# HP printers supported in Citrix XenApp Server environments

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Technical white paper

## Table of contents


Executive summary ..... 3

What's new ..... 3

Versions of Terminal Server and Citrix supported by HP ..... 3

Testing performed by HP ..... 4

HP LaserJet printers and supported driver versions ..... 5

HP color printers with Edgeline technology and supported driver versions ..... 15

Using the HP Universal Print Driver version 5.2 for Windows in Citrix environments ..... 15
- Traditional mode ..... 15
- Dynamic mode ..... 15
- Running the Citrix StressPrinters test with the HP UPD using default settings gives erroneous results ..... 16

The difference between the Citrix and HP UPDs ..... 16
- HP and Citrix UPD recommendations ..... 17
- Known limitation of the UPD when used for auto-created printers or redirected printers with client printers that are directly attached ..... 17
- Client printer settings not reflected in auto-created printers ..... 17

Business Inkjet printers and supported driver versions ..... 18

HP Deskjet printers and supported driver versions ..... 19

Using HP ink-based All-in-One and Photosmart printers ..... 19

HP Designjets and supported driver versions ..... 22

Resolved issues ..... 23
- Process HPMUPxxx.BIN fails to shut down ..... 23
- Auto-creation performance in Citrix ..... 23
- HKCU\Software\Hewlett-Packard registry hive increases in size in Citrix ..... 23
- Memory leaks and memory corruption causing possible spooler crash, spooler hang, failed auto-creation, failed auto-created printer cleanup, and server performance degradation ..... 23
- Auto-creation of HP printer fails with Citrix ..... 24
- Client driver settings lost during auto-creation ..... 24
- Inability to print with certain HP drivers in Citrix MetaFrame 1.8 SP3 or earlier ..... 24

Unresolved issues ..... 25
- HP Deskjet printer drivers will not load under non-administrator privileges ..... 25

Microsoft issues ..... 25
- HP printer with DOT4 port on client does not create a redirected printer in Terminal Server ..... 25

Supported printing features ..... 25
Frequently asked questions ..... 25
Citrix-tested HP printers ..... 26
Testing methodology for HP printers ..... 26
Network print servers ..... 27
Printer policies ..... 28
Client printer properties ..... 29
Universal printer ..... 30
Auto-created client printers ..... 31
Printer driver compatibility ..... 32
Client printer driver mapping ..... 33
Citrix-tested HP Scanners/All-in-One devices ..... 34
Testing methodology for HP All-in-One devices ..... 34
TWAIN Redirection ..... 35
Planned future testing ..... 36
Feedback ..... 36

# Executive summary

Citrix® has collaborated with HP to test select HP printers and their associated HP print drivers in a Citrix XenApp™ 6 Server for Microsoft® Windows® Server 2008 and Microsoft Windows Server 2008 R2 Edition environments.

These tests were run to determine how HP printers and their associated printer drivers performed using the standard printer and printer-related features tests that Citrix uses to test its XenApp Server and XenApp Server client software. This document lists all of the printers tested by HP in Citrix environments, explains the printer tests performed by Citrix, identifies which HP printers and printer driver versions were used, and describes any issues that occurred while performing these tests.

Citrix has also collaborated with HP to test select HP scanners and All-in-One printers and their associated HP TWAIN drivers in a Citrix XenApp Server environment.

These tests were run to determine how HP scanners and All-in-One printers and their associated TWAIN drivers performed using the scan-related feature tests that Citrix uses to test its XenApp Server and XenApp Server client software. This document explains the scan tests performed by Citrix, identifies which HP scanners and All-in-One printers and TWAIN driver versions were used, and describes any issues that occurred while performing these tests.

# What's new

- The table of HP supported printers and drivers has been updated
- HP UPD 5.2 information has been added
- Deskjet and Officejet products have been removed.

# Versions of Terminal Server and Citrix supported by HP

- Microsoft Windows Server 2008 R2 Edition Terminal Services
  - Citrix XenApp™ 6.0
- Microsoft Windows Server 2008 x64 Edition Terminal Services
  - Citrix XenApp™ 5.0
  - Citrix XenApp™ 5.0 Feature Pack 2 and 3
- Microsoft Windows Server 2008 Terminal Services
  - Citrix XenApp™ 5.0
  - Citrix XenApp™ 5.0 Feature Pack 2 and 3
- Microsoft Windows Server 2003 x64 Edition Terminal Services
  - Citrix Presentation Server™ 4.5
  - Citrix Presentation Server™ 4.0
- Microsoft Windows Server 2003 Terminal Services
  - Citrix Presentation Server™ 4.5
  - Citrix Presentation Server™ 4.0
  - Citrix® MetaFrame® Presentation Server, 3.0
  - Citrix® MetaFrame® XP Presentation Server (Feature Release 1, 2, and 3)

# Testing performed by HP

HP performs Windows Server/Citrix Server testing on its print drivers and is confident in the stability and functionality of the driver versions mentioned in this article. HP also screens all driver releases to verify that the drivers are free of memory leaks and memory allocation issues that might cause print spooler crashes or Citrix logon issues.

HP has selected a combination of LaserJet, Business Inkjet, and Deskjet printers for Citrix to test that serve as a representative test sample for all printers in the HP printer family. Because the driver code bases of these printers are common to all printers in the HP printer family, the Citrix testing of these select printers translates to all other HP printers. All HP printers and their associated printer drivers listed in this document are supported by HP in Citrix environments. HP supports only the driver on the Citrix server and no other components from the CD or printing system installed on the Citrix server.

## Feature testing

The HP test team installs the print driver on the Citrix server, logs into a Citrix session, and verifies that printing is successful to client printers and network printers. The feature testing performed by HP is very similar to the Citrix Interoperability Test Kit for the Citrix Ready program. In addition to the feature testing that is part of the Citrix Ready program, HP performs stress testing of its print drivers to ensure that the print driver can stand up to the printing and auto-creation demand that is common on a Citrix server.

## Stress testing

HP performs stress testing of its print drivers in both Citrix and non-Citrix environments. HP tests its print drivers with the StressPrinters tool provided by Citrix to simulate a user logon where multiple printers are auto-created concurrently. HP also employs other printing stress suites to ensure its drivers are compatible and stable in Citrix environments.

# HP LaserJet printers and supported driver versions

Table 1 identifies the HP LaserJet printers and associated drivers that are supported in Citrix environments by HP. These printers and printer drivers were tested by HP. A description of the issue resolutions and known product limitations is included in this section.

**Table 1:** Minimum levels of HP-supported drivers in the Citrix environment

**Note:** The driver versions in this table reflect the information that was available at the time of publication. Subsequent to publication, newer drivers may have been released, and some drivers may no longer be available for download from the HP website. For the most current driver information, please consult www.hp.com.

