

# HP Device Manager 5.0 Release (5.0.0.35437)



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## Overview

This document describes the release of HP Device Manager 5.0.

HP Device Manager (HPDM) is an enterprise-class application for managing and administrating thin client devices on large- and small-scale networks. The system consists of the following major components:

- **HPDM Server**—The central management service, which monitors all state and controls all device management activities.
- **HPDM Gateway**—The software component that links the HPDM Server and HPDM Agents on each thin client.
- **HPDM Master Repository Controller**—The software component that manages the software payloads and package content in the Master Repository and synchronizes that content to other child repositories as requested by the HPDM Server.
- **HPDM HTTPS Repository**—The software component that provides the ability to set up an HPDM repository using the HTTPS protocol.
- **HPDM Console**—The software component that is the primary GUI for administrators, allowing the inventory and management of devices and other administrative activities.
- **HPDM Console Web Bridge**— This component provides access to HPDM Console content through a web browser.
- **HPDM Configuration Center**—The graphical application used to configure settings of various HPDM components.
- **HPDM Agent**—The software component installed on each device to enable device management capabilities.

For more detailed instructions on how to use HP Device Manager, see the [\*HP Device Manager Administrator Guide\*](#).

## Component version information

This release provides the following versions of these components:

Component	Version
HPDM installer	5.0.0.35437
HPDM Server Installer	5.0.3620.35437
HPDM Gateway for Windows® Installer	5.0.3630.34720
HPDM Master Repository Controller Installer	5.0.3680.34204
HPDM HTTPS Repository Installer	5.0.3690.35147
HPDM Console Installer	5.0.3610.35437
HPDM Console Web Bridge Installer	5.0.3700.34467
HPDM Configuration Center Installer	5.0.3710.35112
HPDM Agent	
• Windows 10 IoT Enterprise (64-bit)	5.0.3669.35424
• Windows Embedded Standard 7P (64-bit)	5.0.3669.35424
• Windows Embedded Standard 7E (32-bit)	5.0.3660.35424
• HP Thin Client Conversion Suite (64-bit)	5.0.3673.35424
• HP Thin Client Conversion Suite (32-bit)	5.0.3672.35424
• HP ThinPro 7	5.0.3674.35424
• HP ThinPro 6	5.0.3671.35424
• HP ThinPro 5	5.0.3670.35424

## Third-party software version information

This release includes the following versions of third-party software:

Component	Version
Apache HTTP Server	2.4.39
PHP	7.3.5
OpenSSL	1.1.0j
OpenJDK	11.0.3
PostgreSQL	10.4.1

## New features in HPDM 5.0

- New support for the HP mt45 mobile thin client.
- The new GUI and structured HPDM Console
  - A new homepage
  - New reorganized mainframe with functionality tabs
  - Support for multiple monitors with the ability to dock and undock tabs
  - Allows customizing the layout of Console
  - Allow organizing templates with folders
- Supports using web browser to access HPDM Console
- The new experience of HPDM installation:
  - Separates the configuration process from the installation process
  - Handsfree initialization across components on the first start
  - All components have their own standalone installers
  - Centralized configuration
- Support rule to folders and compliance status
- Improves device property visibility
  - Supports dynamic properties for devices
  - Update timely to server after change
- Changes all HPDM components from 32-bit to 64-bit
- Upgrades Java Runtime Environment from version 8 to version 11
- Adds a unified and robust file transfer resume mechanism for FTP, FTPS, SFTP and HTTPS
- Supports the new license system for Windows PC Converter
- Ability to purge old devices and tasks automatically
- Adds new privilege to set maximum device limit for task execution
- Adds an option to discover devices from the local network of HPDM Gateway
- Adds a tool for ThinPro port check
- Upgrades the third-party software to the latest for vulnerability fixes

## Issues fixed in HPDM 5.0

- Fixed an issue where first contact rules cannot be triggered by new devices after HPDM Server reboots

