## Introducing LPR

LPR is an application that lets you print PC files to any UNIX or LPD host printer on a TCP/IP network running an LPD server program.

The LPR window displays a separate window for each UNIX or other LPD host printer queue to which you are connected.

To successfully print a file, perform the following steps:

- 1. Defining Printers on BSD UNIX Systems.
- 2. Printing Files on a Remote Printer.

#### **Related Topic**

Troubleshooting Remote Printer Connections

## **Creating a Remote Printer -- Windows 98/Me**

Before creating a remote printer, ensure you have defined your printer properly on the host and ensure the host is running an LPD server program.

To create a remote printer using Windows Printers Settings:

- 1. On the Windows Start menu, point to Settings and click Printers.
- 2. Select a local Windows printer with a driver that corresponds to the remote printer type.
- 3. On the File menu, click Properties. The Properties dialog box opens. If you do not have any local printers installed, double-click Add Printer to add a local printer.
- 4. On the Details tab, click Add Port. The Add Port dialog box opens.
- 5. Click Other. Then select HCL LPR Monitor on the port list.
- 6. Click OK. The LPR Add LPR Port and Remote Printer dialog box opens with the Port Name and User ID filled in.
- 7. In the Host box, type the name of the remote host.
- 8. In the Queue name box, type the printer queue name.
- 9. In the Advanced section, specify connection options:

**Timeout in seconds**—Specifies how long the LPR will try to connect to a printer before terminating the attempt.

**Read Host's Queue**—Select this option to automatically display any available queue state information (for example, printer problems, job list, and queue problems) from the host in the printer window. Not all hosts provide queue information.

**Graceful Close**—Prevents the socket from closing until confirmation is received that the job has been delivered.

0. Click OK.

If you want to print directly to the host from any Windows application, you must connect a local printer to the host printer.

Related Topics Defining Printers on BSD UNIX Systems Defining Printers on System V UNIX Changing Remote Printer Settings Printing Files on a Remote Printer

## Creating a Remote Printer -- Windows NT/2000/XP/Server 2003

Before creating a remote printer, ensure you have properly defined your printer on the host and ensure the host is running an LPD server program.

To create a remote printer using Windows Printers Settings:

- 1. On the Windows Start menu, point to Settings and click Printers.
- 2. Select a local Windows printer with a driver that corresponds to the remote printer type.
- 3. On the File menu, click Properties. The printer's Properties dialog box opens. If you do not have any local printers installed, double-click Add Printer to add a local printer.
- 4. On the Ports tab, click Add Port. The Printer Ports dialog box opens.
- 5. In the port list, select HCL LPR Monitor. The Configure LPR Port and Remote Printer dialog box opens.

- 6. In the Host box, type the name of the remote host.
- 7. In the Queue name box, type the printer queue name.
- 8. In the Advanced section, specify connection options:

**Timeout in seconds**—Specifies how long the LPR will try to connect to a printer before terminating the attempt.

**Read Host's Queue**—Select this option to automatically display any available queue state information (for example, printer problems, job list, and queue problems) from the host in the printer window. Not all hosts provide queue information.

**Graceful Close**—Prevents the socket from closing until confirmation is received that the job has been delivered.

**Note:** If you recently installed a Hummingbird product and the HCL LPR Port does not appear in the Ports list, you will need to restart Windows.

#### 9. Click OK, then click Close.

#### **Related Topics**

Defining Printers on BSD UNIX Systems Defining Printers on System V UNIX Printing Files on a Remote Printer Changing Remote Printer Settings

## **Creating a Remote Printer Using LPR**

Before creating a remote printer, ensure you have defined your printer properly on the host and ensure the host is running an LPD server program.

To create a remote printer using LPR:

- 1. On the Printer menu, click Add Remote Printer. The LPR Add LPR Port and Remote Printer dialog box opens with the Port Name and the User ID filled in. The port name is the first available HCL LPR Port and the User ID is the name of the user currently logged in.
- 2. In the Host box, type the name of the remote host.
- 3. In the Queue name box, type the printer queue name.
  - **Note:** In BSD systems, the queue name is specified in the host's /etc/printcap file. In non-BSD systems, type lpstat -t at the host's command prompt to list available queue names.
- 4. In the Advanced section, specify connection options:

**Timeout in seconds**—Specifies how long LPR will try to connect to a printer before terminating the attempt.

**Read Host's Queue**—Select this option to automatically display any available queue state information (for example, printer problems, job list, and queue problems) from the host in the printer window. Not all hosts provide queue information.