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| LJ 1000 | Not supported | N/A | Not Supported** | N/A |
| LJ P1005 | Not supported | N/A | Not Supported** | N/A |
| LJ P1006 | Not supported | N/A | Not Supported** | N/A |
| LJ P1008 | Not supported | N/A | Not Supported** | N/A |
| LJ 1010/1012 | Yes | N/A | XP/2003: 5.60.1604.0<br>Win2003-x64: Not Supported<br>Vista: 20080924 | N/A |
| LJ 1015 | Yes | XP/2003: 60.05.17.02<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS | N/A | N/A |
| CLJ CM1015/ 1017 mfp | Yes | XP/2003/2003-x64: 60.061.442.00 | N/A | XP/2003/2003-x64: 60.061.442.00 |
| LJ 1018 | Not supported | N/A | Not Supported** | N/A |
| LJ 1020 | Not supported | N/A | Not Supported** | N/A |
| LJ 1022 | Yes | Use HP LaserJet 6L PCL5e driver included in the Windows OS | Not Supported | N/A |
| HP LaserJet Pro CP1025 | Not supported | N/A | Not Supported** | N/A |
| LJ 1100 | Yes | XP/2003: 4.3.2.201<br>Win2003-x64: use HP LaserJet 1100 driver included in the Windows OS | N/A | N/A |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| P1102W | Not supported | N/A | Not Supported** | N/A |
| LJ 1150 | Yes | XP/2003: 60.5.17.2<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/Vista/2008/Win7: HP-UPD |
| LJ 1160 | Yes | XP/2003: 61.063.461.42<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/Vista/2008/Win7: HP-UPD |
| LJ 1200 | Yes | XP/2003: 4.3.2.208<br>Win2003-x64: use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.3.2.172<br>Win2003-x64: use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| HP Color LaserJet CP1215 | Not supported | N/A | Not Supported** | N/A |
| LJ 1300 | Yes | XP/2003: 60.5.17.2<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.5.17.2<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| CM 1312 MFP | Yes | XP/2003/2003-x64: 61.72.53.0<br>Vista/2008/Win7: HP-UPD | N/A | Vista/2008/Win7: HP-UPD |
| LJ 1320 | Yes | XP/2003: 61.063.461.42<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 61.063.461.42<br>Win2003-x64: Use HP LaserJet 1200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| HP LaserJet Professional CM1410 Series | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| CLJ 1500 | No | N/A | XP/2003: 1.00.1913.0<br>Win2003-x64: Not Supported | N/A |
| P1505 | No | N/A | Not Supported** | N/A |
| P1505n | Yes | XP/2003/2003-x64: 61.063.351.00 | Not Supported | N/A |
| CP1510 series | Yes | XP/2003/2003-x64: 61.72.52.0 | Not Supported | XP/2003/2003-x64: 61.72.52.0 |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| HP Color LaserJet CP1518 | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| HP LaserJet Professional CP1520 Series | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| LJ M1522 MFP series | Yes | XP/2003/2003-x64: 61.072.467.21 | N/A | XP/2003/2003-x64: 61.072.467.21 |
| HP LaserJet Professional M1530 MFP Series | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| CLJ 1600 | Not supported | N/A | Not Supported** | N/A |
| P1600 | Not supported | N/A | Not Supported** | N/A |
| P1606 | Not supported | N/A | Not Supported** | N/A |
| LJ P2010/P2014 | Yes | XP/2003/2003-x64: 61.063.351.0 | N/A | N/A |
| LJ P2015 | Yes | XP/2003/2003-x64: 60.063.461.42<br>Vista: 61.063.351.0 | N/A | XP/2003/2003-x64: 60.063.461.42 |
| CP2020/2025 | Yes | XP/2003/2003-x64: 61.072.51.02<br>Vista: 61.063.351.0 | N/A | Use the UPD |
| LJ P2035 | Yes | Use the HP-UPD | Not Supported | N/A |
| LJ P2050/2055 | Yes | XP/2003/2003-x64: 61.82.242.0<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.82.242.0<br>Vista/2008/Win7: HP-UPD |
| LJ 2100 | Yes | XP/2003: 4.27.2100.410<br>Win2003-x64: use HP LaserJet 2100 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.0<br>Win2003-x64: use HP LaserJet 2100 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 2200 | Yes | XP/2003: 4.27.2200.410<br>Win2003-x64: use HP LaserJet 2200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 2.0<br>Win2003-x64: use HP LaserJet 2200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 2300 | Yes | XP/2003/2003-x64: 60.051.501.32<br>Vista: 61.063.461.42<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 60.051.501.32<br>Vista: 61.063.461.42<br>2008/Win7: HP-UPD |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| CM2320 | Yes | XP/2003/2003-x64: 61.072.42.00<br>Vista: 61.063.461.42<br>2008/Win7: HP-UPD | N/A | Use the UPD |
| LJ 2410/2420/ 2430 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Vista: 61.074.561.43<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.074.561.43<br>Vista: 61.074.561.43<br>2008/Win7: HP-UPD |
| CLJ 2500 | Yes | XP/2003: 4.20.2500.430<br>Win2003-x64: Use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 1.0.0.0<br>Win2003-x64: Use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| CLJ 2550 | Yes | XP/2003: 60.34.78.41<br>Win2003-x64: Use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: 60.063.461.42 | N/A | XP/2003: 60.34.78.41<br>Win2003-x64: Use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: 60.063.461.42 |
| CLJ 2600 | Not supported | N/A | Not Supported** | N/A |
| CLJ 2605 | Yes | XP/2003/2003-x64: 60.063.461.42 | N/A | XP/2003/2003-x64: 60.063.461.42 |
| CLJ 2700 | Yes | XP/2003/2003-x64: 60.061.447.00<br>Vista/2008/Win7: 60.063.461.42 | N/A | XP/2003/2003-x64: 60.061.447.00<br>Vista/2008/Win7: 60.063.461.42 |
| LJ M2727 mfp | Yes | XP/2003/2003-x64: 61.072.48.00b<br>Vista: 61.072.471.21<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.072.48.00b<br>Vista: 61.072.471.21<br>2008/Win7: HP-UPD |
| LJ 2820/ 2830/2840 | Yes | XP/2003: 60.034.41.00<br>Win2003-x64: Use LJ2400 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.034.41.00<br>Win2003-x64: Use LJ2400 driver<br>Vista/2008/Win7: HP-UPD |
| CLJ 3000 | Yes | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008/Win7: HP-UPD |
| LJ P3005 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Vista/2008/Win7: 61.074.561.43 | N/A | XP/2003/2003-x64: 61.074.561.43<br>Vista/2008/Win7: 61.074.561.43 |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| LJ 3015/ 3020/3030 | Yes | XP/2003: 60.5.72.21<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.5.72.21<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD |
| LJ M3027/ M3035mfp | Yes | XP/2003/2003-x64: 61.071.661.32<br>Vista: 61.082.61.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.32<br>Vista: 61.082.61.41<br>2008/Win7: HP-UPD |
| LJ 3050/3052/ 3055 | Yes | XP/2003: 60.051.564.021<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.051.1243.00<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD |
| LJ 3100 | Yes | Use HP LaserJet Series II driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | N/A |
| LJ 3150 | Yes | Use HP LaserJet Series II driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | N/A |
| LJ 3200 | Yes | XP/2003: 4.3.2.208<br>Win2003-x64: Use HP LaserJet 3200 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | N/A |
| LJ 3300mfp | Yes | XP/2003: 4.19.3300.3<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.13.3300.9<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD |
| LJ 3380 | Yes | XP/2003: 60.5.72.21<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.5.72.21<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD |
| LJ 3390/3392 | Yes | XP/2003: 60.051.564.021<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.051.564.021<br>Win2003-x64: Use HP LaserJet P3005 driver<br>Vista/2008/Win7: HP-UPD |
| CLJ 3500 | Yes | N/A | XP/2003: 61.063.461.41<br>Win2003-x64: Use the HP Color LaserJet 3550 driver | N/A |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| CP3505 | Yes | XP/2003/2003-x64/ Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64/ Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| CP3520/3525 | Yes | XP/2003/2003-x64: 61.082.41.00<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.082.41.00<br>Vista: 61.082.61.41<br>2008/Win7: HP-UPD |
| CM3530 | Yes | XP/2003/2003-x64: 61.082.41.00<br>Vista/2008/Win7: 61.093.01.27 | N/A | Use the UPD |
| CLJ 3550 | Yes | N/A | XP/2003/2003-x64: 60.32.42.00<br>Vista: 61.063.461.41 | N/A |
| CLJ 3600 | Yes | N/A | XP/2003/ 2003-x64: 61.082.61.41 | N/A |
| CLJ 3700 | Yes | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD |
| CLJ 3800 | Yes | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD |
| LJ 4000 | Yes | XP/2003: 4.27.4000.400<br>Win2003-x64: use HP LaserJet 4000 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.0<br>Win2003-x64: use HP LaserJet 4000 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| CLJ CP4005 | Yes | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD |
| HP LaserJet P4014 | Yes | XP/2003/2003-R2/Vista: 61.082.75.21<br>2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista: 61.082.75.21<br>2008/Win7/2008 R2: HP-UPD |
| CLJ CP4025 | Yes | XP/2003/2003-x64/ Vista/2008/Win7: 61.091.12.102 | N/A | HP-UPD |
| LJ 4015 | Yes | PCL5: XP/2003/2003-x64: 61.081.32.00<br>PCL6: XP/2003/2003-x64: 61.072.51.02<br>Vista/2008: 61.082.75.21<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.081.32.00<br>Vista/2008: 61.082.75.21<br>Win7: HP-UPD |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| LJ 4050 | Yes | XP/2003: 4.27.4050.410<br>Win2003-x64: use HP LaserJet 4050 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.0_1.30<br>Win2003-x64: use HP LaserJet 4050 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 4100/ 4101mfp | Yes | XP/2003: 4.27.4100.441<br>Win2003-x64: use HP LaserJet 4100 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 3.0.8<br>Win2003-x64: use HP LaserJet 4100 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 4200 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD |
| LJ 4240/4250 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.074.561.43<br>Vista/2008/Win7: HP-UPD |
| LJ 4300 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD |
| LJ 4345mfp | Yes | XP/2003/2003-x64: 61.071.661.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Win7: HP-UPD |
| LJ M4345mfp | Yes | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| LJ 4350 | Yes | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.074.561.43<br>Win7: HP-UPD |
| CLJ 4500 | Yes | XP/2003: 4.27.4500.400<br>Win2003-x64: use HP Color LaserJet 4500 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.1.1<br>Win2003-x64: use HP Color LaserJet 4500 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 4515 | Yes | PCL5: XP/2003/2003-x64/Vista: 61.081.32.00<br>2008/Win7: HP-UPD<br>PCL6: XP/2003/2003-x64: 61.072.51.02<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.081.32.00<br>2008/Win7: HP-UPD |
| CLJ CP4525 | Yes | Win7/Vista/XP/2003/ 2003-x64/2008: 61.091.12.102 | N/A | HP-UPD |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| HP Color LaserJet CM4540 MFP | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| CLJ 4550 | Yes | XP/2003: 4.27.4550.400<br>Win2003-x64: use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 5.00.2195.2307<br>Win2003-x64: use HP Color LaserJet 4550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| CLJ 4600 | Yes | PCL5: XP/2003: 4.27.4600.440<br>PCL6: XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD |
| CLJ 4650 | Yes | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 61.071.661.41<br>2008/Win7: HP-UPD |
| CLJ 4700 | Yes | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| CLJ 4730mfp | Yes | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| CLJ CM4730mfp | Yes | XP/2003/2003-x64: 61.082.61.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.082.61.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| LJ 5000 | Yes | XP/2003: 4.27.5000.400<br>Win2003-x64: use HP LaserJet 5000 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.0<br>Win2003-x64: use HP LaserJet 5000 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ M5025/ M5035 mfp | Yes | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| LJ 5100 | Yes | PCL6: XP/2003/ 2003-x64/Vista/2008: 61.074.561.43<br>Win7: HP-UPD<br>PCL5: XP/2003/2003-x64: Use the HP-UPD | N/A | XP/2003/2003-x64/ Vista/2008: 61.074.561.43<br>Win7: HP-UPD |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| LJ 5200/5200L | Yes | XP/2003/2003-x64/ Vista/2008: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64/ Vista/2008: 61.074.561.43<br>Win7: HP-UPD |
| CLJ CP5220 | Yes | Win7/Vista/XP/2003/ 2003-x64/2008: 1.1 | N/A | HP-UPD |
| HP Color LaserJet CP5520 Series | Yes | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD | N/A | XP/2003/2003-R2/Vista/ 2008/Win7/2008 R2: HP-UPD |
| LJ 5500 | Yes | PCL6: XP/2003/2003-x64/ Vista: 60.071.661.41 2008/Win7: HP-UPD<br>PCL5: XP/2003/ 2003-x64/2008/Win7: HP-UPD | N/A | XP/2003/2003-x64/Vista: 60.071.661.41<br>2008/Win7: HP-UPD |
| CLJ 5550 | Yes | PCL6: XP/2003/2003-x64 60.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 60.071.661.41<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| CP6015 | Yes | PCL6: XP/2003/2003-x64 61.081.41.02<br>Vista: 61.082.61.41<br>2008/Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.081.41.02<br>Vista: 61.082.61.41<br>2008/Win7: HP-UPD |
| CM6030/CM6040 | Yes | PCL6: XP/2003/2003-x64 61.081.41.02<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64: 61.081.41.02<br>Vista/2008/Win7: HP-UPD |
| LJ 8000 | Yes | XP/2003: 4.27.8000.441<br>Win2003-x64: use HP LaserJet 8000 driver included in the Windows OS | N/A | XP/2003: 4.0<br>Win2003-x64: use HP LaserJet 8000 driver included in the Windows OS<br>Vista/2008: HP-UPD |
| LJ 8100 | Yes | XP/2003: 4.27.8100.410<br>Win2003-x64: use HP LaserJet 8100 driver included in the Windows OS | N/A | XP/2003: 4.0<br>Win2003-x64: use HP LaserJet 8100 driver included in the Windows OS |
| LJ 8150 | Yes | XP/2003: 4.27.8150.410<br>Win2003-x64: use HP LaserJet 8150 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 2.0.5<br>Win2003-x64: use HP LaserJet 8150 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| CLJ 8500 | Yes | XP/2003: 1.0<br>Win2003-x64: use HP LaserJet 8500 driver included in the Windows OS | N/A | XP/2003: 4.01<br>Win2003-x64: use HP LaserJet 8500 driver included in the Windows OS |

