This document describes EI&O's LPR-gateway service which allows you to use your current printing techniques to route output from any of EI&O's NERMVS systems to printers on the TCP/IP Internet using the LPR printing protocol. The destination printers can be attached to any host that speaks LPR or to any LAN that has an LPR server gateway.

Related search topics include output, z/OS (OS/390, previously known as MVS), batch, CICS, and UF Menu System.
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LPR: Routing Print to the Internet

EI&O provides an LPR gateway service which allows you to use your current large system printing techniques to route output from any of EI&O's NERMVS systems, including z/OS (OS/390) batch, CICS (UF Menu System, SASS, etc.), and TSO to printers on the TCP/IP Internet using the LPR printing protocol. The destination printers can be directly attached to the Internet, or attached to any host which natively speaks the LPR protocol, or attached to any LAN which has an LPR server gateway. Examples include HP Laserjets with JetDirect cards, UNIX systems, and PCs.

If you are interested in using the LPR gateway service, contact your system administrator. The remainder of this document provides information for system administrators.

Output is sent to your Internet printer via predefined printer routing.

Predefined (Transparent) Printer Routing

In order to deliver "print" output without the need to modify the EI&O application or program you use, EI&O must define a EI&O printer name for each Internet printer to which you want to route output. Please use a forms-capable web browser to fill out the request form at http://nersp.cns.ufl.edu/cgi-bin/tevp-request.

Fill out a separate request for each printer you want defined.

Upon receipt of your request, we will assign a unique EI&O printer name of the form "TEVPxxxx". Thus you'll be able to route batch output to one of your printers by using a JCL statement such as:

/*ROUTE PRINT NER.TEVP9876

For CICS output, you can arrange for CICS applications to print on printer TEVPxxxx. Make these arrangements with the owner of each application.

Specifying Printer Formats

The software that manages printing requests to Internet printers can optionally add formatting codes to the start of each print file. These prefix strings must be predefined at the host computer and are referred to by alias names.

Initially, when you complete the on-line request form to define your printer to the system, you choose one of the predefined formats to be the default format for your printer. The choices are:

- None (Nothing is added to the print data).
- HP PCL Landscape 132 by 66 (SSTD)
- HP PCL Landscape 132 by 88 ($132X88)
- HP PCL Portrait 85 by 60 (SBOK)
• HP PCL Portrait 72 by 54 (SLET)
• HP PCL Portrait 132 by 100 (S132X100)
• HP PCL Reset to printer defaults (ZZZRESET)
• Other
• Postscript Landscape 132 by 66 (Discouraged)

If you choose option None, no prefix string will be sent with your print job and you will not be able to use the override option described below. Using None would be appropriate if the print server will be adding its own formatting codes. Also, VPS/TCPIP does not generate postscript files with ease. We recommend that you do not select this option as your default format unless you are using a postscript-only printer.

You may have a requirement for a format that is not listed here or on the online form. If that is the case, we invite you to send e-mail to net-services@lists.ufl.edu to request a unique alias. Once this has been done, you can enter this alias in the Other field when establishing a default printer format.

**Overriding Default Formats**

It is possible to override the default printer format by using the `WRITER` keyword on a sysout allocation, a TSO `ALLOCATE` statement, the JCL `OUTPUT` statement, or the TSO `PRINTDS` command. Then, after the end of the job, the system sends a reset command which returns your printer definition to the default values.

You can prevent any prefix string from being sent with your print file. Specifying `WRITER=ZZZZZZZZ` (8 "Z"s) will ensure that no format string is attached to your print job. And specifying sysout `CLASS=B` will prevent the normal EBCDIC to ASCII translation. This combined with using `WRITER=ZZZZZZZZ` allows you total control of the printer data stream.

**Examples of Overriding Default Formats**

The following figures show examples of overriding default formats.

This example routes a system output data set defined by ddname MYFILE to printer TEVPxxxx using an alias to override the default printer format.

**Figure 1. Using the TSO ALLOCATE statement**

```
ALLOCATE FILE(myfile) SYSOUT(A) DEST(TEVPxxxx) WRITER(alias)
```

This example ensures that no format string is attached to a print job and that no EBCDIC to ASCII translation takes place. It sets the sysout class to 'B' and the `WRITER` parameter to 'ZZZZZZZZ'. Notice that in this case the `WRITER` and `CLASS` parameters are positional and do not explicitly use the parameter names.
Figure 2. Using a Sysout Allocation on a DD Statement

```plaintext
//MYJOB JOB ,'programmername',TIME=time,LINES=lines
//STEP1 EXEC PGM=pgm
//SYSPRINT DD SYSOUT=(B,ZZZZZZZZ),DEST=TEVPxxxx
........
/*
This example routes print to the printer called TEVPxxxx. It uses the OUTPUT JCL statement with a name of MYFMT to specify an alias to override the printer default settings.

Figure 3. Using the OUTPUT JCL statement

```plaintext
//OUTJOB JOB ,'programmername',CLASS=class,TIME=time,LINES=lines
//MYFMT OUTPUT DEST=NER.TEVPxxxx,WRITER=alias,DEFAULT=YES
//STEP1 EXEC PGM=pgm
........
/*
You can use the PRINTDS command to override the default format of a printer and use a different predefined format. Enter HELP PRINTDS at the TSO READY prompt for more information.

Figure 4. Using the TSO PRINTDS command

```plaintext
PRINTDS DATASET(data.set.name) DEST(TEVPxxxx) WRITER(alias)
```
We welcome your comments and suggestions on this and all UFIT documentation. Please send your comments to:

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