Technical brief

Secure your printer from bootup to shutdown

HP Pro embedded print security features

The latest generation of HP Pro printing devices offer three key technologies designed to thwart attackers' efforts. These embedded security features are included with the HP OfficeJet Pro 8730/8740, PageWide Pro 400/500 series, and LaserJet Pro M254, M281, and M400/M500 series.

Secure boot
HP boot up code is a set of boot instructions used to load fundamental hardware components and initiate firmware. Secure boot works behind the scenes when your printer powers on— helping to safeguard it from attacks. Secure boot validates the integrity of the boot code at every boot cycle by ensuring the code is HP-signed and genuine. If the code has been compromised, the device is placed in recovery mode with limited functionality until HP genuine code can be reinstalled.

Firmware integrity validation
Like a PC's operating system, firmware coordinates hardware functions, runs the control panel, determines what features are available when printing, scanning, or emailing, and provides network security. Compromised firmware could open your device and network to attack. All firmware updates are validated so only authentic, known-good HP code—digitally signed by HP—is loaded onto the device. During the device startup process, if the code signature is not validated, the device reboots to a secure recovery state and waits for a valid firmware update. Notification of invalid firmware code is displayed via a control panel message.

Run-time code integrity
This feature helps protect devices while they are operational and connected to the network— right when most attacks occur. Run-time code integrity prevents intruders from introducing malicious code while the printer is running. All run-time code memory is write-protected and all data memory is rendered non-executable.

Manage printer security settings
IT managers can use HP JetAdvantage Security Manager to assess and, if necessary, remediate device security settings—across the fleet—to comply with pre-established company security policies.[1]

Learn more: hp.com/go/printersthatprotect

[1] HP JetAdvantage Security Manager must be purchased separately. To learn more, please visit hp.com/go/securitymanager.

How does it work?

The embedded security features address three primary steps in the cycle of an HP Pro device.

HP JetAdvantage Security Manager completes the check cycle.

Manage security settings

HP JetAdvantage Security Manager
Checks and fixes any affected device security settings across the fleet.

Protect memory

Run-time code integrity
Prevents intruders from introducing malicious code into memory during operation.

Check boot code

Secure boot
Ensures that only HP-signed, genuine boot code is run at startup. If the code is compromised, the device is placed in recovery mode.

Check firmware

Firmware integrity validation
Validates the firmware as genuine HP code at device startup. If an anomaly is detected, the device reboots to a secure recovery state.

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4AA6-4973EEW, November 2017, Rev. 2