**Graceful Close**—Prevents the socket from closing until confirmation is received that the job has been delivered.

5. Click OK. A window for the remote printer opens.

#### **Related Topics**

Defining Printers on BSD UNIX Systems Defining Printers on System V UNIX Changing Remote Printer Settings Printing Files on a Remote Printer

# **Defining Printers on BSD UNIX Systems**

Before using LPR to print files, you must define each printer on the host. The procedure for defining printers depends on the type of host.

Note: You must be a system administrator to perform this procedure.

To define printers on generic BSD systems such as ULTRIX, Sun OS 4.x and BSDI, edit the printcap file in the host's /etc directory. You must have root access on the host to edit the printcap file. If you do not have root access, consult your system administrator.

**To define a printer:** 

- 1. Ensure your host is running the Inetd LPD daemon.
- 2. Open the /etc/printcap file in a text editor.
- 3. Define your printer using the syntax shown below. For more information, see the sample entries. »

**Note:** The "\" indicates line continuation. Do not include it in your printer definition.

printername|local printer:\

:lp=/dev/localdevicename:sd=/var/spool/spooldir@

where:

- *printername* is the queue name you want to assign the printer on the BSD host.
- *Iocaldevicename* is the name of the printer device file.
- spooldirectory is the directory where the host stores printer output files. If you do not know the spool directory name, consult your system administrator.
- 4. Save the changes to the /etc/printcap file.
- 5. Create the spool directory with read, write, and execute permissions for the user id of the LPD process.
- 6. Repeat the above steps for each printer you want to define.

#### **Related Topics**

<u>Creating a Remote Printer -- Windows 98/Me</u> <u>Creating a Remote Printer -- Windows NT/2000/XP/Server 2003</u> <u>Creating a Remote Printer Using LPR</u> <u>Printing Files on a Remote Printer</u>

## **Defining Printers on System V UNIX**

Before using LPR to print files, you must define each printer on the host. The procedure for defining printers depends on the type of host.

**Note:** You must be a system administrator to perform this procedure.

Note the following system-specific information. You can use the specified configuration utility to define your printer.

UNIX System	Config. Utility	Security	/etc/printcap
HP HPUX 10.x	sam	/etc/hosts.equiv	Not used
IBM AIX 4.x	smit	/etc/hosts.equiv /etc/hosts.lpd	Not used
SCO Open Server Enterprise	scoadmin	/etc/hosts.equiv /etc/hosts.lpd	Used
SUN Solaris 2.x	admintool		Not used

Warning! Using the /etc/hosts.equiv file has serious security implications. Use the /etc/hosts.lpd file, if possible.

#### **Related Topics**

Creating a Remote Printer -- Windows 98/Me

Creating a Remote Printer -- Windows NT/2000/XP/Server 2003

Creating a Remote Printer Using LPR

Printing Files on a Remote Printer

## **Printing Files on a Remote Printer**

After you have created a remote printer and connected to it, you can use LPR to send PC files to a UNIX or other LPD host printer queue. There are three ways to send files to a remote printer.

## **Drag and drop files**

To print files using drag and drop:

- 1. On the File menu, click Explorer. Windows Explorer opens.
- 2. Drag and drop files from Windows Explorer to the appropriate printer window in LPR.

## Print selected files from LPR

To print files from LPR:

- 1. On the File menu, click Print. The Print Files dialog box opens.
- 2. On the file list, select the files you want to print and click OK.

## **Print from a Windows application**

**Note:** For Windows 98/Me, if you added a remote printer using LPR and you want to print directly to the host from any Windows application, you must connect a local printer to the host printer.

To print files from a Windows application, set the remote printer as your destination printer. You can either set the remote printer as your default printer in Windows, or select the remote printer when you print from a Windows application. For more information about selecting a printer, see your Windows documentation or the documentation for your Windows application.

#### **Related Topics**

Creating a Remote Printer -- Windows NT/2000/XP/Server 2003 Creating a Remote Printer -- Windows 98/Me Creating a Remote Printer Using LPR Troubleshooting Remote Printer Connections

# **Viewing a Remote Printer Queue**

You can view a list of print jobs sent to a particular remote printer.

To view a printer queue:

- 1. Select the window for the appropriate remote printer.
- 2. On the Printer menu, click Refresh. The host responds with a list of print jobs.

# **Changing Remote Printer Settings**

You can change most printer connection information without disconnecting and reconnecting. You can change a remote printer using either LPR or Windows Printers Settings.