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| CLJ 8550 | Yes | XP/2003: 4.27.8550.440<br>Win2003-x64: use HP Color LaserJet 8550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 4.27.8550.440<br>Win2003-x64: use HP Color LaserJet 8550 driver included in the Windows OS<br>Vista/2008/Win7: HP-UPD |
| LJ 9000/<br>LJ 9000mfp | Yes | PCL6: XP/2003/2003-x64/<br>Vista/2008: 61.074.561.43<br>Win7: HP-UPD<br>PCL5: XP/2003/2003-x64:<br>Use the HP-UPD | N/A | XP/2003/2003-x64/<br>Vista/2008: 61.074.561.44<br>Win7: HP-UPD |
| LJ 9040/9050 | Yes | XP/2003/2003-x64/<br>Vista/2008: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64/<br>Vista/2008: 61.074.561.43<br>Win7: HP-UPD |
| LJ 9040mfp/<br>9050mfp | Yes | XP/2003/2003-x64:<br>61.071.661.41<br>Vista/2008: 61.074.561.43<br>Win7: HP-UPD | N/A | XP/2003/2003-x64:<br>61.071.661.41<br>Vista/2008: 61.074.561.43<br>Win7: HP-UPD |
| LJ 9055mfp | Yes | PCL5 XP/2003:<br>60.33.176.32<br>PCL6 XP/2003:<br>60.33.189.21<br>Win2003-x64: use HP LaserJet 9040 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.33.104.43<br>Win2003-x64: use HP LaserJet 9040 driver<br>Vista/2008/Win7: HP-UPD |
| LJ 9065mfp | Yes | PCL5 XP/2003:<br>60.33.176.32<br>PCL6 XP/2003:<br>60.33.189.21<br>Win2003-x64: use HP LaserJet 9040 driver<br>Vista/2008/Win7: HP-UPD | N/A | XP/2003: 60.33.104.43<br>Win2003-x64: use HP LaserJet 9040 driver<br>Vista/2008/Win7: HP-UPD |
| CLJ 9500 | Yes | XP/2003/2003-x64/<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64/<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| CLJ 9500mfp | Yes | XP/2003/2003-x64/<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD | N/A | XP/2003/2003-x64/<br>Vista/2008: 61.082.61.41<br>Win7: HP-UPD |
| LJ 4, 5, 6 Family | Yes | XP/2003: 02.12.01<br>Win2003-x64/<br>Vista/2008/Win7:<br>Use driver included in the Windows OS | N/A | XP/2003: 4.0<br>Win2003-x64/<br>Vista/2008/Win7:<br>Use driver included in the Windows OS |

* Driver versions more current than the versions stated in this table are also supported.

** HP does not recommend installing these host based LaserJet drivers on the Citrix server, but these devices can be supported by using the Citrix UPD on the Citrix server with the HP host based driver installed on the client.

Print drivers for your product are available within the Windows 7 operating system. See the article, Product Support for Microsoft Windows 7, at: http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&taskId=120&prodSeriesId=3463669&prodTypeId=18972&objectID=c01856597

# HP color printers with Edgeline technology and supported driver versions

**Table 2:** Minimum levels of HP-supported drivers in the Citrix environment

| HP printer | Supported in Citrix environ-ment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| CM8050/8060 MFP | Yes | XP/2003/2003-x64: 61.073.43.00 | N/A | XP/2003/2003-x64: 61.073.43.00 |

* Driver versions more current than the versions stated in this table are also supported.

