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HP

Web JetAdmin

Third Party Devices

technical brief



Plug-ins

Designed for HP Web Jetadmin

Overview

HP Web Jetadmin has become more modular in design, whereby plug-ins can be installed to provide additional functionality. Examples of plug-ins include the following:

- Device - adds capabilities and configuration items unique to a particular device.
- Language Packs - allows additional language modules to be loaded into a single installation of HP Web Jetadmin to provide the ability to view the installation of HP Web Jetadmin in multiple languages.
- Application Plug-ins – adds specialized functionality to HP Web Jetadmin, such as disk storage management, report generation, etc..

Application plug-ins include:

- Device Storage Manager Plug-in - downloads forms, macros, and fonts to printer storage disks. Also provides the ability to initialize and write protect disks.
- Report Generation Plug-in – collects usage data from discovered printers, stores the data in a database, and generates reports/graphs using the collected data.
- Print Server Appliance Management Plug-in - provides the ability to manage a fleet of PSAs, including remotely scheduling back-ups, upgrades, and restores for multiple PSAs, remote management of printer drivers, automatic driver

distribution, and batch configuration.

- Print Server Appliance Migration Plug-in - provides automated migration of print shares from a Windows-server to the PSA, while the Client Migration Tool migrates PC clients to the print shares on the PSA.
- Driver Pre-Configuration Plug-in – pre-configures printer drivers to be used for installation of Microsoft Windows print queues via HP Web Jetadmin.

This paper will examine the current plug-ins available for HP Web Jetadmin running under Microsoft Windows NT/2000/XP. Installation of the plug-ins, as well as the functionality provided by each of the types of plug-ins, will be discussed.

Installation

HP Web Jetadmin offers a *Product Update* feature that can be used to either automatically download and

install plug-ins from the web directly, or install plug-ins from the local hard drive that have been previously downloaded from the web. HP Web Jetadmin must have access to the Internet in order to perform the automated function. If a secure proxy is in place, HP Web Jetadmin can be instructed to attempt to use proper credentials to penetrate the secure proxy. If HP Web Jetadmin does not have access to the Internet, the plug-ins can be manually downloaded and installed through *Product Update* by browsing to the desired subdirectory where the plug-ins reside.

Steps to perform either installation technique include:

- 1) Under the *Product Update* selection in the drop-down menu of the *Navigation* tree, select *Install* (see Figure 1).
- 2) If HP Web Jetadmin has access to the internet, a list of available plug-ins should appear in the first box.
- 3) If plug-ins have been previously downloaded to the hard drive, select *Browse* below to locate the file, then select *Upload* to make the file appear in the box above.
- 4) Highlight the desired plug-ins, then click *Next* to begin the installation.

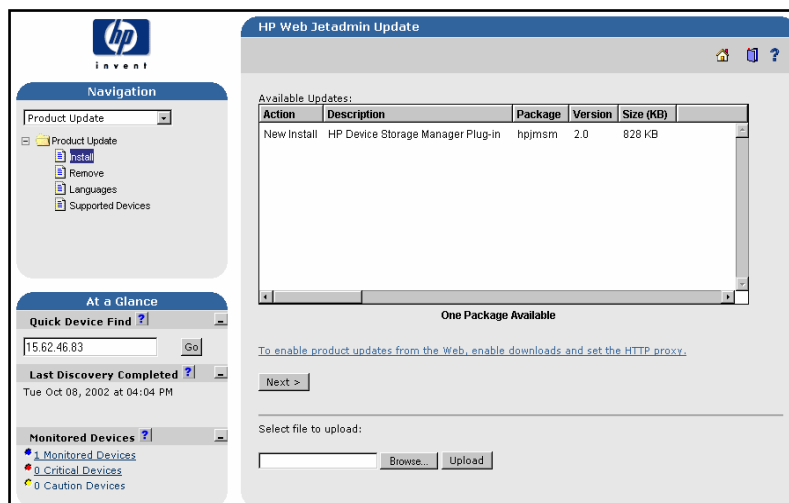


Figure 1

Device Plugins

Each time a new device is released, such as a new printer, HP Web Jetadmin can be updated with specific functionality unique to that device by installing a plug-in for the desired device. The update contains information specific to the new device such as capabilities and configuration settings. For instance, the new device might have capabilities and features such as media capacity and input/output device options. Once the update is applied, HP Web Jetadmin would provide the means for print administrators to configure these new features.

