technical brief

Installation
of HP Web Jetadmin

This technical brief discusses details concerning installation of HP Web JetAdmin 6.5. Implementation planning will be examined as well as migration issues that may be encountered when upgrading from previous versions. Also included is a process on how to back up key files and how to completely remove HP Web Jetadmin from a particular machine if so desired.

Implementation Planning

HP Web Jetadmin is a powerful network printer management, configuration, and installation tool. Proper implementation planning is essential to installing HP Web Jetadmin. One item to consider during implementation planning is the number of installations of HP Web Jetadmin that will reside on the network.

Number of Installations

HP Web Jetadmin is a web-based tool. This means that it can be installed on a single machine and accessed via a browser from other machines. This is in direct contrast to its predecessor, HP Jetadmin, which had to be installed on every machine from which it was accessed. The advantages of a web-based tool include:

- Decreased network traffic since fewer machines are running printer discoveries
- Centralized database management

- Non-operating system specific i.e. doesn't require a different version for every operating system that uses (browses) it

While HP Web Jetadmin can be installed on each machine that needs to manage printers ("desktop" model), it can also be installed on a single or limited number of machines and accessed from any machine within the intranet via a web browser.

One benefit of a single installation is centralized database management. Since each installation of HP Web Jetadmin relies upon and maintains its own cache of printers, a single installation of HP Web Jetadmin upon which other machines can browse is ideal. Otherwise, with multiple installations of HP Web Jetadmin, each installation will have to maintain its own cache, and will not know the contents of the caches of the other HP
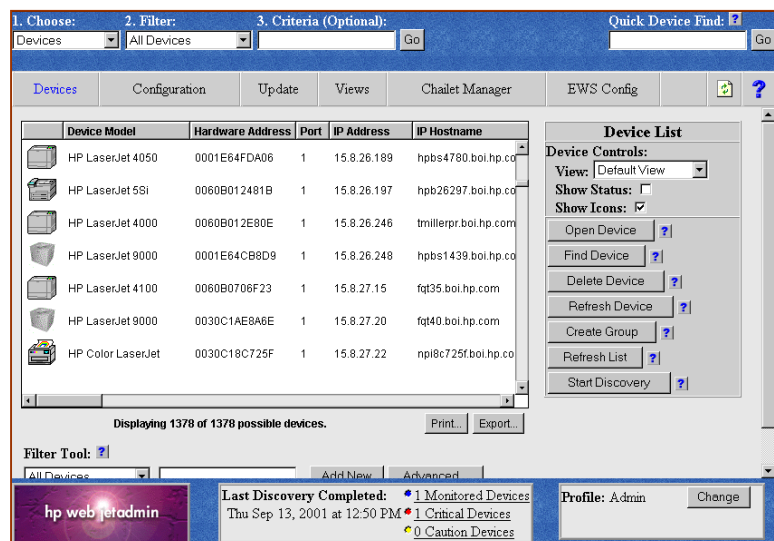
Web Jetadmin machines.

Another benefit of having a single installation of HP Web Jetadmin is the decrease in network traffic that would occur as a result of only one machine performing network discoveries. All clients that browse the HP Web Jetadmin machine will not have to perform printer discoveries.

However, for extremely large networks, a single, central database may not be desirable because the sheer size of the database may not be manageable. In such a situation, it may make more sense to install HP Web Jetadmin servers at strategic locations to manage subsets of the larger network. Also, helpdesk personnel who just want to use HP Web Jetadmin to troubleshoot printers may want to install a copy on each individual's machines to maximize performance and quickly view the status of a printer.

The following factors can directly affect the number of HP Web Jetadmin installations that may occur on a particular network:

- Hardware installed on machines designated to run HP Web Jetadmin
- Number of clients (machines used

to browse HP Web Jetadmin)
- Number of printers
- Location of printers
- Configuration of routers
- Accuracy/speed of printer discovery techniques

Hardware

HP Web Jetadmin can be installed on machines running any of the following operating systems:

- Microsoft Windows NT Workstation or Server
- Microsoft Windows 2000 Professional or Server
- Red Hat Linux
- SuSe Linux

Refer to the HP Web Jetadmin *readme_en.txt* file for specific versions.