# Using the HP Universal Print Driver version 5.2 for Windows in Citrix environments

The HP Universal Print Driver (UPD) for Windows version 5.2, available for free from hp.com at http://www.hp.com/go/upd, is supported by HP in Citrix and Terminal Server environments. HP has tested the HP Universal Print PCL 5 driver, HP Universal Print PCL 6 driver, and the HP universal postscript emulation driver in Citrix environments.

## Traditional mode

The HP Universal Print Driver can be installed in static or traditional mode on the Citrix server and perform as a print driver for all compatible auto-created printers or redirected printers.

For auto-created printers, the HP Universal Print PCL 5 driver can be mapped to print to all PCL 5-capable HP client printers or the HP Universal Print postscript (PS) emulation driver to all postscript-capable HP client printers through driver mapping in the Citrix management tools. To install the HP Universal Print Driver in static or traditional mode, download the software from http://www.hp.com/go/upd and run install.exe from the command line on the server and then configure the mapping from within the Citrix Server. Or use Add Printer Wizard or Add Printer Driver Wizard. Go to http://www.hp.com/go/upd for more information and white papers on the HP UPD.

For Terminal Server 2003 SP1 configurations, the HP Universal Print Driver can be configured as the PCL or PS fallback driver when installed in static or traditional mode.

## Dynamic mode

### Installing UPD in dynamic mode on the clients

Installing and using UPD in dynamic mode on Citrix and Terminal Server clients, and using it as an auto-created printer in a Citrix or Terminal Services session is a supported configuration. However, there are a few things to be aware of.

- When a job is printed from within the Citrix or Terminal Services session, no dynamic mode UI is presented. The print job will automatically print to the last printer that was selected on the client.

- If the UPD dynamic mode installation is new and no printing was ever done, UPD dynamic mode will default to LPT1. If there is no printer connected to LPT1, the print job will fail.

If the user wants to change the physical printer that the job will go to, there are two options:

- HP UPD is installed on clients in dynamic mode, and the Citrix auto-create policy is configured so that the Citrix UPD is the driver that is mapped to the HP UPD on the client. This is the recommended configuration. These steps can be performed from within a Citrix session:
  - When the user selects Print from within an application, select Preferences.
  - When the Citrix UPD UI appears, select Local Driver.
  - The UPD dynamic mode UI will be displayed. The user can then select the desired printer.
  - When the UPD print preferences UI is displayed, the user can click cancel.

- If the HP UPD is installed as a driver on the Citrix or Terminal server and mapped to the dynamic mode UPD on the clients, the user must perform these steps prior to logging in to a Citrix session or published application:
  - Open the Printers folder and select the dynamic mode UPD printer.
  - Right click the printer and select Printing Preferences.
  - The UPD dynamic mode UI will be displayed. The user can then select the desired printer.
  - When the UPD print preferences UI is displayed, the user can click cancel.

### Installing UPD in dynamic mode on the Citrix server

Installation of the HP Universal Print Driver in dynamic mode on the Citrix server is not supported in a multi-user environment. The Windows operating system limits a print queue to one port at a time. Multiple users will compete for the single port bound to the HP Universal Print Driver queue if installed in dynamic mode.

## Running the Citrix StressPrinters test with the HP UPD using default settings gives erroneous results

Citrix Knowledge base article CTX109374 suggests that you use LPT1 as the Printer port name when running the StressPrinters test. This is also the default setting. However, using LPT1 will give erroneous results. The reason is that the HP UPD needs to make queries to the printer during the auto-creation process to obtain the printer's configuration. If an invalid printer port like LPT1 is selected, these queries will time out and fail. The indication is either exceptionally long auto-create times, and/or test failure. To get results that are accurate and reflect actual performance, use a valid auto-created port instead. These ports can be easily identified because the name is preceded by the string "CLIENT:".

# The difference between the Citrix and HP UPDs

The Citrix UPD for Citrix Presentation Server 4.0, 4.5, XenApp 5.0 or XenApp 6.0 works well for auto-created client printers and Microsoft Windows XP, or Windows Vista® clients. The Citrix UPD cannot be used for auto-created session printers, configured by a Citrix policy, that are network print shares connected at login. Discrete print drivers must be installed on the Citrix server for any session printer. The Citrix UPD also requires Windows 2000, XP, or Vista on the client. The Citrix UPD is not supported with thin clients that utilize embedded operating systems because the Citrix UPD works in conjunction with the Windows print driver installed on the client for communication of print settings and rendering of the print jobs locally.

The HP UPD works well for mapping to any HP PCL or Postscript client print driver for auto-created client printers. It works well for any client, including thin clients with embedded operating systems.

The Citrix UPD has the ability to provide all printer configurations and user settings from the client printer, such as print on both sides as default, to the auto-created printer within the Citrix user session. The HP UPD has the ability, if the client printer is a network printer, to communicate with the printer and determine its configuration, such as tray configuration. But the HP UPD cannot determine user settings of the client printers from the client. The auto-created printers using the HP UPD will have default print settings, such as print single-sided as default.

## HP and Citrix UPD recommendations

| | **Citrix UPD** | **HP UPD** |
|---|---|---|
| Citrix MetaFrame XP FR 1, 2, 3 | Available for Windows Clients only | Best choice for printing to any client |
| Citrix Presentation Server 3.0 | Available for Windows Clients only | Best choice for printing to any client |
| Citrix Presentation Server 4.0/4.5 | Best choice for Windows Clients | Best choice for non-Windows clients or thin clients |
| Citrix XenApp 5.0/6.0 | Best choice for Windows Clients | Best choice for non-Windows clients or thin clients |

## Known limitation of the UPD when used for auto-created printers or redirected printers with client printers that are directly attached

The UPD, outside of a Citrix environment, has the ability to configure itself according to the actual configuration of the printer, such as tray configuration, by communicating directly with the printer. Currently, version 5.1 of the UPD has the limitation that, when installed on the server and mapped for auto-created printers, it cannot communicate with the printer installed on the client if the client's printer is directly attached to the client machine, such as via USB. If the printer is networked, automatic configuration is supported. For directly attached printers on the client, such as USB-connected printers, the UPD PCL driver defaults to black and white, no extra trays, no device-specific paper handling, etc. The UPD PS driver defaults to color, no extra trays, no device-specific paper handling, etc.

**NOTE:** Printers that are attached to the client via network ports are not affected. The UPD, installed on the server, can communicate with client printers that are available on the network.

## Client printer settings not reflected in auto-created printers

This is a limitation of Citrix MetaFrame 3.0 and older versions. Driver settings, such as tray configuration, duplexer, printer memory, and quick sets are not read at auto-creation. Paper size and orientation are the only client settings that are read during auto-creation. The remaining settings are determined by the default settings of the driver installed on the server.

Citrix has provided this functionality in Presentation Server 4.0 and beyond by using the Citrix UPD for client printers. The Citrix server must be at least 4.0 and the client must be a Windows client (Windows 2000, XP, Vista) with at least ICA® version 9.0.

If Feature Release 1/Service Pack 1 or later is installed on a MetaFrame XP Server, go to the properties of the auto-created printer and configure the driver for features manually, then set the tray configuration, duplexer, and hard disk settings. The settings will be saved to the user's profile when the user logs out. Printer settings will be restored the next time the user logs in. This feature is available in environments running MetaFrame XP with Feature Release 1 and Service Pack 1 or greater.