The benefit to device plug-ins is that full support for new devices is provided "on-the-fly" without having to wait for the next release of HP Web Jetadmin.

Without a specific device plug-in installed for a particular device, HP Web Jetadmin may still be able to discover the device, but the level of support provided will be limited.

Device Auto Update

While device plug-ins can be manually installed any time through the previously mentioned *Product Update* feature, they can also be automatically downloaded from the Web and installed immediately upon opening the *Status* page of a particular device from within HP Web Jetadmin.

Device Auto Update can be enabled by selecting *Product Update* from the drop-down menu in the *Navigation* tree, then opening the *Product Update* folder and selecting *Supported Devices*. Check the box next to *Enable Device Auto-update* to activate the feature (see Figure 2).

Once this feature has been enabled, whenever HP Web Jetadmin is

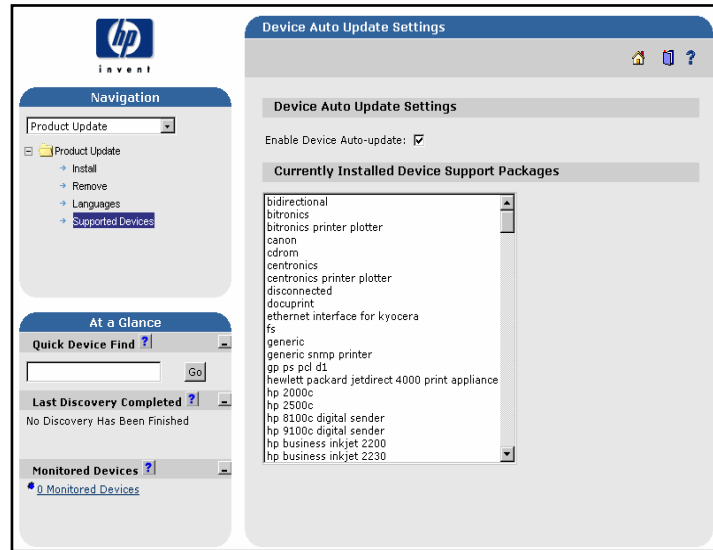


Figure 2

instructed to open a device, and it cannot locate a device plug-in for the device on the hard driver, then it will inform the user that a device plug-in currently does not exist in HP Web Jetadmin and will ask for approval to automatically retrieve on from the Web.

This feature eliminates the need to manually download device plug-ins to gain full device support.

Language Packs

Language packs can be installed into HP Web Jetadmin to provide additional languages in which to view HP Web Jetadmin. In this scenario, a single software executable can simultaneously service multiple browser sessions in multiple languages. There is no need to install a separate HP Web Jetadmin program for each desired language.

A multilingual HP Web Jetadmin provides the following benefits:

- The software is installed only once, which means that there is only one machine to configure.

- There is only one copy of HP Web Jetadmin performing discoveries, which means less network traffic.

Application Plug-ins

Application plug-ins can be installed into HP Web Jetadmin to add specialized functionality such as disk storage management, report generation, etc..

Device Storage Manager Plug-in

Device Storage Manager is a replacement for the HP Resource Manager that provides the ability to manage fonts, forms, and macros on the storage disk of a printer. Fonts, forms, and macros can be copied to the HP Web Jetadmin machine, added to a project, and downloaded to the printer storage disk. Device Storage Manager can be accessed from a group view in HP Web Jetadmin in order to manage fonts or forms on a group of devices simultaneously. This screen provides the ability to add or remove files such as fonts and macros to or from a group of printers.