## Known issues

- Occasionally an error dialog will display when opening the **\_Manage dynamic properties** template while the HPDM Server is busy handling **\_Get Asset** task reports. The error dialog will not block any processing and can be ignored.
- On ThinPro 7.1, after applying screensaver settings via **\_Apply Settings**, the profile captured from this device cannot be deployed. Also, the profile cannot be restored after imaging even the Retain Profile option is enabled. As an interim solution, HP will provide a **File & Registry** template and instructions to allow the device profile to be retained.
- Backup PostgreSQL database can fail on 4.7.9 and above versions when processing audit log due to a PostgreSQL service memory usage issue. This issue prevents the upgrade to 5.0. As an interim solution, HP will provide a tool and instructions to allow backup with a certain level of data loss.
- Due to the ThinPro 5.2 OpenSSL limitation, HPDM Agent for ThinPro 5.2 does not support TLS1.2. However, HPDM Gateway only enables TLS1.2 for TLS connection by default. To manage HPDM Agent for ThinPro 5.2, please enable the “SSL/TLS 1.0 Support” option of HPDM Gateway. You can find this option in the Advanced Options of the HPDM Gateway page of HPDM Configuration Center.
- ThinPro 7.1 introduces a new dynamic display management architecture that does not support remote editing of the display settings configuration of a device.
- Failure to capture or deploy files via the HTTPS protocol on ThinPro 5.x due to security exposure. HP Device Manager will automatically disable support for TLSv1.0 and TLSv1.1 connections to the HPDM HTTPS repository, requiring usage of TLS 1.2 or greater. ThinPro 5.x does not support TLS protocol 1.2 or greater. To capture or deploy files over HTTPS on ThinPro 5.x, please modify the configuration of the HPDM HTTPS repository to enable TLS 1.0 support.

- The image file cannot be imported successfully by HTTPS protocol when the file size is greater than the free space size of the volume that HPDM HTTPS Repository is installed onto and the repository is located on another volume that has enough free space.
- Capture Image does not support resume upload. Capture Image might fail due to customer network stability issues and because the FTPS agent transfer protocol does not support TLS session resumption on data connections. If you are using FTP servers which support it, please disable this option. For example, on a FileZilla Server choose General settings -> FTP over TLS settings -> "Require TLS session resumption on data connection when using PROT P" SHOULD NOT be checked.
- Enabling the Universal Write Filter (UWF) task returns a false success when the UWF module isn't installed on the device side. If the original write filter status is disabled, the HP Write Filter will be enabled. If the original write filter status is set to HP Write Filter enabled, this task won't change the write filter status.
- Remotely installing Windows Security Updates can fail without logging the reason because Microsoft did not include all explanations for silent installation failure in a standard output form.
- Using HTTPS to deploy an HP ThinPro 5.2 image is not supported, although using HTTPS to capture an HP ThinPro 5.2 image is supported.
- When capturing or deploying images on the HP mt42 mobile thin client, a BSOD may occur after the imaging process. The BSOD does not impact the imaging process, and the system will restart automatically, clearing the BSOD.
- If an HPDM repository is configured to use HTTPS only, and an Update Agent task or Deploy Files subtask (in a File and Registry task) utilizing that repository is sent to a device that has HPDM Agent version 4.7 SP2 or older, the task is falsely reported as successful. The workaround is to update the device's HPDM Agent using a different protocol before sending it any tasks that utilize HTTPS.
- Cached image-capturing over wireless networking is not supported for HP ThinPro 5.2, 6, or 7. You must use a wired connection to prepare and capture the image.
- The payload of customized File and Registry templates will be removed from repositories if the Deploy Files subtask is removed from the customized template while sending a task which relies on the customized template. This issue can be avoided by not modifying template content while sending tasks.
- Devices may disappear from the device table during task execution. The devices can be displayed again by refreshing the device table or switching to another device folder and then reverting to the original view.
- The Deploy Profile task does not finish when the profile has a large file attached.
- The privileges of a Windows Embedded Standard 7 image's Administrator account change to the same privileges of the User account after capturing an image if the Administrator account has never been logged in and the Administrator password has been remotely changed via HPDM.
- Some FTP servers do not support Unicode. In this case, you must set the proper system language settings for all components to ensure file names on these FTP servers readable.
- If a localized character set other than UTF-Latin-1 (Western Europe) is used in DHCP tags, such as grouping information, the information is shown as unrecognizable characters in HPDM.
- If a localized character set other than UTF-Latin-1 (Western Europe) is used in LDAP, the information is shown as unrecognizable characters in HPDM.
- On HP ThinPro devices, network settings can be set only for network card eth0. If eth0 is disabled or does not exist, the task to apply network settings (such as changing the hostname and other network information) will fail.
- When deploying device settings and configurations captured using HP Easy Tools, the target devices must have EWF disabled and be signed in as Administrator. This is because HPDM calls HP Easy Tools to apply the changes (a requirement of HP Easy Tools).

