HP Universal Print Driver for Windows, version 4.1
Technical Frequently Asked Questions

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Services

What services are installed, and what are the services used for?

The HP Port Resolver (HPBPRO.DLL) and HP Status Monitor (HPBOID.DLL) services are installed on the server. These services are there as a way to have a common and easily accessible set of components to establish bi-directional communication with network and DOT4 connected devices.

Why does HP install services for bidirectional communications?

The UPD installs services for bidirectional communication to facilitate the following advantages:

- The services allow the Universal Print Driver to communicate with each HP device and automatically customize itself for each device's unique features.
- Bi-directional communication services enable real-time print job and device information (Status Notification Prompt).

When are services installed? (I saw that some services are only installed if I click on Update Properties and the user has admin rights.)

To install the driver, you must have Admin rights, unless it's a point-and-print install (where the service registration doesn't get pushed).

What services are pushed out to the client?

In a Point-and-Print install, no services should be registered or running on clients, although the files get pushed with the driver. If the client has local installs of product-specific HP drivers installed, however, they may or may not have the same services depending on the age and model of the drivers.

Are there different services for Universal Print Driver PCL5/6 and PS? Can they be installed on the same server/client?

The services are common across PDLs and only one instance is in place at a time. Since the services are only running for the time it takes for the devices to communicate, the upgrade path is clean.

Is there a statement from Microsoft regarding the use of the services?

Not that I'm aware of. The service architecture in Windows is still heavily used. I have never seen a document from Microsoft indicating that IHV/ISVs are discouraged from taking advantage of it to drive their solutions.

Does Universal Print Driver use different services than product-specific drivers?

Not drivers released in the same window. The product-specific drivers used to register a couple of additional services, but the current set of services described above is common to the Universal Print Driver and product-specific drivers.

What is the strategy of HP regarding the services? Are they going to be replaced by another technology in future?

There are no plans to do this at this time.

User rights and Update Now

Is it possible for an administrator to access the server print queue from a Point-and-Print client?

In this case, the **Update Now** feature would be active, since the rights allow it.

When **Update Now** is selected, the driver will register the components required to enable bi-directional communication. In this specific case, the services could end up being registered on a client, although a non-server administrator user would never use them.

Does it make a difference if an administrator or user maps a printer on the client?

See above.

If the user is just printing, there would be no difference. If the user has admin rights and is using the **Update Now** feature, the behavior would be different.

What user rights do I need to have to get the services installed?

The files will be installed—even on a client—when the driver is installed. However, only when the user has admin rights, as described in the **Update Now** scenario above, would the services ever be registered.

Microsoft® Windows®

Is there a difference when using Windows Vista® or XPS printpath?

Windows Vista does have several new features in the print path. To learn more, you can read the following Microsoft documentation:

http://msdn2.microsoft.com/en-us/library/aa970449.aspx

http://download.microsoft.com/download/a/f/7/af7777e5-7dcd-4800-8a0a-b18336565f5b/pkginstall.doc
http://msdn2.microsoft.com/en-us/library/Aa480212.aspx

HP will have direct XPS print support in the Universal Print Driver, version 4.5, but we will also continue to support the GDI path.