To change a remote printer using LPR:

- 1. Select the window for the appropriate remote printer.
- 2. On the Printer menu, click Edit Remote Printer Properties. The Edit Remote Printer Properties dialog box opens.
- 3. Make the necessary changes.

To change remote printer settings:

#### Windows 98/Me

- 1. On the Windows Start menu, point to Settings and click Printers.
- 2. Select the appropriate local printer.
- 3. On the File menu, click Properties. The Properties dialog box opens.
- 4. On the Details tab, select the HCL LPR Port you want to change.
- 5. Click Port Settings. The Configure LPR Port and Remote Printer dialog box opens.
- 6. Make the necessary changes and click OK.

Windows NT/2000/XP/Server 2003

- 1. On the Windows Start menu, point to Settings and click Printers.
- 2. Select the appropriate local printer.
- 3. On the File menu, click Properties. The printer's Properties dialog box opens.
- 4. On the Ports tab, select the HCL LPR Port you want to change.
- 5. Click Configure Port. The Configure LPR Port and Remote Printer dialog box opens.
- 6. Make the necessary changes and click OK.

#### **Related Topics**

Creating a Remote Printer -- Windows NT/2000/XP/Server 2003 Creating a Remote Printer -- Windows 98/Me Creating a Remote Printer Using LPR Specifying a Job Number

# **Specifying a Job Number**

A Job number is assigned to a print job for identification purposes. By default, the Job number is initially set to one, and is automatically incremented each time you send a new print job.

In most cases, you do not need to change the default number. However, if the host is confusing print jobs (that is, if there is more than one print job with the same Job number) you can pre-assign a value.

To assign a Job number:

- 1. Select the window for the appropriate remote printer.
- 2. On the Printer menu, click Set Initial Job Number. The Set Initial Job Number dialog box opens.
- 3. In the Job Number box, type the number at which you want printing to start and click OK.

## **Printing with a Banner Page**

To include a banner page with each print job, select Print Banner on the File menu. A check mark appears next to the menu item. Clear this option if you do not want to include a banner with print jobs.

# **Deleting Print Jobs**

To delete selected print job(s), click Delete Document on the Document menu in LPR.

**Note:** You can delete print jobs only if you are logged onto the host with the User ID root. Your system administrator may have set restricted LPR Root Access.

**Troubleshooting Remote Printer Connections** 

## Host is refusing print jobs

Solution 1—If the host indicates that your print job already exists on the host, there may already be a print job in the queue with the same Job number. You should assign a different Job number to the print job. For more information, see <u>Specifying a Job Number</u>.

Solution 2—Your PC may not be defined in the .LPD or hosts.equiv file on the UNIX or other LPD host. Make changes to the appropriate file:

- Defining Printers on BSD UNIX Systems
- Defining Printers on System V UNIX

Solution 3—Some hosts monitor queue status (for example, printer problems, job list, queue problems, and so on). If your host tracks this information, you can display it to troubleshoot the problem.

To display queue information:

- 1. In LPR, select the window for the appropriate remote printer.
- 2. Do one of the following:
  - On the Printer menu, click Refresh.
  - To automatically display queue status when you send a print job, click Edit Remote Printer Properties on the Printer menu. Select the Read Host's Queue check box, and click OK.

Warning! The use of /etc/hosts.equiv file has serious security implications. You should not modify this file without consulting your system administrator. You should use the /etc/hosts.lpd file, whenever possible.

## You can't add a printer/port

**Cause**—If you receive an access denied message while trying to add a printer/port, either you do not have sufficient privilege to do so, or the HCL LPR port monitor is not running.

## **Using the Command Line**

Using the following syntax, you can call LPR from the DOS command line or from within a batch file:

```
humlpr <host> <printer> <userid> <filename(s)>
```

You can send text or graphics files to:

- Sending Files to a PC Host with DOS hcllpd
- Sending Files to a PC Host with Windows lpd
- Sending Files to a Print Queue on a UNIX Host

# Sending Files to a PC Host with DOS hcllpd

When sending file(s) to another PC running the DOS hcllpd daemon, there are a number of options available for the *<printer>*:

LP	Sends a Form Feed at the end of the job if the last character is not a Form Feed.
DOS	Does not send a Form Feed after the job.
UNIX	Converts Line Feed characters into a Carriage Return and Line Feed.
UNIXFF	Same as option UNIX but sends a Form Feed after the job, if the last characters are not FF.