## System requirements

### HPDM Server requirements

Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
Third-party software	OpenJDK 11.0.3 (bundled with installer) One of the following database management systems (DBMS): Microsoft® SQL Server 2016 or later PostgreSQL 10.4.1 (bundled with installer)
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 1 GB RAM 2 GB free disk space

### HPDM Gateway requirements

Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 1 GB RAM 2 GB free disk space

### HPDM Master Repository Controller requirements

Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 1GB RAM 4 GB free disk space <b>NOTE:</b> The above hardware is the minimum required for the Master Repository. If there will be a large number of imaging or file-copying operations, then HP recommends using a more powerful system with additional free disk space.
Protocol	HTTPS, FTP, FTPS, SFTP, or SMB
Recommended third-party FTP servers	Apache HTTP Server (An embedded version of Apache HTTP Server is bundled with the installer.) FileZilla Microsoft Internet Information Server (IIS) freeSSHd

### HPDM HTTPS Repository requirements

Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores

2 GB RAM  
2 GB free disk space  
7200 RPM disk

**NOTE:** The above hardware is the minimum required for HPDM Embedded HTTPS Server. If there will be a large number of imaging or file transfer-operations, then HP recommends using a more powerful system with additional free disk space.

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Protocol	HTTPS
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## HPDM Console requirements

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Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 Windows 10
Third-party software	OpenJDK 11.0.3 (bundled with installer)
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 1 GB RAM 1 GB free disk space

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## HPDM Console Web Bridge requirements

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Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 1 GB RAM 2 GB free disk space

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## HPDM Configuration Center requirements

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Component	Requirements
Operating system	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 Windows 10
Hardware	Intel® compatible 64-bit processor supporting 2 or more CPU cores 2 GB RAM (For 1 Console instance and Console Web Bridge server. Add 1 GB for each additional Console) 1 GB free disk space

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## HPDM Agent requirements

HPDM provides full support for all HP thin clients within EOL (end-of-life) + 3 years and partial support for all HP thin clients within EOL + 5 years. Each thin client should have a minimum of 10 MB of free disk space.

See the following matrix. Full support (F) means that all existing and new features in HPDM 5.0 are supported.

Thin client model	Windows 10 IoT Enterprise (64-bit)	Windows Embedded Standard 7P (64-bit)	Windows Embedded Standard 7E (32-bit)	HP ThinPro 7	HP ThinPro 6	HP ThinPro 5
t730	F	F		F	F	F
t630	F		F	F	F	
t628	F		F	F	F	
t620/t620 PLUS	F	F	F	F	F	F
t530	F		F	F	F	
t520	F	F	F	F	F	F
t430	F			F	F	
t420			F	F	F	F
t240				F		
mt45	F			F		
mt44	F					
mt43	F					
mt42	F		F			
mt31	F			F		
mt21	F			F	F	
mt20	F			F	F	

## Network requirements

Component	Requirements
Network	<p>HPDM supports only IPv4 networks.</p> <p>HPDM can image thin clients using either PXE or non-PXE (preferred) methods. If PXE imaging is desired, make sure that there are no other PXE services running on the network.</p> <p>If you are using an ISC DHCP server, it must be running at least version 3.0.</p>

## Port requirements

See the *HP Device Manager Administrator Guide – Port Usage* section for a list of standard and custom ports required.



# Installation procedure

## Server-side Components

The server-side components of the system are installed using the HP Device Manager installer (`HP_Device_Manager-revision.exe`). Starting from HPDM 5.0, the HP Device Manager installer is composed of Device Manager Component installers. Each component has its own standalone installer, and the HP Device Manager installer is the global application that installs all HPDM components.

