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Security Advisory

HP Enterprise Printing Communication: Meltdown & Spectre CPU Vulnerabilities

Jan 17th, 2018 ([Revision History](#))

On January 3rd, 2018 Google's Project Zero and academic institutions announced vulnerabilities in common CPU platforms. The vulnerabilities impact Intel x86 processors and certain AMD and ARM processors.

The Spectre and Meltdown vulnerabilities affect microprocessors utilizing speculative execution and indirect branch prediction. It may allow unauthorized disclosure of information to an attacker with local user access via a side-channel analysis.

These vulnerabilities could allow a malicious process to read memory of other software processes. This would require installation of malicious code to perform a successful exploit.

The following security features mitigate loading untrusted or tampered code on HP devices:

- Digital signing of printer firmware and firmware updates
- Digital signing of printer solutions code
- HP SureStart and Secure Boot / ROM based code validation
- Whitelisting and Code Integrity Validation
- Runtime Intrusion Detection
- Run-time Code Integrity that ensures Executable Memory is Write-Protected

For additional information on these security features see the [References](#) section

The following HP print devices use x86 and ARM processors that are susceptible to these vulnerabilities. One or more of the above security features mitigate loading untrusted or tampered code on these devices.

- HP LaserJet Enterprise printers and multifunction printers
- HP LaserJet Enterprise pre-FutureSmart printers and multifunction printers
- HP LaserJet Pro printers and multifunction printers
- HP PageWide Enterprise printers and multifunction printers

- HP PageWide Pro printers and multifunction printers
- HP LaserJet Managed multifunction printers
- HP PageWide Managed printers and multifunction printers
- HP Digital Senders and Document Capture Workstations
- HP OfficeJet Pro printers
- HP Designjet Series printers
- HP PageWide XL Series printers
- HP HD / SD Pro Scanners
- HP Latex printers

For a complete device listing see [Appendix A](#).

HP Software Solutions

HP Software Solutions rely on their host servers and are not directly impacted by the CPU vulnerabilities. Patches or remediation recommendations should be followed from Microsoft® and other operating systems providers.

Recommended Actions

HP will evaluate implementation of code fixes from CPU and operating system vendors as they become available for HP printing device architectures.

The following actions further protect against installation of malicious code.

Note: Not all setting available on all devices

- Configure local administrator password (EWS)
- Disable Printer Updates
- Disable PJI Disk Access and Postscript Disk Access
- Disable NFS
- Disable FTP

Stay Informed

Subscribe to HP real-time security information: All HP products use a common centralized Security Bulletin process managed by HP's Product Security Response Team (PSRT). Subscribe to HP Security Bulletins by following these steps:

1. Go to <http://www.hp.com/go/support>.
2. Click **Get software and drivers**.
3. Find your product.

4. Scroll to the bottom of the page and under **Other support resources**, click **Sign up for driver, support & security alerts**.
5. Follow the onscreen prompts to sign up for alerts.

References

- Spectre Vulnerability - [CVE-2017-5753; CVE-2017-5715](#)
- Meltdown Vulnerability - [CVE-2017-5754](#)
- <https://spectreattack.com/>
- [HPI PC Security Bulletin](#)
- [HP SureStart, Whitelisting and Intrusion Detection security features](#)
- [HP LaserJet Pro - Embedded security features](#)