# Business Inkjet printers and supported driver versions

The table below identifies the HP Business Inkjet printers and associated drivers that are supported in Citrix environments by HP. These printers and printer drivers have been tested by HP. A description of the issue resolutions and known product limitations is included in this section.

| HP printer | Supported in Citrix environment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| Deskjet 310/320/340 (Monochrome) | Not tested | Use OS driver | N/A | N/A |
| Deskjet 350C | Not tested | XP: Ver. 1.0 | N/A | N/A |
| Deskjet 450 | Yes | XP: Ver. 1.0<br>XP: Ver. 1.8 | N/A | N/A |
| Deskjet 460 | Yes | Ver. 1.1 | N/A | N/A |
| Deskjet 1000C | Not Supported | N/A | N/A | N/A |
| Deskjet 1100/1120 | Not tested | XP: Ver. 1.1 | N/A | N/A |
| Deskjet 1125C | Not tested | XP: 1120 driver | N/A | N/A |
| Deskjet 1220C | MetaFrame 1.8 only | Ver. 2.1 | N/A | Ver. 2.1 |
| Inkjet 2000C | Not tested | Ver. 3.1 light | N/A | N/A |
| Inkjet 2500C | Not tested | Ver. 3.1 light | N/A | N/A |
| CP 1160 | Yes | XP: Ver. 1.8 | N/A | N/A |
| CP 1700 | Yes | XP: Ver. 1.8 | N/A | N/A |
| BIJ 1000 | Yes | Ver. 1.0 2.233.10.0 | N/A | N/A |
| BIJ 1100d | Yes | Ver. 1.1 | N/A | N/A |
| BIJ 1200d | Yes | Ver. 1.0 | N/A | N/A |
| BIJ 2200 | Yes | PCL3 Ver. 1.4 | N/A | N/A |
| BIJ 2250 | Yes | PCL5 Ver. 1.4 | | PCL5/PS Ver. 1.4 |
| BIJ 2230 | Yes | PCL3 Ver. 1.0 | N/A | N/A |
| BIJ 2280 | Yes | PCL5 Ver. 1.0 | N/A | PCL5/PS Ver. 1.0 |
| BIJ 2300 | Yes | Ver. 1.0 | N/A | N/A |
| BIJ 2600 | Yes | PCL5 Ver. 1.0 | N/A | PCL5/PS Ver. 1.0 |
| BIJ 2800 | Yes | Ver. 1.0 | N/A | N/A |
| BIJ 3000 | Yes | PCL6/PCL5 Ver. 1.0 | N/A | PCL6/PCL5/PS Ver. 1.0 |
| Deskjet 9300 | Yes | PCL3 Ver. 1.0 | N/A | N/A |
| Deskjet 9600 Series | Yes | PCL3 Ver. 1.1 | N/A | N/A |
| Deskjet 9800 Series | Yes | PCL3 Ver. 1.0 | N/A | N/A |

* Driver versions more current than the versions stated in this table are also supported.

# HP Deskjet printers and supported driver versions

HP recognizes the need for small inexpensive printing solutions for Citrix environments and offers a wide range of compatible products to meet the needs of Citrix users. HP recommends the use of Business Inkjets over consumer Deskjets whenever possible in Citrix environments for the following reasons:

- Lower cost per page when compared to consumer Deskjets
- Faster print speeds in normal modes
- Robust networking capabilities, comparable to HP LaserJets
- Lower intervention rates with higher capacity paper trays and ink supplies
- Higher reliability and duty load
- More comprehensive testing in Citrix environments compared to consumer Deskjets

Many of these printers and printer drivers have not been tested by HP. While these printers and drivers are not directly supported by HP, most customers will be able to use them without issue.

# Using HP ink-based All-in-One and Photosmart printers

HP does not directly support the use of consumer ink-based All-in-One (AIO) and Photosmart products in Citrix environments. Customers who wish to use HP ink-based All-in-One and Photosmart printers in Citrix environments may use the associated Deskjet printer driver. Using an associated Deskjet driver will limit product use to printing; all other product features will be available on a walk-up basis (fax, scan, card readers, etc.) HP recommends downloading the 'basic features' or corporate drivers when using mapped drivers. HP All-in-One and Photosmart products that are leveraged from LIDIL based Deskjets are not supported. These products include the PSC and Officejet products leveraged from the Deskjet 3000 series.

| HP printer | Supported in Citrix environment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| Officejet 500/600 | Not tested | Use Deskjet 660 | N/A | N/A |
| Officejet Pro K550 series | Yes | PCL3 Ver. 1.0 | N/A | N/A |
| Officejet 700 | Not tested | Use Deskjet 690 | N/A | N/A |
| Officejet Pro K850 series | Yes | PCL3 Ver. 1.0 | N/A | N/A |
| Officejet 1150 | Not tested | Use Deskjet 850 | N/A | N/A |
| Officejet 1170/1175 | Not Supported | N/A | N/A | N/A |
| Officejet D Series | Not Tested | Use Business Ink cp 1160 | N/A | N/A |
| Officejet G Series | Not tested | Use Deskjet 970 | N/A | N/A |
| Officejet H470 | Yes | Ver. 1.0 | N/A | N/A |
| Officejet J4500/4640/4680 | Yes | Ver. 1.0 | N/A | N/A |
| Officejet J5700 | Yes | Ver. 1.0 | N/A | N/A |
| Officejet J6400 | Yes | Ver. 1.0 | N/A | N/A |
| Officejet K Series | Not tested | Use Deskjet 970 | N/A | N/A |
| Officejet Pro K5300 Series | Yes | Ver. 1.0 | N/A | N/A |

| HP printer | Supported in Citrix environment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| Officejet Pro K5400 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro K5700 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro K8600 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro L7300 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro L7500 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro L7600 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet Pro L7700 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet R Series | Not tested | Use Deskjet 895 | N/A | N/A |
| Officejet T Series | Not tested | Use Deskjet 895 | N/A | N/A |
| Officejet V Series | Not tested | Use Deskjet 970 | N/A | N/A |
| Officejet 4100 Series | Not Supported | N/A | N/A | N/A |
| Officejet 4200 Series | Not Supported | N/A | N/A | N/A |
| Officejet 5100 Series | Not Supported | N/A | N/A | N/A |
| Officejet 5500 Series | Not Supported | N/A | N/A | N/A |
| Officejet 5600 Series | Not Supported | N/A | N/A | N/A |
| Officejet 6000 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet 6100 Series | Not tested | Use Deskjet 5550 | N/A | N/A |
| Officejet 6200 Series | Not tested | Use Deskjet 5740 | N/A | N/A |
| Officejet 6300 Series | Not tested | Use Deskjet 5900 | N/A | N/A |
| Officejet 6500 Series | Yes | Ver. 1.0 | N/A | N/A |
| Officejet 7100 Series | Not tested | Use Business Ink cp 1160 | N/A | N/A |
| Officejet 7200 Series | Not tested | Use Deskjet 6540 | N/A | N/A |
| Officejet 7300 Series | Not tested | Use Deskjet 6540 | N/A | N/A |
| Officejet 7400 Series | Not tested | Use Deskjet 6540 | N/A | N/A |
| Officejet 7500 Series | Yes | 04.43.07.853 | N/A | N/A |
| Officejet Pro 8000 Series | Yes | 8580 | N/A | N/A |
| Officejet Pro 8500 All-in-One | Yes | 04.43.07.853 | N/A | N/A |
| Officejet 9100 Series | Yes | Ver. 1.0 | N/A | N/A |
| PSC 750, 950 | Not tested | Use Deskjet 970 | N/A | N/A |
| PSC 1100 Series | Not Supported | N/A | N/A | N/A |
| PSC 1200 Series | Not Supported | N/A | N/A | N/A |
| PSC 1300 Series | Not Supported | N/A | N/A | N/A |
| PSC 1400 Series | Not Supported | N/A | N/A | N/A |
| PSC 1500 Series | Not Supported | N/A | N/A | N/A |
| PSC 1600 Series | Not Supported | N/A | N/A | N/A |