The HP Device Manager installer is composed of the following Device Manager Component installers:

- HPDM Server installer
- HPDM Gateway installer
- HPDM Master Repository Controller installer
- HPDM HTTPS Repository installer
- HPDM Console installer
- HPDM Console Web Bridge installer
- HPDM Configuration Center installer

There are two setup types: Complete Setup and Custom Setup.

### Complete Setup:

Install all server-side components.

The user doesn't need to configure anything during the installation and the user can use most of HPDM functions after the installation is finished, such as update agent, capture/deploy files etc.

The following are the default settings for complete setup:

1. HTTPS Repository is installed as the default repository server, and a random user and password are created during installation.
2. A clean PostgreSQL database is created and initialized for HPDM Server if there is no database for the HPDM. A random password is created for the root user during initializing database, and the root user must change this random password at first logon.
3. HPDM Server uses the local HTTPS Repository as its master repository and imports its randomly created user and password to database automatically.
4. The check box of "Launch HPDM Configuration Center" is unchecked after installation.

### Custom Setup:

Select which components to install.

The following are the default settings for custom setup:

1. A clean PostgreSQL database is created and initialized for HPDM Server if there is no database for the HPDM. A random password is created for the root user when the database is initialized. If the HPDM Console is installed on the same machine with HPDM Server, the root user must change the random password at first logon. If they aren't installed on the same machine, the user must first reset the password of root user via HPDM Configuration Center, and then login the HPDM Console with the new password.
2. HTTPS Repository is installed with HPDM Master Repository Controller, and a random user and password are created during installation. If the HPDM Server is installed on the same machine with HPDM Master Repository Controller, the HPDM Server uses the local HTTPS Repository as its master repository and imports its randomly created user and password to database automatically. If they aren't installed on the same machine, the user must reset the HTTPS Repository user name and password via HPDM Configuration Center and configure the repository settings via HPDM Console.
3. The check box of "Launch HPDM Configuration Center" is checked after installation.

### Silent Installation:

Silently install a server-side component with command-line parameter combinations.

The Device Manager Component installers only support silent installation. There is no user interface for the Device Manager Component installers.

Command line options must be specified when running the Device Manager Component installer. Each different component will have different command-line options as seen in the below examples:

- HPDM Server

```
ComponentInstallerFileName /hide_progress /v"INSTALLDIR="C:\Program Files\HP\HP Device Manager\" START=1"
```

Note: START: Starts HPDM service or not after installation. 1 means start, 0 means not start. The default value is 1.

- HPDM HTTPS Repository

```
ComponentInstallerFileName /hide_progress /v"PORT=443 INSTALLDIR="C:\Program Files\HP\HP Device Manager\" "
```

- Other Components

```
ComponentInstallerFileName /hide_progress /v"INSTALLDIR="C:\Program Files\HP\HP Device Manager\" "
```

- Uninstall

For all components, the silent uninstall command is the same as below:

```
ComponentInstallerFileName /hide_progress /v"SILENT=1"
```

Please note, the double quotation in the above examples is necessary.

Only the HP Device Manager Installer is released on the HP website. The user can get the Device Manager Component installers after installing the HP Device Manager installer. All Device Manager Component installers save to the "Location to save Files" folder path that you chose during installing HP Device Manger. By default, the location is "C:\SWSetup\HP Device Manager 5.0\".

A result log file like "C:\SWSetup\HP Device Manager 5.0\log\2019\_05\_01.log" will be generated after silent installation, and the user can check the log file if the installation failed.

NOTE: Please check whether the Microsoft Visual C++ 2015 Redistributable (x64) is installed or not on the target machine before installing a component with a Device Manager Component installer. If it isn't installed, please install it first. The installer of this redistributable is included in HP Device Manager installer. It saves in the same folder path of the Device Manager Component installers its filename is VC\_redist.x64.exe.

If the user wants to configure HPDM Console, HPDM Gateway or HPDM HTTPS Repository which is installed by the Device Manager Component installer, the user must install the HPDM Configuration Center separately.

## HPDM Agent

HP thin clients will ship with an HPDM Agent preinstalled. To update HPDM Agent, from HPDM Console, send an **Update Agent** task to all thin clients.

## Imaging notes

### Imaging support matrix

The following matrix shows which operating systems and HP thin clients are supported for each imaging method.