Note: Since HP Web Jetadmin installs its own web service, Microsoft Windows NT/2000 Server is not required. Microsoft Windows NT/2000 Workstation performs quite well as a platform for HP Web Jetadmin.

Also, the *readme_en.txt* file provides the recommended minimum hardware requirements for installing HP Web Jetadmin. it is highly recommended to install 256 MB or more of RAM in order to maximize performance, especially if multiple machines will browse HP Web Jetadmin at a single time.. Processor speed follows the same logic. While a 400 MHz processor may suffice for a single user accessing HP Web Jetadmin, multiple simultaneous users or a large number of printers in the cache may warrant having a much more powerful processor, at least 600 – 800 MHZ. The number of printers to be managed from an installation of HP Web Jetadmin and the number of users that will browse this machine simultaneously will

increase the number of used cycles for the processor and will dictate exactly how much hardware should be installed. The general rule of thumb should be as follows:

The more hardware that is installed on the machine, the better the performance of HP Web Jetadmin.

Tools such as Performance Monitor under Windows NT can provide a general idea of when additional hardware should be installed.

It is also recommended to install HP Web Jetadmin on a machine that is not running a large amount of additional applications. For example, HP Web Jetadmin running on a Windows NT PDC or a print server processing many print jobs more than likely will not perform as well as HP Web Jetadmin running on a standalone machine.

Client Machines

In general, any client that can browse the HP Web Jetadmin server using a standard web browser should be able to manage and configure printers without having to install the software itself. Although HP Web Jetadmin cannot be installed on a Windows 9x machine, a Windows 9x client can certainly be used to browse to an HP Web Jetadmin machine. This provides the ability to manage printers from just about anywhere on the network without physically having to install HP Web Jetadmin all over the network. This minimizes the amount of network traffic that will occur during management of printers.

Browsers that are supported to view HP Web Jetadmin include:

- Microsoft Internet Explorer
- Netscape Navigator and Communicator

Refer to the HP Web Jetadmin *readme_en.txt* file for specific versions.

Microsoft Internet Explorer has performed more efficiently in terms of speed and reliability in HP tests. However, the version of the Microsoft Virtual Java Machine (JVM) may require updating.

The number of clients that can browse an HP Web Jetadmin server is directly related to the hardware installed on the HP Web Jetadmin server and the size of the printer cache. Naturally, the more hardware on the HP Web Jetadmin machine, the greater the number of clients that can simultaneously browse to that machine. Also, the greater the number of printers in the cache, the potential exists for loss of efficiency if a great number of clients simultaneously browse the HP Web Jetadmin server. Once again, the use of a tool such as Performance Monitor under Windows NT can indicate when too many simultaneous clients degrade performance.

Number of Printers

The number of printers that HP Web Jetadmin can discover and manage is unlimited. However, as the number of printers in the cache increases, more resources are required on the machine in order to maintain adequate performance and efficiency. Also, if periodic status checks are performed, larger amounts of printers will take longer to poll to obtain status information, also affecting performance. Fortunately, the cache can be broken down into smaller more manageable parts called "groups" to help alleviate degradation in performance for such items as status.

Location of Printers

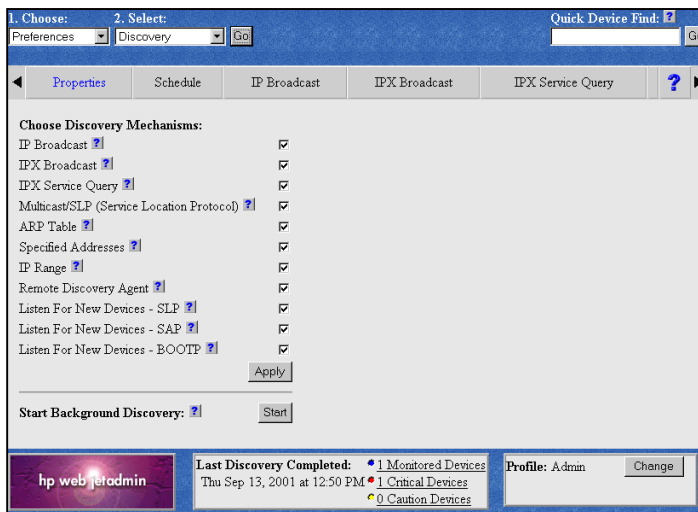Where the printers are physically located in reference to the HP Web

Figure 1

Jetadmin machine can affect the number of installations of HP Web Jetadmin as well as the selected discovery methods. Particularly on large WANs, timing can become an issue. It may be desired to strategically install HP Web Jetadmin machines in close proximity to printers if timing problems exist and if SNMP traffic across routers becomes an issue.