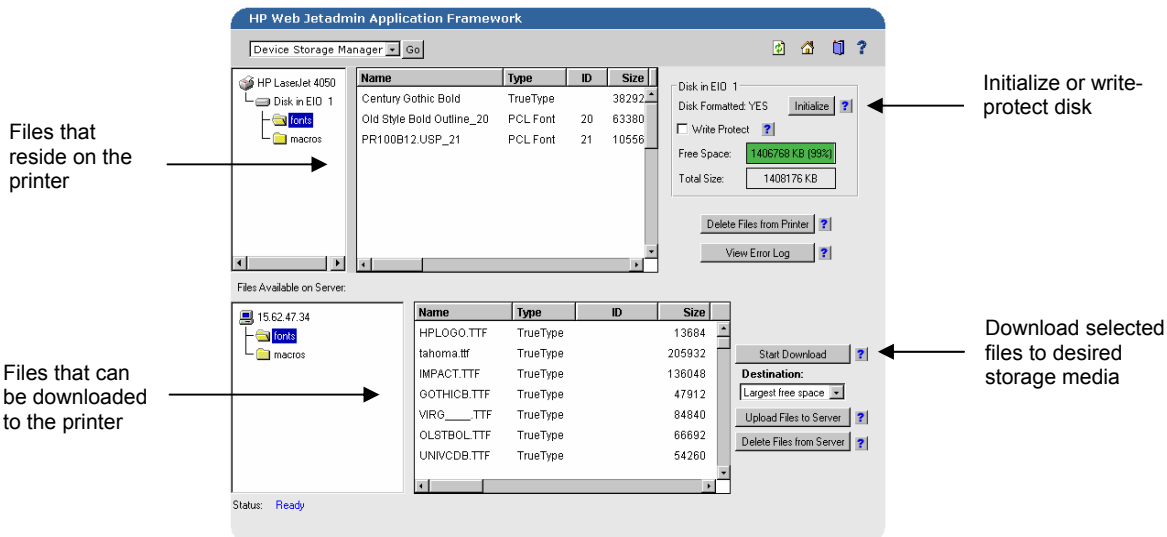


Figure 3 Device Storage Manager

The Device Storage Manager can also be accessed from the *Status* page of a single device in HP Web Jetadmin in order to manage fonts and forms on a single device. (see figure 3) This screen provides the ability to view files that have been downloaded to the printer, add/remove files, initialize and write protect the printer storage disk.

- Microsoft Access 2000 / 2002
- MySQL Server 3.23 and 4.0
- Microsoft SQL Server 7 / 2000
- Microsoft MSDE 7 / 2000

Once data has been collected, the following types of benefits can be achieved from the various report types that can be generated:

- Balance asset deployment. Detailed usage tracking ensures

that you have the right feature availability, right usage levels, right device placement, and right costs of operation in a balanced deployment that matches your business. Trend reports can assist in making load balancing decisions in order to reduce printer wait time.

- Create customized trending reports and graphs. Reports can streamline budgeting processes and maximize printer investment. Information Technology can

Report Generation Plug-in

HP Report Generation Plug-in is an application plug-in that provides reporting capabilities for printers managed via HP Web Jetadmin. Once installed into HP Web Jetadmin, HP Report Generation Plug-in can collect data from discovered printers, store the data in a database, and generate reports/graphs using the collected data (see Figure 4).

Reports can streamline budgeting processes and maximize printer investment. Reports and graphs help monitor printer usage and optimize print assets.