| HP printer | Supported in Citrix environment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| PSC 2100 | Not tested | Use Deskjet 5550 | N/A | N/A |
| PSC 2170/2175 | Not tested | Use Deskjet 5550 | N/A | N/A |
| PSC 2200 | Not tested | Use Deskjet 5550 | N/A | N/A |
| PSC 2300 | Not tested | Use Deskjet 5740 | N/A | N/A |
| PSC 2400 | Not tested | Use Deskjet 5650 | N/A | N/A |
| PSC 2510 | Not tested | Use Deskjet 5650 | N/A | N/A |
| PSC 2600 | Not tested | Use Deskjet 6540 | N/A | N/A |
| PSC 2700 | Not tested | Use Deskjet 6540 | N/A | N/A |
| PS 2575 AIO | Not Supported | N/A | N/A | N/A |
| PS 3110 AIO | Not Supported | N/A | N/A | N/A |
| PS 3210 AIO | Not Supported | N/A | N/A | N/A |
| PS 3310 AIO | Not Supported | N/A | N/A | N/A |
| Photosmart C3100 All-in-One series | Not Supported | N/A | N/A | N/A |
| Photosmart C4100 All-in-One series | Not Supported | N/A | N/A | N/A |
| Photosmart C5100 All-in-One series | Not Supported | N/A | N/A | N/A |
| Photosmart C6100 All-in-One series | Not Supported | N/A | N/A | N/A |
| Photosmart C7100 All-in-One series | Not Supported | N/A | N/A | N/A |
| Deskjet F300 All-in-One series | Not Supported | N/A | N/A | N/A |
| PS P-1000 | Not tested | Use Deskjet 970Cxi | N/A | N/A |
| PS P-1100 | Not tested | Use Deskjet 970Cxi | N/A | N/A |
| PS 1115 | Not tested | Use Deskjet 990 | N/A | N/A |
| PS1215/1218 | Not tested | Use Deskjet 990 | N/A | N/A |
| PS 1315 | Not tested | Use Deskjet 990 | N/A | N/A |
| PS 7150 | Not tested | Use Deskjet 5550 | N/A | N/A |
| PS 7260 | Not Supported | N/A | Yes | N/A |
| PS 7300 | Not tested | Use Deskjet 5550 | N/A | N/A |
| PS 7400 | Not Supported | N/A | Yes | N/A |
| PS 7500 | Not Supported | ** | N/A | N/A |
| PS 7600 | Not tested | Use Deskjet 5650 | N/A | N/A |
| PS 7700 | Not tested | Use Deskjet 5650 | N/A | N/A |
| PS 7800 | Not tested | Use Deskjet 6540 | N/A | N/A |

| HP printer | Supported in Citrix environment | HP-supported drivers* | | |
|---|---|---|---|---|
| | | PCL | Host-based | PS |
| PS 7900 | Not Supported | ** | N/A | N/A |
| PS 8000 | Not tested | Use 5900 Commercial Slim Driver | N/A | N/A |
| PS 8100 | Not tested | Use Deskjet 6540 | N/A | N/A |
| PS 8200 | Not Supported | N/A | N/A | N/A |
| PS 8400 | Not Supported | ** | N/A | N/A |
| PS 8700 | Not Supported | ** | N/A | N/A |

* Driver versions more current than the versions stated in this table are also supported.

** 7550, 7900, 8400 and 8700 are PCL3 devices but use 3 cartridge print assemblies which are not supported by the Deskjet base drivers.

## HP Designjets and supported driver versions

| HP printer | Supported in Citrix environment HPGL2 | HP-supported drivers* | | |
|---|---|---|---|---|
| | | HPGL2 | Host-based (PCL3 GUI) | PS |
| DJ 70/90 | Not tested | N/A | Not tested | N/A |
| DJ 100/110 | Not tested | N/A | Not tested | N/A |
| DJ 30/130 | Yes | N/A | 6.03 | N/A |
| DJ 500 | Yes | N/A | 5.35<br>6.03 | N/A |
| DJ 500 + HPGL2 card / 510 | Yes | All | All | N/A |
| DJ 800 | Yes | 5.35<br>6.11 | N/A | 4.29 |
| DJ 5500 | Yes | 6.13 | N/A | 4.29 |
| DJ 1050/1055 | Yes | 4.66 | N/A | 4.29 |
| DJ 4000/4500/ 4020/4520 | Yes | All | N/A | All |
| DJ T1100/T1120/T610 /T620/T770/T1200 | Yes | All | N/A | All |
| DJ T2300 | Yes | All | N/A | All |
| DJ T7100 | Yes | All | N/A | All |

* Driver versions more current than the versions stated in this table are also supported.

# Resolved issues

## Process HPMUPxxx.BIN fails to shut down

In UPD versions prior to 5.1, there was a process named HPMUPxxx.BIN (HPMUP081.bin, HPMUP083.bin, HPMUP084.bin or HPMUP091.bin) fails to shut down during Citrix session logoff. This process has been removed in UPD 5.1.

## Auto-creation performance in Citrix

The UPD versions 4.1, 4.5, 4.7 and discrete print driver versions 61.071.xxx.xx and 61.081.xxx.xx have a known performance issue when auto creating printers at user login. The process msiexec.exe might consume CPU resources and slow auto-creation of the printer as well as other applications hosted on the Citrix server for a certain amount of time. UPD version 5.0 has the fix for this issue.

In general, the time it takes to auto-create a printer using the HP UPD or a discrete HP print driver version 60.xxx.xxx.xxx or 61.xxx.xx.xxx will be anywhere from 2-10 seconds, depending upon the performance and load of the print spooler and other processes on the Citrix server. This is due to the initialization of the HP UPD or discrete print driver.

When using the Citrix StressPrinters tool and testing the HP UPD, selecting the default LPT1: port from the StressPrinters tool will provide install times that are not accurate. The HP UPD attempts to communicate with the printer over the LPT1 port and will timeout after a long period of time. The true simulation of the HP UPD is to run StressPrinters from a Citrix server and select a Citrix redirected port that is connected to a live network printer.

## HKCU\Software\Hewlett-Packard registry hive increases in size in Citrix

Print driver versions 61.071.xxx.xx fail to clean up registry data written to the HKEY_CURRENT_USER\Software\Hewlett-Packard registry hive. Keys under this hive will grow over time. A new registry key is created each time a user logs onto a Citrix server for each printer auto-created. An example of such a key is HKEY_CURRENT_USER\Software\Hewlett-Packard\165b5934-15c4-4a84-c392-d044915211da where 165b5934-15c4-4a84-c392-d044915211da is a GUID (globally unique identifier). HPBIDIInfo or HPCUSTOMForms will be keys in the GUID hive. Newer version of the print driver, such as version 61.081.xxx.xx or the latest HP Universal Print Driver, has a fix for this issue.

## Memory leaks and memory corruption causing possible spooler crash, spooler hang, failed auto-creation, failed auto-created printer cleanup, and server performance degradation

**hpbmini.dll issue**

This issue occurs with 60.x.x.x and 4.x.x.x. print drivers containing hpbmini.dll version 1.0.0.18 or older. Version 1.0.0.19 and newer has the fix. The memory leaks and memory corruption possible with the 1.0.0.18 (or older) dll will not cause a spooler crash, but can degrade performance of the server.

Version 4.x.x.x print drivers have an issue unloading hpbmini.dll which will likely cause a spooler crash when the server has a heavy load of connected users.

**hpcdmc32.dll issue**

This issue occurs with 60.x.x.x and 4.x.x.x print drivers containing hpcdmc32.dll version 1.0.2.30 or older. Version 1.0.2.31 and newer has the fix. The most recent version of hpcdmc32.dll is 1.0.2.35. The memory leaks possible with the 1.0.2.30 (or older) dll will not cause a spooler crash but may cause performance degradation.

Other symptoms caused by the above components include failed auto-creation of printers and auto-created client printers not deleted when users log off.

**Solution**

To determine if these are issues affecting a server and for a workaround, rename hpbmini.dll and hpcdmc32.dll in the windows\system32\spool\drivers\w32sx86\3 directory and remove hpbmini.dll from DependentFiles registry entry in HKLM\SYSTEM\CurrentControlSet\Control\Print\Environments\Windows NT x86\Drivers\Version-3\<driver> hive.

For HP print drivers version 4.x.x.x, it is strongly recommended to upgrade to the 60.x.x.x or 61.x.x.x driver versions available on hp.com. If one is not available, then use the HP Universal Print Driver. For existing 60.x.x.x drivers with these suspected issues it is strongly recommended to upgrade to the latest driver available on hp.com.

## Auto-creation of HP printer fails with Citrix

This issue occurs when an HP PCL driver (version 4.3.x.x to 4.20.x.x.) is installed on the server. When Citrix auto creates using an older HP driver, the process halts and any remaining printers fail to auto-create. To resolve this situation, update the HP driver on the server to the version listed in the tables above.

## Client driver settings lost during auto-creation

This is a limitation of Citrix MetaFrame 3.0 and older versions. Driver settings, such as tray configuration, duplexer, printer memory, and quick sets are not read at auto-creation. Paper size and orientation are the only client settings that are read during auto-creation. The remaining settings are determined by the default settings of the driver installed on the server.

Citrix has provided this functionality in Presentation Server 4.0. The server must be 4.0 and the client must be a 32-bit Windows client with at least ICA version 9.0.