Configuration of Routers

Configuration of routers may also affect where HP Web Jetadmin will be installed, and will definitely affect the desired discovery methods. If routers are filtering SNMP traffic such as UDP type 161 packets, HP Web Jetadmin will either have to be installed on each subnet, or a discovery technique called "RDA" (Remote Discovery Agent) will have to be used. This technique can push a service to machines on remote subnets, have those machines perform discoveries and configuration, and report information back to HP Web Jetadmin using TCP packets. Also, if routers are configured to filter IPX packets, discovery techniques using TCP/IP will have to be selected.

Discovery Techniques

HP Web Jetadmin has a multitude of discovery techniques from which to choose to aid in the speed and accuracy of discovering printers (see Figure 1). Each technique has its advantages and disadvantages, of which can be read in a technical brief titled "Discovering Devices in HP Web Jetadmin". Techniques most desirable for a particular network may also dictate how many installations of HP Web Jetadmin will

occur.

Installation

Installation of HP Web Jetadmin 6.5 is a quick and easy task, with several options to consider during the process. If the HP Web Jetadmin 6.5 installer detects a previous version of HP Web Jetadmin is installed, it will will offer the ability to upgrade the previous version or install a new copy (see Figure 2). An upgrade from an older version of HP Web Jetadmin to version 6.5 will preserve settings for discovery options, groups, maps, etc. This is important since the effort involved in creating these items may have been significant in the past. However, safety precautions can be made by backing up key files from the previous install before proceeding with a new installation. The next section will discuss backup in more detail.

In fact, if *New Installation* is chosen as the install method, HP Web Jetadmin offers the ability to automatically backup all files from a previous installation during the installation of the new version (see Figure 3). If this option is selected, the entire file structure from the previous HP Web Jetadmin version is copied to the
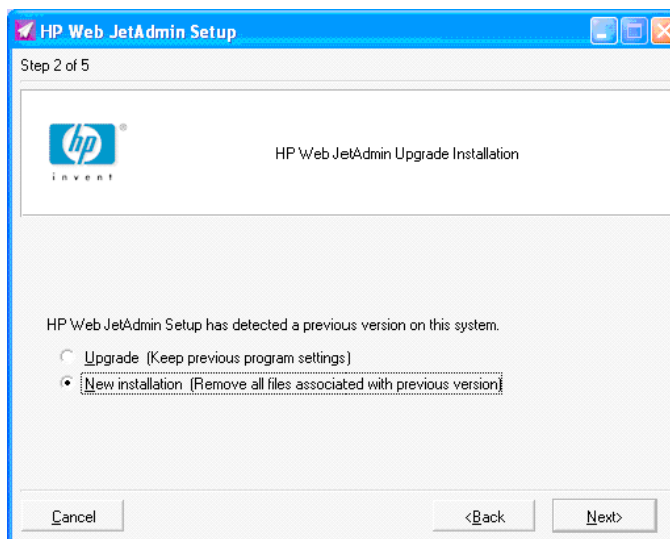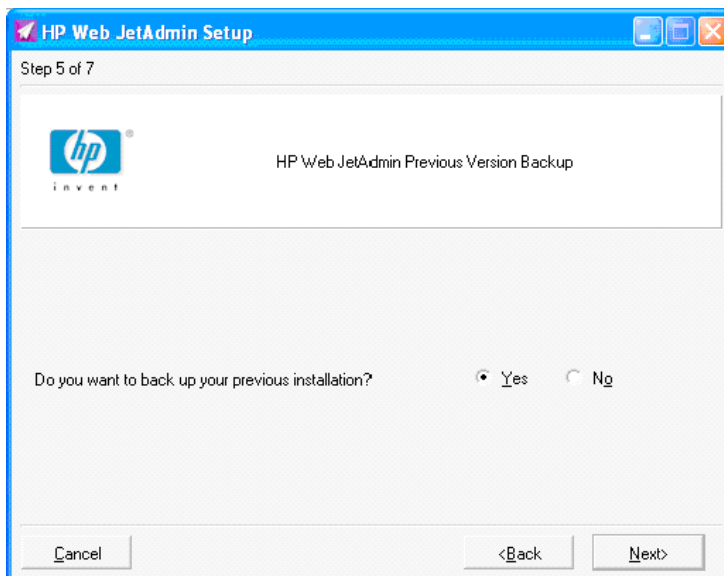