HP Report Generation Plug-in allows data to be stored in any of the following common database systems:

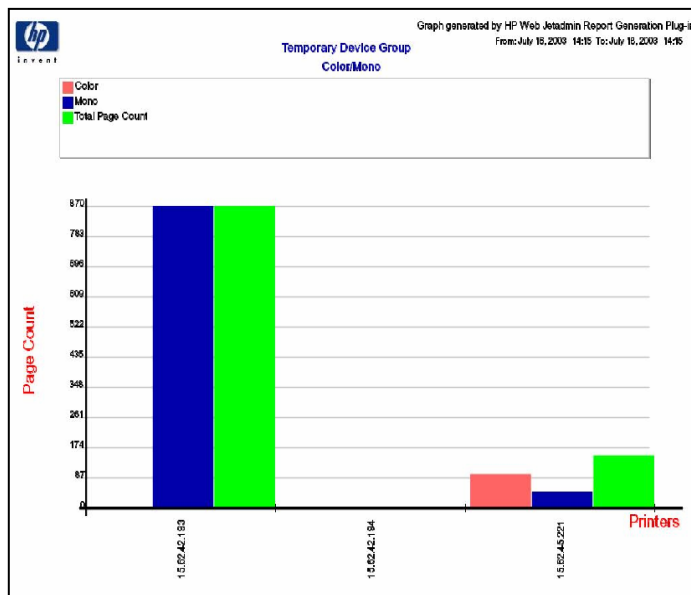


Figure 4 - Report Generation



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save time by providing online reports and graphs showing printer usage.

- Track and forecast supplies usage. This plug-in works with HP Smart printing supplies to keep track of supplies – which allows you to forecast supplies purchases and streamline device management and the budgeting process.
- Track device assets. Take advantage of detailed device and accessory asset tracking to highlight changes in the printing environment.
- Track error logs. Trace history and trends in error reports to predict and resolve problems before they occur.
- Receive email reports automatically. Schedule automatic emails of trend analysis reports across any designated time period – from a single day to when you first began collecting data.

Custom fields can also be imported into the database and displayed in the reports. The reports can be displayed as graphs such as pie, bar, and line. Reports/graphs can be scheduled to be sent via e-mail to recipients on a regular basis.

Print Server Appliance Management Plug-in

The PSA is a network device used to manage and monitor printing. It has been designed to provide a quick and easy way to add print capacity and off-load print spooling and services from the general-purpose servers. The HP Print Server Appliance (PSA) Management Plug-in for Web Jetadmin enables administrators to perform numerous tasks for one or multiple Print Server Appliances in a batch environment. Other features of the PSA Management Plug-in include updating the firmware for one or multiple PSAs, back up and restoration of the PSA, and managing printer drivers on the PSA (see Figure 5).

Print Server Appliance Migration Plug-in

HP Print Server Appliance Migration Plug-in is an automated tool to move clients from print shares on a Windows server to print shares on an HP Print Server Appliance.

The PSA Migration Plug-in consists of two components: the Server Migration Tool and the Client Migration Tool. The Server Migration Tool migrates print shares from a Windows-server to the PSA, while the Client Migration Tool migrates PC clients to the print shares on the PSA.

Driver Pre-Configuration Plug-in

HP Web Jetadmin provides a queue creation function that allows printers to be created on any Windows NT 4.0, Windows 2000, or Windows XP machine. The Driver Pre-Configuration Plug-in adds a number of screens to the existing queue creation workflow to allow the drivers being installed to be customized as part of the process. It also allows IT administrators to manage the configurations that are created for specific queues by allowing them to be saved (with a name) and used in subsequent installations.

Network administrators use the HP Driver Pre-configuration plug-in to pre-configure a printer driver before deploying and installing it via the print queue creation feature of HP Web Jetadmin. It is most beneficial when configuring printer drivers for multiple workstations and printers that share the same configuration.

Two classes of features can be configured:

- printer accessories
- driver feature settings.

The driver is configured to match the printer hardware so that access to all printer accessories through the driver is enabled appropriately i.e. duplexing units, additional input trays/output bins, etc. Most driver feature settings can also be configured.