# When called from within a batch file, one of the following values is returned:

0	Successful Print operation.
1	Network Driver not loaded.
2	Incorrect number of parameters specified.
3	Unable to open the specified file.
4	Incorrect # of characters sent.
5	Incorrect # of characters sent.
6	Connection to Host was lost.
7	Unable to open TCP Socket.
8	Unknown Host name specified.
9	Unable to Bind.
10	No local Port available
11	Unable to Connect.

## Related Topics Sending Files to a PC Host with Windows Ipd

Sending Files to a Print Queue on a UNIX Host

## Sending Files to a PC Host with Windows lpd

When sending one or more files to another PC running the Windows lpd daemon, the names used for the *<printer>* option are in the form xxx-LPT? Or xxx-COM?, where xxx is any of the following:

LP	Does not send a Form Feed after the job.
DOSFF	Sends a Form Feed at the end of the host if the last character is not a Form Feed.
UNIX	Converts Line Feed characters into a Carriage Return and Line Feed.
UNIXFF	Same as option UNIX, but sends a Form feed after the job if the last characters are not FF.

You must know the port to which the printer is connected at the remote host. A typical example for user martyg to send a .txt file to a PC with the hostname warrenp and printer connected to lpt1 is:

C:\HCLTPC>humlpr warren dosff-lpt1 martyg LPDTEST.TXT

A successful transmission of the file to the remote location is indicated by the message:

Sending LPDTEST.TXT - 1355 bytes

C:\HCLTCP>\_

#### **Related Topics**

Sending Files to a PC Host with DOS hcllpd Sending Files to a Print Queue on a UNIX Host

## Sending Files to a Print Queue on a UNIX Host

When sending one or more files to a Print Queue on a UNIX host, a valid Print Queue name <printer> must be specified. A typical example for user gsw to send all files with an extension of . bat to a printer on zeus called kyocera would be:

humlpr zeus kyocera gsw \*.bat

#### **Related Topics**

Sending Files to a PC Host with DOS hcllpd Sending Files to a PC Host with Windows lpd

# **General Accessibility**

Hummingbird products are accessible to all users. Wherever possible, our software adheres to Microsoft Windows interface standards and contains a comprehensive set of accessibility features.

Access Keys All menus have associated access keys (mnemonics) that let you use the keyboard, rather than a mouse, to navigate the user interface (UI). These access keys appear as underlined letters in the names of most UI items. (If this is not the case, press Alt to reveal them.) To open any menu, press Alt and then press the key that corresponds with the underlined letter in the menu name. For example, to access the File menu in any Hummingbird application, press Alt+F.

Once you have opened a menu, you can access an item on the menu by pressing the underlined letter in the menu item name, or you can use the arrow keys to navigate the menu list.

**Keyboard Shortcuts** Some often-used menu options also have shortcut (accelerator) keys. The shortcut key for an item appears beside it on the menu.

**Directional Arrows** Use the directional arrows on the keyboard to navigate through menu items or to scroll vertically and horizontally. You can also use the directional arrows to navigate through multiple options. For example, if you have a series of radio buttons, you can use the arrow keys to navigate the possible selections.

**Tab Key Sequence** To navigate through a dialog box, press the Tab key. Selected items appear with a dotted border. You can also press Shift+Tab to go back to a previous selection within the dialog box.

**Spacebar** Press the Spacebar to select or clear check boxes, or to select buttons in a dialog box.

**Esc** Press the Esc key to close a dialog box without implementing any new settings.

**Enter** Press the Enter key to select the highlighted item or to close a dialog box and apply the new settings. You can also press the Enter key to close all About boxes.

**ToolTips** ToolTips appear for all functional icons. This feature lets users use Screen Reviewers to make interface information available through synthesized speech or through a refreshable Braille display.

# **Microsoft Accessibility Options**

Microsoft Windows environments contain accessibility options that let you change how you interact with the software. These options can add sound, increase the magnification, and create sticky keys.

To enable/disable Accessibility options:

- 1. In Control Panel, double-click Accessibility Options.
- 2. In the Accessibility Options dialog box, select or clear the option check boxes on the various tabs as required, and click Apply.
- 3. Click OK.

If you installed the Microsoft Accessibility components for your Windows system, you can find additional accessibility tools under Accessibility on the Start menu.

# **Technical Support**

You can contact the Hummingbird Technical Support department Monday to Friday between 8:00 a.m. and 8:00 p.m. Eastern Time.

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