Appendix A

HP LaserJet Enterprise printers and multifunction printers HP PageWide Enterprise printers and multifunction printers HP Digital Senders and Document Capture Workstations	
HP Color LaserJet CM4540 MFP	HP LaserJet Enterprise M527
HP Color LaserJet CP5525	HP LaserJet Enterprise M604
HP Color LaserJet Enterprise Flow MFP M681	HP LaserJet Enterprise M605
HP Color LaserJet Enterprise Flow MFP M682	HP LaserJet Enterprise M606
HP Color LaserJet Enterprise M552	HP LaserJet Enterprise M607
HP Color LaserJet Enterprise M553	HP LaserJet Enterprise M608
HP Color LaserJet Enterprise M651	HP LaserJet Enterprise M609
HP Color LaserJet Enterprise M652	HP LaserJet Enterprise M806
HP Color LaserJet Enterprise M653	HP LaserJet Enterprise MFP M630
HP Color LaserJet Enterprise M750	HP LaserJet Enterprise MFP M631
HP Color LaserJet Enterprise MFP M577	HP LaserJet Enterprise MFP M632
HP Color LaserJet Enterprise MFP M681	HP LaserJet Enterprise MFP M633
HP Color LaserJet Enterprise MFP M682	HP LaserJet Enterprise MFP M725
HP Color LaserJet M680	HP Digital Sender Flow 8500 fn2 Doc Capture WS
HP LaserJet Enterprise 500 color MFP M575	HP OfficeJet Enterprise Color Flow MFP X585
HP LaserJet Enterprise 500 MFP M525	HP OfficeJet Enterprise Color MFP X585
HP LaserJet Enterprise 600 M601	HP OfficeJet Enterprise Color X555
HP LaserJet Enterprise 600 M602	HP PageWide Enterprise Color 765
HP LaserJet Enterprise 600 M603	HP PageWide Enterprise Color MFP 586
HP LaserJet Enterprise 700 color MFP M775 series	HP PageWide Enterprise Color MPF 780
HP LaserJet Enterprise 700 M712	HP PageWide Enterprise Color MPF 785
HP LaserJet Enterprise 800 color M855	HP PageWide Enterprise Color X556
HP LaserJet Enterprise 800 color MFP M880	HP LaserJet Enterprise Flow MFP M633
HP LaserJet Enterprise Color 500 M551 Series	HP LaserJet Enterprise M4555 MFP

HP LaserJet Enterprise printers and multifunction printers HP PageWide Enterprise printers and multifunction printers HP Digital Senders and Document Capture Workstations	
HP LaserJet Enterprise color flow MFP M575	HP LaserJet Enterprise M506
HP LaserJet Enterprise flow M830z MFP	HP Scanjet Enterprise 7000n
HP LaserJet Enterprise flow MFP M525	HP Scanjet Enterprise 8500 Doc Capture WS
HP LaserJet Enterprise Flow MFP M630	HP ScanJet Enterprise Flow N9120 Doc Scanner
HP LaserJet Enterprise Flow MFP M631	HP LaserJet Enterprise Flow MFP M632

HP LaserJet Enterprise pre-FutureSmart printers and multifunction printers	
HP Color LaserJet Enterprise CP4025	HP Color LaserJet Enterprise CP4525
HP Color LaserJet Enterprise CP4520	

HP LaserJet Managed multifunction printers	
HP PageWide Managed Color Flow MFP 586	HP PageWide Managed Color Flow MFP E58650
HP PageWide Managed Color MFP E58650	HP PageWide Managed Color Flow MFP E77660
HP PageWide Managed Color MFP E77650	HP PageWide Managed Color Flow MFP E77650
HP PageWide Managed Color E75160	HP PageWide Managed Color E55650
HP LaserJet Managed MFP E62555	HP LaserJet Managed MFP E62565
HP Color LaserJet Managed E65050	HP LaserJet Managed E60055
HP Color LaserJet Managed E65060	HP LaserJet Managed E60065
HP Color LaserJet Managed Flow MFP E67550	HP LaserJet Managed E60075
HP Color LaserJet Managed Flow MFP E67560	HP LaserJet Managed Flow MFP E62555
HP Color LaserJet Managed MFP E67550	HP LaserJet Managed Flow MFP E62565
HP Color LaserJet Managed MFP E67560	HP LaserJet Managed Flow MFP E62575
HP LaserJet Managed MFP E72525	HP Color LaserJet Managed MFP E77822
HP LaserJet Managed Flow MFP E72525	HP Color LaserJet Managed Flow MFP E77822
HP LaserJet Managed MFP E72530	HP Color LaserJet Managed MFP E77825
HP LaserJet Managed Flow MFP E72530	HP Color LaserJet Managed Flow MFP E77825
HP LaserJet Managed MFP E72535	HP Color LaserJet Managed MFP E77830
HP LaserJet Managed Flow MFP E72535	HP Color LaserJet Managed Flow MFP E77830
HP LaserJet Managed MFP E82540	HP Color LaserJet Managed MFP E87640
HP LaserJet Managed Flow MFP E82540	HP Color LaserJet Managed Flow MFP E87640
HP LaserJet Managed MFP E82550	HP Color LaserJet Managed MFP E87650
HP LaserJet Managed Flow MFP E82550	HP Color LaserJet Managed Flow MFP E87650
HP LaserJet Managed MFP E82560	HP Color LaserJet Managed MFP E87660
HP LaserJet Managed Flow MFP E82560	HP Color LaserJet Managed Flow MFP E87660