Figure 2

Figure 3

following subdirectory:

> \Program Files\HP Web
> JetAdmin\safety.

The backup directory structure is not configurable.

Note: Previous settings are not copied over if *New Installation* is chosen. All previous settings will be lost, however, the backup option would preserve the files that contained those settings if restoration is required.

The HP Web Jetadmin installer will also present the opportunity to configure any of the following parameters (see Figure 4):

- Computer hostname
- Port number
- Installation directory
- Program group

Once the installation is complete, HP Web Jetadmin can be launched from a supported browser by entering the hostname or IP address of the machine followed by the port number.

For example, to access the installation of HP Web Jetadmin depicted in Figure 4, one could enter any of the following as the URL in a browser:

- Metz:8000
- Metz.boi.hp.com:8000
- 15.62.5.6:8000

If the hostname that is entered cannot be resolved by a name server such as WINS or DNS, the IP address can be used instead as shown above.

The typical default port number for web services is a value of 80. Since HP Web Jetadmin may be running alongside another web service on the same machine, the port number for HP Web Jetadmin defaults to a value of 8000. If desired, this parameter can be changed.

Log File

The HP Web Jetadmin installer writes the details of an installation to a log file, *wjainstall.log*, for troubleshooting purposes The log file is typically written to the \Program Files\HP Web Jetadmin subdirectory. However, if the install fails, the file may be located in the temp directory.

Command Line Install

The HP Web Jetadmin installer also offers the ability to perform a command line installation. Type "Setup -h" from the \Program Files\HP Web Jetadmin subdirectory for more details
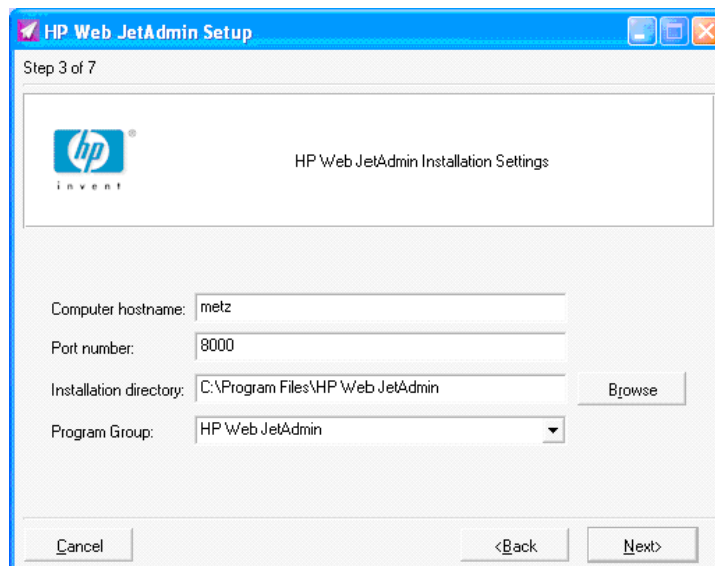

Figure 4

Back Up

While any previous groups, maps, etc. will not be deleted during an upgrade from an older version of HP Web Jetadmin to a newer version, it is still wise to back up this information in case any problems arise either during a migration or just during general operation.