While the feature set that is configurable is defined by the developers of each individual product, the general rule is that all driver features are supported. This means that both the device settings (such as Optional Paper Surces and Duplex Unit) and the printing preferences (such as default Paper Source and default Output Bin) are customizable prior to installation.

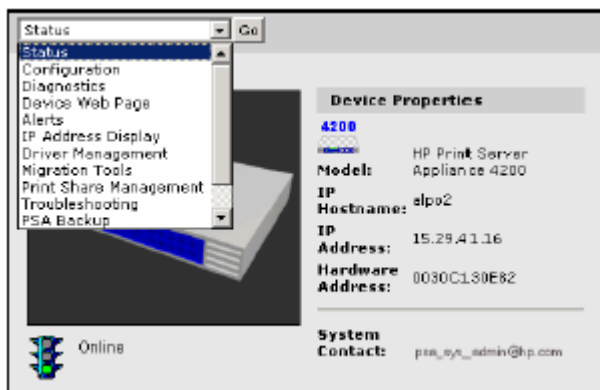


Figure 5 – PSA Plug-ins



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Web JetAdmin

Third Party Devices

A number of features that can be locked to a particular state if an IT administrator wants greater control over the way compatible devices are used include:

- Print on Both Sides (Duplex)
- Print in Grayscale
- Media Type
- Paper Source
- Output Bin

Remote Discovery Agent

The HP Remote Discovery Agent (RDA) component allows HP Web Jetadmin to discover unconfigured devices (192.0.0.192) on remote subnets using TCP/IP.

HP RDA is a piece of software that HP Web Jetadmin pushes to a computer on the remote subnet. This software runs as a service (NT/2000/XP) or daemon process (Unix/Linux) on the remote computer, performs a discovery using any of the Web Jetadmin provided discovery mechanisms, and passes the discovery information back to HP Web Jetadmin using TCP packets. Not only does it discover unconfigured IP devices where otherwise IPX would have to be used, it also decreases the amount of SNMP traffic that would normally cross routers during discovery.

When pushing the HP RDA component from a Windows NT/2000/XP Web Jetadmin machine to another Windows NT/2000/XP machine, the HP RDA component is included with the core HP Web Jetadmin application. Additionally, HP Web Jetadmin can push HP RDA from a Windows NT/2000/XP computer to a Linux computer. However, a separate HP RDA component must be downloaded and installed in order to perform this function. Pushing the HP RDA component from a Linux computer to a Windows NT/2000/XP computer is not supported.

Print Server Management

The HP Web Print Server Management component allows administrators to install print queues remotely from any location that has access to the network. It creates shared printers on the network to which users can connect and print.

HP Web Jetadmin for Windows NT/2000/XP already contains support for creating print queues onto other Windows NT/2000/XP machines. However, in order for HP Web Jetadmin to create print queues onto Unix or Linux machines, this additional Web Print Server Management component must be installed.

The following two components are installed during Print Path creation in the Windows NT/2000/XP environment:

- HP Web Print Server Manager software (installed as a service)
- HP Standard TCP/IP Port Monitor (installed as a print monitor within Windows NT/2000/XP)

During Unix (HP-UX and Solaris) print queue creation, HP Web Jetadmin will push the following two components:

- HP Web Print Server Manager software (installed as a daemon process)
- HP Jetdirect Printer Installer for Unix (E.10.18)

For Linux Print Path creation, HP Web Jetadmin will push only the following component:

- HP Web Print Server Manager software (installed as a daemon process)

Summary

HP Web Jetadmin provides the ability to increase functionality by allowing plug-ins to be installed. Plug-ins

such as device plug-ins, language packs, application plug-ins, and discovery and print queue creation components all add functionality to HP Web Jetadmin not included in the base product. This modular technique of adding plug-ins to HP Web Jetadmin paves the way for adding desired functionality quickly and easily down the road.

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