HP LaserJet Pro printers and multifunction printers	
HP LaserJet M15 Printer	HP Color LaserJet Pro MFP M277dw
HP LaserJet M16 Printer	HP LaserJet Pro M225rdn
HP LaserJet MFP M28 Printer	HP LaserJet Pro M226dn
HP LaserJet MFP M29 Printer	HP LaserJet Pro M201
HP Color LaserJet Pro M154	HP LaserJet Pro M202
HP Color LaserJet Pro M254	HP Color LaserJet Pro MFP M176
HP Color LaserJet Pro MFP M180	HP Color LaserJet Pro MFP M177
HP Color LaserJet Pro MFP M181	HP LaserJet Pro MFP M125
HP Color LaserJet Pro MFP M280	HP LaserJet Pro MFP M126
HP Color LaserJet Pro MFP M281	HP LaserJet Pro MFP M127
HP LaserJet Pro MFP M26	HP LaserJet Pro MFP M128
HP LaserJet Pro M12 Printer	HP LaserJet Pro M701 Printer
HP LaserJet Pro M102	HP LaserJet Pro M706 Printer
HP LaserJet Pro M104	HP Color LaserJet Pro MFP M476
HP LaserJet Ultra M106	HP LaserJet Pro M435 MFP
HP LaserJet Pro MFP M130	HP LaserJet Pro M521 MFP
HP LaserJet Pro MFP M132	HP LaserJet Pro 500 color MFP M570
HP LaserJet Ultra MFP M134	HP LaserJet Pro 400 M401
HP LaserJet Pro M203dn	HP LaserJet Pro 400 MFP M425
HP LaserJet Ultra M206dn	HP LaserJet Pro 200 color MFP M276
HP LaserJet Pro MFP M227sdn	HP LaserJet Pro 200 color Printer M251
HP LaserJet Ultra MFP M230sdn	HP LaserJet 100 color MFP M175
HP LaserJet Pro M501n	HP LaserJet 300 color M351
HP Color LaserJet Pro M452dn	HP LaserJet 400 color M451
HP Color LaserJet Pro MFP M377dw	LaserJet Pro 300 Color MFP M375
HP Color LaserJet Pro MFP M477fdn	LaserJet Pro 400 Color MFP M475
HP LaserJet Pro M402dn	HP TopShot LaserJet Pro M275 MFP
HP LaserJet Pro M403dw	HP LaserJet Pro P1102
HP LaserJet Pro MFP M427dw	HP LaserJet Pro CP1025
HP LaserJet Pro MFP M426fdw	HP LaserJet Professional M1136 MFP
HP Color LaserJet Pro M252n	HP LaserJet Pro CM1415 MFP
HP Color LaserJet Pro MFP M274n	HP LaserJet Pro CP1525