Some HP Web Jetadmin items such as groups, profiles, maps, and file specified discovery typically contain changes from the original installation of HP Web JetAdmin. These changes may have required a significant amount of time and effort on the part of the administrator. Backing them up on a regular basis is an excellent precaution. For example, the following occurrences could cause these files to be corrupted or deleted:

- disk crash
- uninstallation of Web JetAdmin
- accidental deletion
- machine crash while files are open or in use

Figure 5 contains the recommended files for backup of Web Jetadmin 6.5. Previous versions of HP Web Jetadmin may have a slightly different subdirectory structure, but the file names themselves have remained consistent since the HP Web Jetadmin 6.0 version.

HP Web Jetadmin also installs a port monitor called the HP Standard TCP/IP Port Monitor during print path creation under Windows NT/2000. Each time a print path is created, a registry entry is also created. The following registry entries for the HP Standard TCP/IP Ports should be backed up on a regular basis:

- HKEY_Local_Machine\System\ CurrentControlSet\Control\Print\ Monitors\HP Standard TCP/IP Port

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HP Web Jetadmin 6.5

\Program Files\HP Web JetAdmin\
    *.dat   discovery database files
    *.ini   configuration settings for discovery, groups, appearance, passwords, maps, etc.

\Program Files\HP Web JetAdmin\doc\plugins\hpjwja\
    *.ini   configuration settings for discovery, groups, appearance, passwords, maps, etc.
    hpaltmsg*.txt alerts text files

\Program Files\HP Web JetAdmin\doc\plugins\framework\
    framework.ini   stores profiles information

\Program Files\HP Web JetAdmin\doc\plugins\hpjwja\firmware\jetdirect\
    . (all files)   HP JetDirect firmware images that have been downloaded from the web

\Program Files\HP Web JetAdmin\doc\plugins\hpjwja\firmware\printers\
    . (all files)   HP printer firmware images that have been downloaded from the web

\Program Files\HP Web JetAdmin\doc\uploads\
    . (all files)   uploaded files such as maps

Figure 5

These registry entries would not be removed if HP Web Jetadmin were to be removed. However, it would be beneficial to back them up in case of accidental deletion or corruption, especially since they may have taken a substantial amount of time to create.

There are other registry entries for HP Web Jetadmin. However, they do not change after installation, and could be easily replaced with another installation.

Uninstallation

Selecting the "UNINSTALL HP Web Jetadmin" item from the Start Menu will remove HP Web Jetadmin from a particular machine. Two choices for uninstallation are available:

- Standard
- Complete

For the Standard option, some key components will remain in case the intent was to re-install HP Web Jetadmin. Items that remain include user defined groups, maps, etc.

The Complete option will completely remove all files, services, and registry entries related to HP Web Jetadmin. In case manual removal is required or desired, the following subdirectories, and files contained within can be deleted to completely remove HP Web Jetadmin:

- *\Program Files\HP Web JetAdmin*
- *\Program Files\HP Remote Discovery Agent*
- *\Program Files\HP Web Print Server Manager*

Registry entries to remove include:

- HKEY_LOCAL_MACHINE\
  Software\Hewlett-Packard\
  HP Web JetAdmin
- HKEY_LOCAL_MACHINE\
  SYSTEM\CurrentControlSet\
  Services\HPWebPSManager
- HKEY_LOCAL_MACHINE\
  SYSTEM\CurrentControlSet\
  Services\HPRemDiscAgent
- HKEY_LOCAL_MACHINE\
  SYSTEM\CurrentControlSet\
  Services\HPWebPkgMngr

Linux does not build program links on the Linux desktop or in the Linux program menu. Therefore, there is no uninstall option in the program menu for Web JetAdmin installed in Linux as there is in Windows.

To uninstall HP Web Jetadmin from a Linux machine, use the command:

    /opt/hpwebjet/setup -r

at the Linux command prompt to uninstall Web JetAdmin for Linux.

Summary

Proper planning can be a critical component of installing a printer management tool such as HP Web Jetadmin. There are many installation issues to consider, including the number of HP Web Jetadmin servers. It is important to understand what happens when migrating from older versions of HP Web Jetadmin to newer versions. Proper techniques for backing up HP Web Jetadmin are equally important to prepare for any unforeseen circumstances. Finally, for cases where the desire is to completely remove HP Web Jetadmin, detailed instructions have been included in this technical brief.