Operating system and thin client models	File-based capture <sup>1</sup>	Disk-based capture	File-based deployment <sup>1</sup>	Disk-based deployment	PXE deployment
<b>Windows 10 IoT Enterprise (64-bit)</b> t730, t630, t628, t620/t620 PLUS, t530, t520, t430, mt45, mt44, mt43, mt42, mt31, mt21, mt20	✓		✓		✓ <sup>2</sup>
<b>Windows Embedded Standard 7 (64-bit)<sup>3</sup></b> t730, t620/t620 PLUS, t520	✓		✓		✓ <sup>2</sup>
<b>Windows Embedded Standard 7 (32-bit)<sup>3</sup></b> t630, t628, t620/t620 PLUS, t530, t520, t420, mt42	✓		✓	✓	✓ <sup>2</sup>
<b>HP ThinPro 7</b> t730, t630, t628, t620/t620 PLUS, t530, t520, t430, t420, t240, mt45, mt31, mt21, mt20		✓		✓	✓ <sup>2</sup>
<b>HP ThinPro 6</b> t730, t630, t628, t620/t620 PLUS, t530, t520, t430, t420, mt21, mt20		✓		✓	✓ <sup>2</sup>
<b>HP ThinPro 5</b> t730, t620/t620 PLUS, t520, t420		✓		✓	✓ <sup>2</sup>

<sup>1</sup> File-based imaging is the current method used by HPDM for Windows imaging. The original imaging method used by HPDM in version 4.4.2 and prior was disk-based imaging.

<sup>2</sup> PXE deployment is supported only for the following HP thin client models: t730, t630, t628, t620/t620 PLUS, t530, t520, t420. PXE capture is not supported in HPDM.

<sup>3</sup> Drivers will be missing when deploying a Windows Embedded Standard 7 image captured from a different HP thin client.

### Preserved settings during imaging

**Source device**—The device from which the image will be captured.

**Target device**—The device to which the captured image will be deployed.

#### Capture Image

Operating system	Preserved settings
Windows 10 IoT Enterprise Windows Embedded Standard 7	All settings from the source device are preserved on both the source device and the captured image except hostname, network settings, domain settings, and Write Filter status.
HP ThinPro	All settings in ThinPro profile (so for 7.1 no display settings) from the source device are preserved on both the source device and the captured image, except hostname and network settings.

**Note:** For Windows operating systems, if the source thin client was joined to a domain prior to a **\_Capture Image** task, then domain membership will be lost after cloning the image. It is recommended to remove the source device from any domain prior to this task. There is also a known issue where the group policy that controls the domain password complexity will affect local user accounts, resulting in the user requirement to change the password to meet more strict criteria.

#### Deploy Image

Operating system	Preserved settings
Windows 10 IoT Enterprise Windows Embedded Standard 7	<ul style="list-style-type: none"> <li>• Write filter status</li> <li>• Hostname</li> <li>• Network settings</li> <li>• Terminal Service license</li> <li>• Windows activation license (select operating systems only)</li> </ul>
HP ThinPro	<ul style="list-style-type: none"> <li>• Hostname</li> <li>• Network settings</li> </ul>

## Checks before imaging

The following matrix describes which items are checked before imaging in HPDM 5.0.

<b>Operating system type</b>	<b>BIOS family</b>	<b>Flash size</b>	<b>Hardware architecture</b>
<b>Windows</b> (file-based imaging)	✓	✓ <sup>1</sup>	
<b>Windows</b> (disk-based imaging)		✓	✓
<b>HP ThinPro</b>		✓	✓

<sup>1</sup> For file-based imaging, check the partition size instead of the flash size.

## License

All the license information of open source software used in HPDM can be found in the HPDM installation directory at `Doc\licenses`.

Portions of HPDM are licensed under the terms of the GNU Public License version 2 or the GNU Lesser Public License version 2.1.

Source code for these components may be found at [ftp.hp.com/pub/device\\_manager](ftp.hp.com/pub/device_manager) or by contacting HP support.

## For more information

To read more about HP Device Manager, go to <http://www.hp.com/go/hpdm>.

### Sign up for updates

[hp.com/go/getupdated](http://hp.com/go/getupdated)

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