HP PageWide Pro printers and multifunction printers HP PageWide Managed printers, HP OfficeJet Pro printers	
HP PageWide Pro 750	HP PageWide Pro 552 Printer
HP PageWide Managed P75050	HP PageWide Managed P55250
HP PageWide Pro MFP 772	HP PageWide Pro 577 MFP
HP PageWide Managed MFP P77740	HP PageWide MFP P57750
HP PageWide Managed MFP P77750	HP PageWide Pro 577 MFP
HP PageWide Managed MFP P77760	HP OfficeJet Pro 8210
HP PageWide Pro 477 MFP	HP OfficeJet Pro 8740
HP PageWide 377d MFP	HP OfficeJet Pro 8730
HP PageWide Pro 452 Printer	HP OfficeJet Pro 8732M
HP PageWide 352d Printer	HP DesignJet T730
HP PageWide Pro 452 Printer	HP Designjet T830 MFP
HP OfficeJet Pro 7740 Wide Format All-in-One	HP OfficeJet Pro 7720 Wide Format All-in-One
HP OfficeJet Pro 7730 Wide Format All-in-One	

HP Designjet Series Printers, PageWide XL Series Printers HP Latex Printers, HP HD / SD Pro Scanners	
HP Designjet T3500 Printer	PageWide XL 8000
HP Designjet T1700 Printer	HP Latex 560 Printer
HP Designjet T730 Printer	HP Latex 570 Printer
HP Designjet 7830 Printer	HP Latex 1500 Printer
PageWide XL4000/4500	HP Latex 3100 Printer
PageWide XL 5000	HP Latex 3500 Printer
HP Latex 3200 Printer	HP HD Pro 42 in Scanner Printer
HP Latex 3600 Printer	HP SD Pro 42 in Scanner Printer

Revision History

Revision	Date	Reason
1.3	17- January - 2018	Added HP Color LaserJet Enterprise CP4520 Added PageWide XL4000/4500 Added PageWide XL 5000 Added PageWide XL 8000 Removed the following devices: HP Color LaserJet 3000 HP Color LaserJet 3800 HP Color LaserJet 4700 HP Color LaserJet 4730 MFP HP Color LaserJet 5550 HP Color LaserJet 9500 MFP HP Color LaserJet CM4730 MFP HP Color LaserJet CM6040 MFP

		<p> HP Color LaserJet CP3505 HP Color LaserJet CP3525 HP Color LaserJet CP4005 HP Color LaserJet CP6015 HP LaserJet 2400 Printer series HP LaserJet 4345 MFP HP LaserJet 4350 HP LaserJet 5200L HP LaserJet 5200N HP LaserJet 9040 HP LaserJet 9040 MFP HP LaserJet 9050 HP LaserJet 9050 MFP HP LaserJet CM3530 MFP HP LaserJet Enterprise P3015 HP LaserJet M3027 MFP HP LaserJet M3035 MFP HP LaserJet M4345 MFP HP LaserJet M5025 MFP HP LaserJet M5035 MFP HP LaserJet M9040 MFP HP LaserJet M9050 MFP HP LaserJet P3005 HP LaserJet P4014 HP LaserJet P4015 HP 9200c Digital Sender HP 9250c Digital Sender HP Designjet T7200 Printer HP Designjet T2500 Printer HP Designjet T1500 Printer HP Designjet T920 Printer HP Designjet T1530 Printer HP Designjet T2530 Printer HP Designjet Z6200 Printer HP Designjet D5800 Printer HP PageWide XL Printer Series HP Designjet T930 Printer HP Designjet T2300 Printer HP Designjet T1300 Printer HP Designjet T795 Printer HP Designjet T790 Printer HP Designjet T1700dr Printer HP Designjet T520 Printer HP Designjet T120 Printer HP Designjet Z3200 Printer HP Designjet Z5200 Printer HP Designjet Z5400 Printer HP Designjet Z5600 PS Printer HP Designjet Z2600 Printer HP Designjet Z6800 Printer HP Designjet Z6600 Printer </p>
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1.2	16 – January- 2018	Added Recommended Actions Section Removed PageWide XL 8000/5000/4500/4000 Printers Added PageWide XL Printer Series
1.1	11 - January - 2018	Initial Version

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