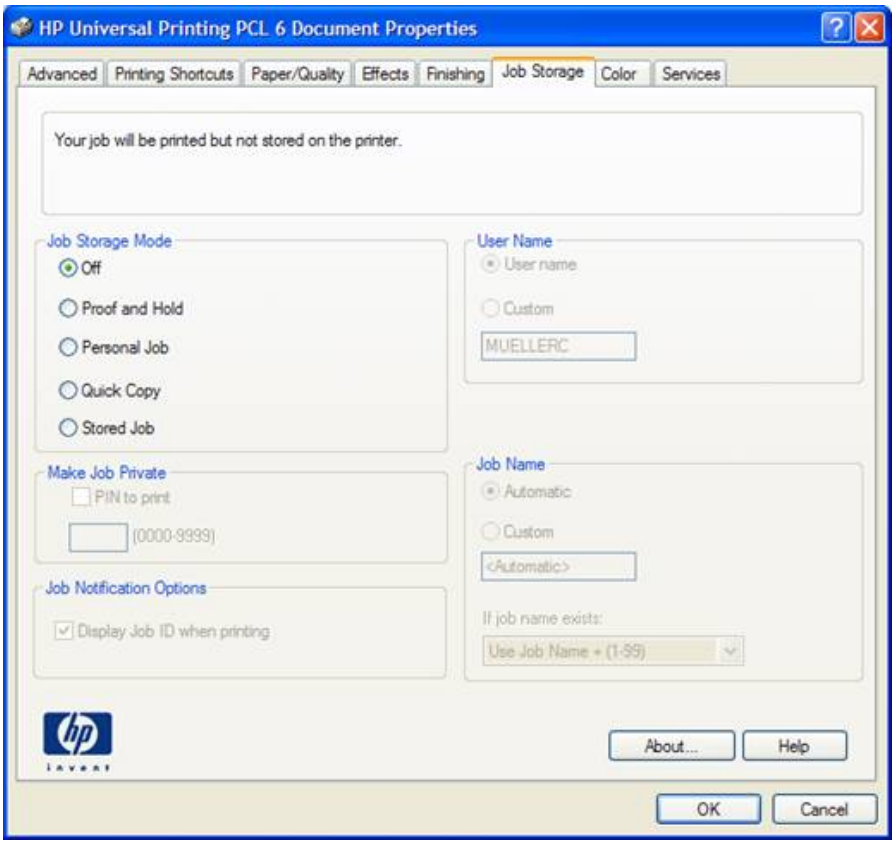
Stored print jobs

If I send several stored jobs to the printer at once, do I have to enter a PIN for each print job?

If you assigned a PIN to a **Private Job** or a **Stored Job**, you will need to enter that PIN at the device's control panel to retrieve that print job. If you stored the print job on the device but did not enter a PIN, you can retrieve the print job at the device by selecting your **User Name** and the **Job Name** at the control panel.

Stored Jobs will store print jobs on a hard disk drive, if one is installed, and can be kept to be printed again later. A **Personal Job** will be deleted when it is finished printing. You can consider **Personal Jobs** as temporary and **Stored Jobs** as semi-permanent.

The screen below shows the **Job Storage** tab and your private printing options.



Can I configure the Universal Print Driver so that job storage is locked?

You may be able to lock job storage, depending on the tool you are using to configure the Universal Print Driver. The table below lists the type of tool, type of stored job, and whether that job type can be locked.

	DMC		MPA		AD template	
Feature	Default	Lock	Default	Lock	Default	Lock
Proof and Hold	Yes	Yes	Yes	Yes	Yes	Yes
Personal Job	Yes	Yes	Yes	Yes	Yes	Yes
Quick Copy	Yes	Yes	Yes	Yes	Yes	Yes
Stored Job does not require PIN	No	No	Yes	Yes	Yes	Yes
Stored Job requires PIN	Yes	Yes	Yes	Yes	Yes	Yes

How do I use the driver configuration utility (DMC) to configure private printing in the Universal Print Driver without affecting WHQL certification?

Yes. Follow the steps below:

1. Launch the driver configuration utility.
2. From the **File** menu, select **Open** and browse to the .cfg file for the Universal Print Driver.
3. Make desired changes to the **Job Storage** tab.
4. Save as a .cfm file.

5. Copy the .cfm file to %SYSTEMROOT%\system32\spool\drivers\w32x86\3.
6. Create print queues, selecting **Use Existing Driver** in APW or printui/u.

The new print queues you create will have the defaults you configured.

HP Managed Printing Administration (MPA) software

What is MPA software?

HP Managed Printing Administration (MPA) software or Active Directory (AD) group policy templates enable you to create User Groups or Managed Print Policies that manage notifications and control color access. HP MPA software also allows you to create Managed Printer Lists to help users quickly find a printer. Both provide an automated method to create a controlled and customized print environment. Download HP MPA software or AD templates from www.hp.com/go/mpa.

For additional information on all of the management capabilities and how to set them for your environment, see the System Administrator's Guide at http://h20338.www2.hp.com/Hpsub/downloads/UPD_SAG_Updated_5_29_07.pdf and the Active Directory Administrator Template White Paper at http://h20000.www2.hp.com/bc/docs/support/SupportManual/c01034932/c01034932.pdf.