If Feature Release 1/Service Pack 1 or later is installed on a MetaFrame XP Server, go to the properties of the auto-created printer and configure the driver for features manually, then set the tray configuration, duplexer, and hard disk settings. The settings will be saved to the user's profile when the user logs out. Printer settings will be restored the next time the user logs in. This feature is available in environments running MetaFrame XP with Feature Release 1 and Service Pack 1 or greater.

## Inability to print with certain HP drivers in Citrix MetaFrame 1.8 SP3 or earlier

With any of the following HP print drivers: BIJ1100, DJ450, CP1700, DJ9600, DJ9300, CP1160, the user logs in for the first time and printing functions correctly. When the user logs off and logs back in again, printing is no longer functional.

Citrix has provided the fix in MetaFrame 1.8 Service Pack 4.

# Unresolved issues

## HP Deskjet printer drivers will not load under non-administrator privileges

HP does not recommend the use of "host-based" printers in Citrix environments. Host-based printers rely upon the bulk of the rendering to be done on the host machine by the host-based driver and are designed for direct-connect, non-networked environments. As a result, host-based print jobs can be considerably larger than PCL-based jobs, which is undesirable when printing over constrained bandwidth connections. An alternative is to use the Citrix Universal Print Driver or Universal Printing System to print to a host-based client printer.

# Microsoft issues

## HP printer with DOT4 port on client does not create a redirected printer in Terminal Server

This issue does not occur with Citrix, only with Terminal Server. If an HP printer is connected to a client with a USB DOT4 port, then no redirected printer is created when logging onto a Terminal Server. Microsoft has a workaround described in the knowledge base article 302361.

# Supported printing features

All printing features of the driver are supported in Terminal Server/Citrix environments with the exception of bi-directional communication to client printers. Bi-directional communication to networked printers is unaffected.

## Frequently asked questions

**Question:** Is my HP printer supported in a Citrix environment by HP?

Answer: Check the LaserJet, Business Inkjet, Designjet, Deskjet, and Ink-based All-in-One and Photosmart printer sections of this white paper to see if your printer is listed as supported.

**Question:** Is a certain HP print driver certified in Citrix?

Answer: Citrix does not certify print drivers. However, HP and Citrix do test print drivers and printers in Citrix Presentation Server 4.0/4.5, XenApp 5.0 and XenApp 6.0. To determine if a certain printer is supported, check the LaserJet, Business Inkjet, Deskjet, and Ink-based All-in-One and Photosmart printer sections of this white paper. All support for a printer and print driver is claimed by HP and provided by HP.

**Question:** How do I configure my Citrix server to map print drivers, use and configure the Citrix UPD, or configure and session network printers?

Answer: Consult the Citrix Advanced Concept Guide and other online documentation from citrix.com.

**Question:** Why do my auto-created printer settings not reflect the correct printer settings from my client printers?

Answer: Citrix Presentation Server 4.0/4.5, XenApp 5.0 and XenApp 6.0, and the Citrix UPD have the ability to read the local printer settings from the client. The server must be at least 4.0 and the client must be a 32-bit or x64 Windows client with at least ICA version 9.0.

**Question:** Can I use my All-in-One, MFP, or scanner connected to my client to scan to applications within my Citrix ICA session?

Answer: Yes. Citrix Presentation Server 4.0 /4.5, XenApp 5.0 or XenApp 6.0 with a 32-bit or x64 Windows client and ICA 9.0 support TWAIN devices directly connected to the client.

**Question:** Where can I download the Windows Server 2003 driver for Deskjet, PSC, Officejet, and Photosmart printers?

Answer: HP does not develop Microsoft Windows Server 2003 drivers for consumer based inkjet products. Microsoft recommends using XP drivers which should work without issue.

# Citrix-tested HP printers

Citrix tested the following HP printers and their associated 32-bit and 64-bit drivers with Citrix XenApp Server 6.0. Throughout the testing, no problems were encountered when running Citrix test cases with the HP printers and drivers listed for each test case.

| Printers tested | Software tested |
|---|---|
| HP Officejet Pro K5400<br>HP Officejet Pro L7680 All-in-One<br>HP Color LaserJet 4700<br>HP LaserJet P2035n<br>HP Color LaserJet CP3525n<br>HP LaserJet P2015dn | Citrix XenApp Server 6.0<br>Citrix Online plug-in, version 12.0<br>HP Universal, PCL, PS printers & 32-bit/64-bit drivers |

## Testing methodology for HP printers

Printer setup – Printers were connected to both client and server systems, and as stand-alone network printers using HP Jetdirect print server devices. Printers were connected to client and server systems using IP addresses and USB cables.

Note on hardware used – Varied client and server systems from numerous manufacturers were used throughout the testing process; the number of systems and configurations are outside the scope of this document.

Note on printer drivers used – The 32-bit and 64-bit printer driver versions listed are the driver versions that were available at time of testing. Newer driver versions may be available.

Note on description – This is a base description of the feature and what it does.

Note on test methodology – This is a basic summary of the testing that was performed on the feature. Actual testing is much more extensive and, therefore, beyond the scope of this document.

# Network print servers

## Description

Network print servers (not running Citrix XenApp Server) are servers with shared printers attached to them. Administrators add these shared printers into the Citrix Session Printers policy in order to make them available to all users when they connect to the server farm.

## Test methodology

HP printers were attached to the print server using a parallel cable, USB cable or TCP/IP port and connecting to the printer through Jetdirect. These printers were configured for multiple users. Drivers for the printers were downloaded from the HP Driver Support website.

A printer policy was then created for Session printers and a User filter created for the Session printer policy for domain users, allowing domain users logged on to the XenApp server farm to verify that the shared network printer was available in the client session, and that the client could print successfully.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | HP Color LaserJet 4700 PCL 5c (61.82.61.41) & HP Color LaserJet 4700 PS (61.82.61.41) |
| HP LaserJet P2035n | HP LaserJet P2035n XPS (2.0.0.59668) |
| HP Color LaserJet CP3525n | HP Color LaserJet CP3525 PCL 6 (61.82.61.41) & HP Color LaserJet CP3525 PCL6 (6.1.7600.16385) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |

## Known issues with network print server and HP printers and drivers

No issues were discovered when testing the Citrix XenApp Server Session Printers feature using the HP printers and drivers listed above.

# Printer policies

## Description

Policies are used to apply Citrix XenApp Server settings for client device mapping, for example, to specific users, clients, and servers. Printer policies are used for configuring settings such as auto-creation, printer property retention, print job routing, printer mapping, printer driver configuration, and session printers.

## Test methodology

An HP printer was attached to the client system using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system and drivers for the printers were downloaded from the HP Driver Support website.

The client system connected to the Citrix XenApp server farm. Each type of printer setting that is configurable by printer policies was checked to verify operability with the HP printers and drivers and to ensure that the client could print successfully.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | HP Color LaserJet 4700 PCL 5c (61.82.61.41) & HP Color LaserJet 4700 PS (61.82.61.41) |
| HP LaserJet P2035n | HP LaserJet P2035n XPS (2.0.0.59668) |
| HP Color LaserJet CP3525n | HP Color LaserJet CP3525 PCL 6 (61.82.61.41) & HP Color LaserJet CP3525 PCL6 (6.1.7600.16385) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |
| HP Officejet Pro K5400 | HP Officejet Pro K5400 Series (6.1.7600.16385) |
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with Citrix Printer policies and HP printers and drivers

No issues were discovered when testing the Citrix XenApp Server Printer policies using the HP printers and drivers listed above.

# Client printer properties

## Description

Client printer properties are the settings that control the configuration of printers installed on the client system. These settings are configured locally on the client's desktop. Some of the more common settings are propagated to the auto-created client printer in the user's session.

## Test methodology

An HP printer was attached to the client device using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system and drivers for the printers were downloaded from the HP Driver Support website.

Setting changes were made to the HP printer installed locally on the client system, and then the client system connected to the Citrix XenApp server farm. The settings were propagated and the client was able to print successfully.

| Printer model tested | Driver version tested |
|---|---|
| HP LaserJet P2035n | HP LaserJet P2035n XPS (2.0.0.59668) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |
| HP Officejet Pro K5400 | HP Officejet Pro K5400 Series (6.1.7600.16385) |
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with client printer properties and HP printers and drivers

No issues were discovered when testing the client printer properties using the HP printers and drivers listed above.

