Section 10 IPP

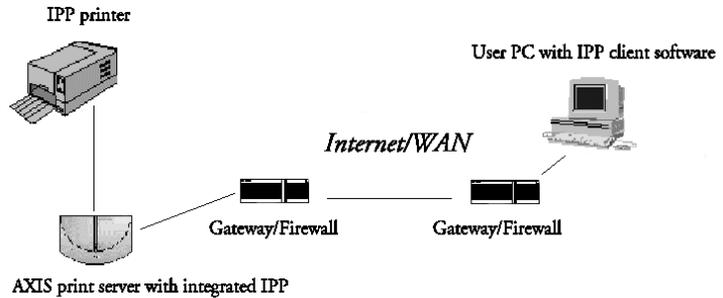## Overview

IPP (Internet Printing Protocol) is a TCP/IP based client-server protocol. IPP enables printing over any LAN or WAN supporting TCP/IP. The most prevalent example of this is IPP printing over the Internet, which is illustrated below.

Figure: The path of a print job from LAN to LAN over the Internet

In practical terms this means that you can send documents to a remote printer as an addition to or replacement of fax and e-mail, with the same quality and color options of traditional network printing.

User Requirements

The IPP protocol does not require any special configuration of the print server, the IPP function is automatically activated when you install your AXIS 5600 Print Server.

IPP is platform independant and functional in Windows (NT, 95, 98 and 2000), Macintosh, OS/2, NetWare and UNIX environments.

Currently available IPP clients include:

- the Internet Printer Connection software from Hewlett Packard for WindowsNT,

- the Microsoft IPP Client delivered with Windows 2000,

- IPP clients for Windows '95 and '98 that can be downloaded from the Microsoft web site.

- the Common Unix Printing System for Unix/Linux environments.

Firewall Considerations   If there are one or more firewalls between the IPP Client and the server, you may have to make some changes to the firewall configuration. IPP uses TCP port 631 for printing, so any firewalls between client and server must be configured to allow bi-directional traffic on that port. Please consult your network administrator if you think any configuration changes are neccesary.

IPP Compliance   The Axis print server with integrated IPP is compatible with any 1.0 and 1.1 compliant IPP client. The AXIS 5600 Print Server presents IPP Printer objects to the client, one for each printer port.

Note: ☐ Axis firmware including IPP can be down-loaded free of charge from the Axis website http://www.axis.com.

☐ The details on how to print will vary between different IPP clients. Please refer to your client documentation for more specific information.

Address Schemes

NetWare

When using IPP printing, you need to know the IP address or host name of your IPP-enabled Axis print server. The AXIS 5600 Print Server supports the http: address scheme (which is used in the IPP 1.0 standard), and the ipp: adress scheme (used in the IPP 1.1 standard).

Windows

The examples given below assume that the host name of the Axis print server is axisps and that the corresponding IP adress is 12.100.110.2.

Example   http: address schemes.

IPP address using host name	IPP address using IP address	Corresponding printer
http://axisps:631/LPT1	http://12.100.110.2:631/LPT1	Printer attached to the LPT1 parallel port
http://axisps:631/LPT2	http://12.100.110.2:631/LPT2	Printer attached to the LPT2 parallel port
http://axisps:631/COM1	http://12.100.110.2:631/COM1	Printer attached to the COM1 serial port

OS/2

Macintosh

Note that the IPP port number (631) should be specified in the http: address scheme.

Example   ipp: address schemes.

IPP address using host name	IPP address using IP address	Corresponding printer
ipp://axisps/LPT1	ipp://12.100.110.2/LPT1	Printer attached to the LPT1 parallel port
ipp://axisps/LPT2	ipp://12.100.110.2/LPT2	Printer attached to the LPT2 parallel port
ipp://axisps/COM1	ipp://12.100.110.2/COM1	Printer attached to the COM1 serial port

UNIX

How It Works

In order to print using IPP, you need to be able to access a printer which is connected to the AXIS 5600 with integrated IPP. Once you have access to the destination printer, you are ready to print to the printer of your choice via for example the Internet.

The URL for the destination printer is defined in the print server host name, the port number and the local printer name, in that order. When using IPP printing over the Internet with the AXIS 5600, the host name used for the Axis print server could be "axisps", for example. The port number used is 631, followed by the local printer name (Ex. LPT1).

A walk-through example of the IPP printing process is perhaps the best way to describe the IPP functionality:

1. As a LAN-user in a Windows environment, you wish to print a document on a color printer which is integrated in another LAN and located in another city.

2. Proceed with selecting the IPP printer to which you want to send your document from your **Printer Name** list (In **File | Print**). The name structure of the printer begins with http://axisps:631/....

3. If your destination printer URL does not exist in your **Printer Name** list, you need to add it. (See the examples below for Windows environments).

4. When you press **Print**, the print job is sent over the Internet to the AXIS 5600 print server which sends the job to the destination printer.

NetWare

Windows

OS/2

Macintosh

UNIX

NetWare

Windows

OS/2

Macintosh

UNIX

Example   Adding an IPP printer in Windows '95

In this example we will assume the printers' http: address is
http://axisps:631/LPT1:

To add a destination printer for IPP printing in Windows '95:

1. Open **Start** | **Settings** | **Printers.**

2. Choose **Add Printer.** The Add Printer Wizard will start.

3. Choose **Network Printer**.

4. In the **Network Path or Queue name** field, write the
    http: address of the destination printer
    (http://axisps:631/LPT1). If you do not have the
    appropriate printer driver installed on your computer, the
    Installation Wizard will ask you to select one:

5. Specify your printer from the printer list. Click **Next**.

6. The printer driver corresponding to your printer will be
    installed.

7. Click **Finish** when done.

For information on how to use IPP in other environments,
please refer to the documentation supplied with your IPP
client.

Example   Adding an IPP printer in Windows '98

In this example we will assume the printers' http: address is
http://axisps:631/LPT1:

To add a destination printer for IPP printing in Windows '98:

1. Open **Start** | **Settings** | **Printers.**

2. Choose **Add Printer.** The Add Printer Wizard will start.

3. Choose **Network Printer**.

4. In the **Network Path or Queue name** field, write the
    http: address of the destination printer
    (http://axisps:631/LPT1). If you do not have the
    appropriate printer driver installed on your computer, the
    Installation Wizard will ask you to select one:

5. Specify your printer from the printer list. Click **Next**.

6. The printer driver corresponding to your printer will be
    installed.

7. Click **Finish** when done.

For information on how to use IPP in other environments,
please refer to the documentation supplied with your IPP
client.

NetWare

Windows

OS/2

Macintosh

UNIX

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Example   Printing to an IPP printer in Windows 2000

In this example we will assume the printers' http: address is
http://axisps:631/LPT1.

If you want to print via IPP from Windows 2000:

1.   Choose **File | Print.**

2.   If you need to enter a new destination printer, click **Find
     Printer** in the **Select Printer** frame.

3.   Enter the printer http: address in the **URL** or **Printer** field
     (http://axisps:631/LPT1). Click **OK**. If you do not have
     the appropriate printer driver installed on your computer,
     the Installation Wizard will ask you to select one:

4.   Specify your printer from the printer list. Click **OK**.

5.   The printer driver corresponding to your printer will be
     installed. Click **Finish**.

6.   Print as usual.

For information on how to use IPP in other environments,
please refer to the documentation supplied with your IPP
client.