



Powerful Print Server

by Simson L. Garfinkel

HP's LaserJet 6MP and JetDirect EX Plus partner for an excellent personal or group printing solution.

Although it's aimed at the Apple Computer Inc. Macintosh market, Hewlett-Packard Co.'s LaserJet 6MP is an excellent PostScript printer that is equally at home with UNIX systems, Microsoft Corp. Windows 95 workstations, or even hand-held PDAs like the Apple Newton. Combined with HP's low-cost print server, the JetDirect EX Plus, this printer can even support clients running Novell Inc. NetWare, Windows for Workgroups 3.11, and IBM OS/2. In fact, the 6MP/EX Plus combination is so flexible that this is a printer you're likely to use year after year—long after you've thrown away your current generation of computers and operating systems.

Weighing just 22.5 pounds, the 6MP is a compact 600-dpi printer that is rated at 8 pages per minute (ppm), 12,000 pages per month. The printer has two paper trays: one on the bottom that can handle 250 pages, and a fold-out tray that can handle stacked envelopes, letterheads, single sheets, Rolodex cards and practically anything else up to its limit of legal-size paper. Two paper paths allow you to send the paper to the stacker on top or feed paper straight through to prevent curling and bending.

The printer has two parallel interfaces—a standard IEEE 1284-B and the smaller IEEE 1284-C—as well as an 8-pin mini-DIN connector used for Apple LocalTalk networks. On the front of the printer, there's a high-speed infrared port that lets you print from IR-equipped laptops and PDAs without the bother of connecting wires.

Thankfully, HP hasn't gone overboard on controls. The printer's spartan interface has just two buttons and five lights. The buttons reset the printer and self-test. The lights signal power, paper jam and activity. The printer also has two out-of-paper indicators, one for each paper tray.

HP's JetDirect EX Plus is the second half of this network printer solution. This little box has a high-speed serial port and two network connectors: one for 10BaseT Ethernet, the other for thin net. On the front are two lights, one for



HP's LaserJet 6MP PostScript printer, when combined with the JetDirect EX Plus print server, is so flexible you're likely to use it year after year.

Figure 1. /etc/printcap Entries for 6MP

```
6mp_text:lp=:rm=printer1:rp=text:\
:lf=/var/spool/lpd/printer1_text.log:\
:sd=/var/spool/lpd/printer1_text:
6mp_ps:lp=:rm=printer1:rp=raw:\
:lf=/var/spool/lpd/printer1_raw.log:\
:sd=/var/spool/lpd/printer1_raw:
```

power, one for activity. There's also a test button that doubles as a reset button if you hold it down while you plug in the unit's external power supply.

Simple Setup

Setting up this printer is simplicity itself. Just unpack, pop in the toner cartridge and fill the paper tray. The printer's small footprint makes it an easy fit on top of a file cabinet or in the corner of a large desk. Next, unpack the JetDirect and plug it into the printer's parallel port using the cable provided. Plug both the JetDirect and the printer into the wall, and plug the JetDirect into your LAN.

You can print to the JetDirect immediately after you hook it up if you want to use Apple's EtherTalk protocol. Most users, though, will want to configure the JetDirect. HP's included software runs on SunOS, Solaris and HP-UX, as well as Windows for Workgroups, Windows 95/NT, Mac OS, Novell NetWare and IBM OS/2 LAN Server. HP's software locates the printer using a network broadcast; you then assign the printer a name and an IP address.

If you don't like graphical interfaces, you can also configure the printer using BOOTP, RARP, DHCP, SNMP or by connecting to the printer's telnet server. The printer can log its status using SNMP traps or the standard UNIX Syslog facility. The JetDirect defines multiprotocol flexibility!

The whole configuration process takes about three minutes, after which the printer is ready to accept print jobs from any host on your network. (In the interest of security, you can also restrict printing to certain hosts.) If you want to print from a UNIX system, you'll need to add two entries to your /etc/printcapfile—one for printing

text files, the other for printing PostScript files. My entries are shown in Figure 1.

Using the Printer

The 6MP's print quality is stunning. Unlike 300-dpi printers that were popular for more than a decade, I had no problem distinguishing punctuation marks or seeing the elegant serifs on my fonts. In fact, I could actually read 3-point text without using a magnifying glass. With a magnifying glass, I could read 2-point text without any difficulty—the o's were still open circles, and I could still tell the difference between periods and commas.

Printing in hot sticky weather, I had roughly one paper jam every 1,000 pages printing with quality paper. Using post-consumer recycled paper, jams jumped to one every 250 pages or so.

The printer is silent when it is in standby mode, and instantly turns on—getting the first page out in less than 14 seconds (even if nobody has printed to the machine in more than a day). And I found that HP's claimed 8 ppm is accurate—even when those pages contain complicated graphics and many font changes.

If money is tight, you can save \$250 by ordering HP's 6Pse printer instead of the 6MP. This printer is identical to the 6MP but lacks the Macintosh port and PostScript, instead insisting that you send it pages using HP's PCL language. The good news is that a lot of programs support PCL, and the 6Pse is upwards-compatible with HP's LaserJet 1, 2, 3, 4 and 5. And if you really need PostScript, there's always GhostScript, a PostScript interpreter that's freely downloadable over the Internet and comes with some versions of UNIX.

For an extraordinary low-cost net-

work printer, combine HP's 6Lse, a 6-ppm machine, with the JetDirect EX Plus. This printer is only rated at 8,000 pages per month and lacks PostScript and the second print tray. On the other hand, it's great for an office on a budget.

Meanwhile, if your printing needs are intense, you can purchase HP's JetDirect EX Plus 3, which can handle three printers. Combined with three HP 6MPs, this lets you put together a three-headed printing cluster for \$3,496. Personally, though, I would rather buy three JetDirect EX units and put the printers in different locations around the office. =>

HP LaserJet 6 Series

Company

Hewlett-Packard Co.
3000 Hanover St.
Palo Alto, CA 94304

Telephone

(800) 752-0900

WWW

<http://www.hp.com>

Best Feature

Spectacular print quality.

Worst Feature

Can't think of one.

Price

6Lse: \$399 (6 ppm)

6Pse: \$799 (8 ppm,
2 parallel ports,
infrared)

6MP: \$949 (8 ppm,
3 ports, Mac, PC
and PostScript)

HP JetDirect EX Plus Print Server

Best Feature

Ease of setup.

Worst Feature

Would be nice if it could be powered from printer.

Price

\$349 (AppleTalk, Novell,
LAN Manager, UNIX lpd)

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