How do I export printer lists from Web Jetadmin 10.0 to the HP MPA software?

Create an Export XML file. See the example of a Web Jetadmin 10.X Export XML file below:

```
Devices>
- <Device>
  <DisplayName>HP 9100C Digital Sender</DisplayName>
  <IPv4Address>15.197.219.211</IPv4Address>
  <IPHostname>b01a42.emea.hpqcorp.net</IPHostname>
  <SystemLocation>GSS-MCSE El Camino</SystemLocation>
  <SystemContact><Not supported></SystemContact>
  <DeviceLocation><Not supported></DeviceLocation>
  </Device>
- <Device>
  <DisplayName>HP 9100C Digital Sender</DisplayName>
  <IPv4Address>15.197.213.121</IPv4Address>
  <IPHostname>npicaf7cd.emea.hpqcorp.net</IPHostname>
  <SystemLocation><Unknown></SystemLocation>
  <SystemContact><Not supported></SystemContact>
  <DeviceLocation><Unknown></DeviceLocation>
  </Device>
```

- <Device>

<DisplayName>HP 9100C Digital Sender</DisplayName>

<IPv4Address>15.197.219.100</IPv4Address>

<IPHostname>npi35f3d5.emea.hpqcorp.net</IPHostname>

<SystemLocation>Digital Sender</SystemLocation>

<SystemContact><Not supported></SystemContact>

<DeviceLocation><Not supported></DeviceLocation>

</Device>

</Device>

Managed Print Policies

What are Managed Print Policies (MPPs)?

An MPP is an XML document that controls the driver operation in a particular printing environment. Use MPPs to create a customized print environment and to limit user network access to certain printers. For example, users in one environment could print in color any time, while in another environment could print only during business hours.

One benefit of an MPP is that it extends the control of IT administrators over the printer environment, ultimately reducing support costs, supplies costs, and productivity costs in the company. IT administrators can assign color access by user, time of day, or application, or shut color capability down completely until it's needed.

Installation

Can I upgrade to a new version of the Universal Print Driver without having to install the driver on every PC?

If you use a software management application, such as the HP MPA or AD templates, you can simply push the new Universal Print Driver software, automatically upgrading the clients. If a client user has created permanent instance queues, the driver will be upgraded on that PC due to the way Windows works.

If you do not use a software management application, then you will have to upgrade manually or ask users to run the Universal Print Driver installer from a shared location.

When I installed the Microsoft Hot Fixes, I got the error message, "Unable to Install Printer. Operation could not be completed."

Recently hp updated and released to the web several print drivers with stability fixes and new features. hp has observed that a system or spooler hang may occur near the end of the installation/upgrade process. This behavior has been observed with any discreet print driver (non-Universal Print Driver) released prior to February 2007 when upgrading to a newer driver released after February 2007.

Many driver files are unique to a specific driver, yet other files are common among multiple drivers. These common files need to update or replace the prior revision in order to complete the installation of the print driver. However, there are times when the operating system does not allow the print driver to replace or

update a particular .dll required to complete an installation or upgrade successfully. One such .dll that has frequently been identified to hang has been "hpbmini.dll."

Technical Description

When updating an hp print driver from version 60.xx.yy.zz to version 61.xx.yy.zz the driver upgrade process may hang towards the end of the process. When the hang occurs the print driver is attempting to write some values back to the .dll, but it has not been allowed to be updated by the Operating System. The Operating System compares the hpbmini.dll file between the one currently installed and the one attempting to be installed, but does not compare file versions. Rather the Operating System makes the decision based on the date stamp of the file, and in certain cases the older version file may have a newer date stamp than the newer version file thus the Operating System will keep the existing file in place.

hpbmini.dll v.1.0.0.18 1/1/06 upgrade to hpbmini.dll v.1.0.0.19 1/1/07 – upgrade successful.

hpbmini.dll v.1.0.0.18 2/7/07 upgrade to hpbmini.dll v.1.0.0.19 1/1/07 – upgrade fail.

hpcdmc32.dll v.1.0.2.32 1/1/06 upgrade to hpcdmc32.dll v.1.0.2.35 1/1/07 – upgrade successful.

hpcdmc32.dll (1.0.2.32) 2/7/07 upgrade to hpcdmc32.dll (1.0.2.35) 1/1/07 – upgrade fail.