# Universal printer

## Description

Auto-creation of client printers requires drivers for client printers to be available on servers running Citrix XenApp Server. When you use universal printing you do not need to install native printer drivers in your server farm, the client printers are auto-created using Citrix Universal printing.

## Test methodology

An HP printer was attached to the client system using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system. Because printer drivers are not needed to test the Universal printer, only HP printers are tested with this feature.

The client system connected to the XenApp server farm, which verified that the client's locally attached HP printers were available in the user's session and that the client could print successfully to the client's locally attached HP printers.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | Citrix Universal Printer (1.0.0.1) Citrix XPS Universal Printer (1.0.0.1) |
| HP LaserJet P2035n | |
| HP Color LaserJet CP3525n | |
| HP LaserJet P2015dn | |
| HP Officejet Pro K5400 | |
| HP Officejet Pro L7680 All-in-One | |

## Known issues with Citrix Universal Printer

No issues were discovered when testing the Citrix Universal Printer using the HP printers listed above.

# Auto-created client printers

## Description

Auto-created client printers are printers that are connected to ports on users' Win16 and Win32 client devices, Windows CE, DOS, and Macintosh OS platforms

## Test methodology

An HP printer was attached to the client system using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system and drivers for the printers were downloaded from the HP Driver Support website.

The client system connected to the XenApp server farm, which verified that the client's locally attached HP printers were available in the user's session and that the client could print successfully to the client's locally attached HP printers.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | HP Color LaserJet 4700 PCL 5c (61.82.61.41) & HP Color LaserJet 4700 PS (61.82.61.41) |
| HP LaserJet P2035n | HP LaserJet P2035n XPS (2.0.0.59668) |
| HP Color LaserJet CP3525n | HP Color LaserJet CP3525 PCL 6 (61.82.61.41) & HP Color LaserJet CP3525 PCL6 (6.1.7600.16385) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |
| HP Officejet Pro K5400 | HP Officejet Pro K5400 Series (6.1.7600.16385) |
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with printer auto-creation and HP printers and drivers

No issues were discovered when testing auto-created client printers using the HP printers and drivers listed above.

# Printer driver compatibility

## Description

Some printer drivers can cause server problems when printing to client printers in the Citrix XenApp Server farm. Printing to a client printer with a problematic driver can result in a fatal system error on the server. Because of this, you might need to prevent the auto-creation of client printers that use specific printer drivers. The printer driver compatibility feature allows you to designate or prohibit drivers for use with client printers.

## Test methodology

An HP printer was attached to the client system using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system and drivers for the printers were downloaded from the HP Driver Support website.

The Printer driver mapping and compatibility policy was configured and enabled on the Citrix XenApp Server. The driver for the HP printer was configured to allow the auto-creation of the client printer using that particular HP driver. The client then connected to the Citrix XenApp Server farm and the auto-creation of the client printer was verified. The client printer was able to print successfully.

Subsequently, in the printer driver mapping and compatibility policy, the driver for the HP printer was configured to disallow the auto-creation of the client printer using that particular HP driver. The client then connected to the Citrix server farm and the client printer was not auto-created. There were no issues with preventing the HP printer from being auto-created.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | HP Color LaserJet 4700 PCL 5c (61.82.61.41) & HP Color LaserJet 4700 PS (61.82.61.41) |
| HP Color LaserJet CP3525n | HP Color LaserJet CP3525 PCL 6 (61.82.61.41) & HP Color LaserJet CP3525 PCL6 (6.1.7600.16385) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |
| HP Officejet Pro K5400 | HP Officejet Pro K5400 Series (6.1.7600.16385) |
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with printer driver compatibility and HP printers and drivers

No issues were discovered when testing the Citrix XenApp Server printer driver compatibility feature using the HP printers and drivers listed above.

# Client printer driver mapping

## Description

When using Citrix XenApp Server clients, you map printer drivers to identify printer drivers that have different names for the same printer on different Windows platforms. You need to use mapping if the printer drivers installed on Citrix XenApp Servers have names for client printers different from the drivers used on client systems.

## Test methodology

An HP printer was attached to the client system using a parallel cable, USB cable or TCP/IP port. The printer was installed on the client system, and drivers for the printers were downloaded from the HP Driver Support website and installed on the Citrix XenApp Server.

A printer driver with a different name than the HP driver installed on the server was installed on the client system. The client printer driver was mapped to the HP printer driver installed on the server. The client connected to the Citrix XenApp Server farm and the auto-creation of the client printer was verified. The client printer was able to print successfully.

| Printer model tested | Driver version tested |
|---|---|
| HP Color LaserJet 4700 | HP Color LaserJet 4700 PCL 5c (61.82.61.41) & HP Color LaserJet 4700 PS (61.82.61.41) |
| HP LaserJet P2035n | HP LaserJet P2035n XPS (2.0.0.59668) |
| HP Color LaserJet CP3525n | HP Color LaserJet CP3525 PCL 6 (61.82.61.41) & HP Color LaserJet CP3525 PCL6 (6.1.7600.16385) |
| HP LaserJet P2015dn | HP LaserJet P2015 Series PCL 5e (61.74.561.43) & HP LaserJet P2015 Series PCL 6 (61.74.561.43) & HP LaserJet P2015 Series PS (61.74.561.43) |
| HP Officejet Pro K5400 | HP Officejet Pro K5400 Series (6.1.7600.16385) |
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with client printer driver mapping and HP printers and drivers

No issues were discovered when testing client printer driver mapping with Citrix XenApp Server using the HP printers and drivers listed above.

# Citrix-tested HP Scanners/All-in-One devices

Citrix tested the following HP Scanners/All-in-One devices and their associated drivers with Citrix XenApp Server 6.0. Although these devices are multi-functional, Citrix only tested the scanning capability of the Scanners/All-in-One devices listed below. All other functionality of these devices was not tested by Citrix. Throughout the testing, no problems were encountered when running Citrix test cases with the HP Scanners/All-in-One devices and drivers listed for each test case.

| Scanner tested | Software tested |
|---|---|
| HP Officejet Pro L7680 All-in-One | Citrix XenApp Server 6.0<br>Citrix Online plug-in, version 12.0 |

## Testing methodology for HP All-in-One devices

Scanners/All-in-One setup – Scanners/All-in-One devices were connected to client using SCSI cables and USB cables.

Note on client systems used – Varied client and server systems from numerous manufacturers were used throughout the testing process; the number of systems and configurations are outside the scope of this document.

Note on Scanner/All-in-One drivers used – The Scanner/All-in-One driver versions listed are the driver versions that were available at time of testing. Newer driver versions may be available.

Note on description – This is a base description of the feature and what it does.

Note on test methodology – This is a basic summary of the testing that was performed on the feature. Actual testing is much more extensive and, therefore, beyond the scope of this document.

# TWAIN Redirection

## Description

Citrix XenApp Server can now redirect client-connected imaging devices, notably document scanners, from the client to the server. This allows users to control client-attached imaging devices from applications that run on the server.

## Test methodology

An HP Scanners/All-in-One device was attached to the client system using a SCSI cable or USB cable. The Scanner/All-in-One device was connected to the client system and drivers for the Scanner/All-in-One device were either downloaded from the HP Driver Support website or installed from the CD-ROM supplied with the Scanner/All-in-One device.

The client system connected to the XenApp server farm, which verified that the TWAIN compatible applications in a Citrix XenApp Server session could recognize and utilize the Scanner/All-in-One device for scanning within the TWAIN compliant application.

| Printer model tested | TWAIN driver version tested |
|---|---|
| HP Officejet Pro L7680 All-in-One | HP Officejet Pro L7600 Series (6.1.7600.16385) |

## Known issues with TWAIN Redirection and HP Scanners/All-in-One devices

No issues were discovered when testing TWAIN Redirection using the HP Scanners/All-in-One devices listed above.

## Planned future testing

HP LaserJet/Business Inkjet/Designjet/Deskjet printers and Scanner/All-in-One devices testing is planned to continue on the next release of Citrix XenApp Server and newer model HP LaserJet, Business Inkjet, Designjet, Deskjet printers and Scanner/All-in-One devices will be added to the test matrix.

## Feedback

To help us improve our documents, please provide feedback at http://h20219.www2.hp.com/ActiveAnswers/us/en/solutions/technical_tools_feedback.html.




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