.

Method 1: Using the Command Line

Create the device from the Command Line by typing:

CRTDEVPRT DEVD(DEVXXXX) DEVCLS(*VRT) TYPE(3812) MODEL(1) CTL(QVIRCD0001) FONT(87) TEXT('MANUAL CREATION OF VIRTUAL DEVICE DEVXXXX')

The value for DEVD should match the Device Name given in step 3. The value of CTL should match the virtual controller on the system (Normally QVIRCD0001) The value for TEXT is optional.

MAIN	AS/400 Main Menu	
Select one of the following:		System: S4449156
 User tasks Office tasks General system tasks Files, libraries, and Programming Communications Dechine or change the second secon	folders system	
9. Display a menu 10. Information Assistant 11. Client Access/400 tasl	options ks	
90. Sign off		
Selection or command ===> CRTDEVPRT DEVD(DEVXXXX) DI FONT(087) TEXT('MANUAL CREATION F3=Exit F4=Prompt F9=Retric F23=Set initial menu	EVCLS(*VRT) TYPE(3812) MODE N OF VIRTUAL DEVICE DEXXXX eve F12=Cancel F13=Info	EL(1)CTL(QVIRCD0001)) prmation Assistant

Check the status of the device is Vary on Pending. The device will remain in this state until the defined PrintServer has established the session. This is done by restarting; either from PrintGuide or by switching power off and then on.

Method 2: Using Device Definition panels

The Device can also be created using the same values from the Work with Device Definition Screens using option F6.

The value for DEVD should match the Device Name given in step 3.

The value of CTL should match the virtual controller on the system (Normally QVIRCD0001) The value for TEXT is optional.

Create Device Desc (Printer) (CRTDEVPRT) Type choices, press Enter. Device description DEVD > DEVXXXX Device class DEVCLS > *VRT > 3812 > 1 *YES > QVIRCD0001 FONT Font: Identifier > 087 Point size *NONE Form feed FORMFEED *TYPE Separator drawer SEPDRAWER *FILE Separator program SEPPGM *NONE Library PRTERRMSG Printer error message PRTERRMSG Message queue MSGQ *INQ QSYSOPR Library *LIBL More.. F9=All parameters F11=Choices F14=Command string F24=More keys Create Device Desc (Printer) (CRTDEVPRT) Type choices, press Enter. Host print transform TRANSFORM *NO User-defined options USRDFNOPT + for more values *NONE User-defined object: USRDFNOBJ Object *NONE Librarv *NONE Data transform program USRDTATFM DEVXXXX' More... F9=All parameters F11=Choices F14=Command string F24=More keys

Check the status of the device is Vary on Pending. The device will remain in this state until the defined PrintServer has established the session. This is done by restarting; either from PrintGuide or by switching power off and then on.

8 AS/400 Printing using TCP/IP LPR/LPD

This chapter provides:

AS/400 definitions

Once these parameters have been configured, and the basic TCP/IP installation of the PrintServer has been completed, printing from AS/400 will be possible. This will use the AS/400 Host Print Transform to format and translate EBCDIC data to the printer language selected.

Requirements:

• AS/400 version 3.1 with TCP/IP installed and configured PrintServer The defined Output queue will be specified when printing

8.1 Create a remote output queue

The CRTOUTQ command is used to create a Remote output queue. This will enable the AS/400 to automatically output data that has been translated by Host Print Transform to the PrintServer.

Create Output Queue (CRTOUTQ)		
Type choices, press Enter.		
Output queue OUTQ	> <name></name>	
Library	*CURLIB	
Maximum spooled file size: MAXPAGES		
Number of pages	*NONE	
Starting time		
Ending time		
+ for more values		
Order of files on queue SEQ	*FIFO	
Remote system RMTSYS	> *INTNETADR	
Remote printer queue RMTPRTQ	> LPDPRT1	
Writers to autostart AUTOSTRWTR	> 1	

Create	e Output Queue (CRTOUTQ)
Type choices, press Enter.	
Queue for writer messages	. MSGQ QSYSOPR
Library	. *LIBL
Connection type	. CNNTYPE > *IP
Destination type	. DESTTYPE > *OTHER
Transform SCS to ASCII	. TRANSFORM > *YES
Manufacturer type and model	. MFRTYPMDL <your model="" printer=""></your>
Internet address	. INTNETADR > <ip address="" of="" td="" your<=""></ip>
PrintServer>	
Destination options	. DESTOPT *NONE
Text 'description'	. TEXT >

The value *IP must be used for CNNTYPE The value *OTHER must be used for DESTTYPE The value *YES must be used for TRANSFORM The value used for MRFTYPMDL will depend on the attached printer. Use the 'F4' to obtain a list of the possible choices The value used for INTNETADR must be the same as the IP address of your PrintServer.

8.2 AS/400 printing

The data to be printed must be associated with the defined OUTQ via the various PRTF commands.

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http://golfingnear.com Email search by domain

http://emailbydomain.com Auto manuals search

http://auto.somanuals.com TV manuals search

http://tv.somanuals.com