What causes the date stamp to change? Any operation in the Operating System that restores or updates print drivers can change the date stamp to reflect the time and date of the file change.

Why doesn't the Operating System look at the version number of the file instead of the date stamp? hp has created its print driver components with a specific schema to develop file version definitions which generates a unique file version. This schema does not match the Operating System Vendor's approach to versioning these components which then causes the Operating System to use the date stamp instead of the version.

Future versions of hp print drivers are adopting a different method for versioning the individual print driver components unique to hp printers.

Solution\Workaround

The only known solution is to rename, replace or remove the file labeled "hpbmini.dll" and/or "hpcdmc32.dll" from the [Windows]\…\system32\spool\drivers\w32x86\3 directory in the Windows operating system.

There may be other instances of these files, but they are cached by the operating system and are not used by the print system.

Cluster environments

When installing the HP Universal Print Driver in a Cluster environment, you must first install the Universal Print Driver and then create a printer (UPD driver initialization occurs at this time) on each node that will compose the virtual server. After this process, you can delete the printers you created on the nodes.

What version of Universal Print Driver supports cluster environments?

The Universal Print Driver versions 3.1 to UPD 4.1 are supported in Microsoft Active/passive Cluster environments only. The Universal Print Driver version 4.5 is supported in Active/Passive and Active /Active Cluster environments.

For more information, refer to a white paper that outlines best practices for using HP LaserJet printer drivers in the Microsoft Cluster Server environment. It also details known issues relating to printer drivers and Cluster environment. http://h20331.www2.hp.com/Hpsub/downloads/HP_Drivers_in_Cluster_Environments.pdf.

Universal Print Driver defaults

How does the Universal Print Driver determine the default paper size?

The default paper size is based on the operating system locale rather than the print driver language. The print driver retrieves the locale information and sets the default paper size appropriately (A4 or letter).

SNMP

Does Universal Print Driver support SNMPv3?

No. The Universal Print Driver supports SNMPv1 and v2. SNMPv3 is not supported.

Reported defects resolved with Universal Print Driver 4.4.2

Job storage/secure printing issues

- The HP Color LaserJet 5550 does not use the client's username as default.
- Navigating to Printing Shortcuts resets the Job Storage options.

Installation issues

- Errors when installing/updating.
- Installation fails when configuring multiple active nodes on a cluster.
- Universal Print Driver PCL6 is not installing correctly when the install command is used with the /dst switch.
- The HPBPRO.exe file causes crashes on the spooler.
- Printer install hangs.

Localization issues

- There is a localization error in HP CM8060/CM8050 Color MFP driver paper description.

Microsoft application issues

- Manual duplexing does not work in Microsoft Vista for host-based drivers, including HP Color LaserJet3600, HP Color LaserJet3550, HP Color LaserJet3500, and HP Color LaserJet2600.
- Microsoft Word crashes when clicking **Properties** in the print dialogue window.
- Microsoft Excel crashes after printing.
- In Microsoft PowerPoint, there's a problem with spacing in the slides.
- When using the PCL5 driver, an embedded Visio image in Microsoft Word is missing part of a graphic.

Managed Printer Lists issues

- Web Jetadmin 10.0 printer list xml definitions are not compatible with Universal Print Driver Managed Printer List definitions.

Active Directory issues

- Spooler crashing - Drivers unloading Active Directory services.

Other issues

- Memory and handle leaks have been identified and fixed, addressing reported spooler crashes

Reported defects resolved with Universal Print Driver 4.0

- The PCL 5e driver prints four copies when only two are requested and does not collate properly.

Reported defects resolved with Universal Print Driver 4.1

- Printers won't correctly configure during installation.
- HP Managed Printing Administration 2.02 and Universal Print Driver 4.1 are not job logging.
- In the version 4.1 driver, garbage displays in the notification field when French is selected on the printer's control panel.

Other resolved issues

- The printer hostname fails if it contains a "." (period) character.
- The HPZUI4wm.dll file causes the spooler to crash.
- Users experience an extremely slow response when requesting the Print Preferences page.
- The Lj1320PS- hp*****.cfg files remain in the spooler.
- HP Color LaserJet 5550 displays an intermittent error 49.

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