

Dell Hybrid Client

Version 1.x Conversion Guide



Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Introduction

Dell Hybrid Client is a desktop solution by Dell that follows the Software-as-a-Service (SaaS) model of software delivery. It provides a hybrid operating environment that enables you to access virtual, cloud, or local applications and resources seamlessly. It encompasses the cloud and storage aggregation for maintaining security and simplicity.

You must use a management software to configure, operate, and update devices that are powered by Dell Hybrid Client, thereby eliminating the need for IT support to visit the physical devices. You can manage the devices by using Wyse Management Suite Pro 3.1 or later. Wyse Management Suite offers process automation and helps lower costs for large deployments of devices that are powered by Dell Hybrid Client. Using secure HTTPS-based communication and Active Directory authentication for role-based administration, Wyse Management Suite keeps your devices up to date. The Wyse Management Suite mobile application enables administrators to view critical alerts, notifications on the dashboard, and send real-time command.

This guide contains instructions to convert the Dell Wyse 5070 devices running Windows 10 IoT Enterprise LTSB, Windows 10 IoT Enterprise LTSC, ThinLinux 2.x and ThinOS 8.6 to Dell Hybrid Client using Wyse Management Suite Pro 3.1 or later. This guide also provides information to convert the Dell OptiPlex 7070 Ultra systems running Ubuntu 18.04 and Windows 10 to Dell Hybrid Client using Wyse Management Suite Pro 3.1 or later. The target audience for this guide is enterprise customers with administrator privileges.

Supported platforms for Dell Hybrid Client conversion

Table 1. Supported platforms and configurations

Platform	Configuration			Operating System
	Processor	Memory	Storage	
Wyse 5070	Intel Celeron Dual Core	4 GB and higher capacity RAM	16 GB or higher capacity SSD or eMMC	ThinLinux 2.x and ThinOS 8.6
	Intel Pentium Quad Core			
Wyse 5070 Extended	Intel Pentium Quad Core	4 GB and higher capacity RAM	32 GB eMMC and 64 GB SSD	Windows 10 IoT Enterprise LTSB and Windows 10 IoT Enterprise LTSC
Wyse 5070	Intel Celeron Dual Core		64 GB SSD	
	Intel Pentium Quad Core	4 GB and higher capacity RAM	64 GB and 128 GB SSD	
Wyse 5070 Extended	Intel Pentium Quad Core		128 GB and higher capacity SSD or HDD	Ubuntu 18.04 and Windows 10
OptiPlex 7070 Ultra	8th Generation Intel Core i3/i5/i7			

Topics:

- Supported management software

Supported management software

Table 2. Supported management software

Supported environment	
Management software	Wyse Management Suite
Edition	Pro
Version	3.1 and later

Dell Wyse 5070 Conversion

Prerequisites

- If the Wyse 5070 device running either Windows 10 or ThinLinux 2.x does not have the latest boot agent which is equal or later than 4.0.8, download it from the <https://www.dell.com/support>.
- If the Wyse 5070 device running ThinOS, ensure that you have upgraded to the latest version (Maintenance Release 8 and later). For more information about how to update ThinOS firmware, see the Wyse Management Suite 3.1 Administrator's guide.
- If you are converting Windows 10 IoT Enterprise devices, download the Dell Hybrid Client image, DHC_CONVERSION_5070.exe from the <https://www.dell.com/support>.
- If you are converting ThinLinux 2.x or ThinOS 8.6 devices, download the Dell Hybrid Client image, DHC_CONVERSION_5070_16GB.exe from the <https://www.dell.com/support>.
- Ensure that you use Wyse Management Suite Pro 3.1 or later version for thin clients in addition to the Dell Hybrid Client license.
- Ensure that the number of Hybrid Client licenses is equal or more than the number of devices that need to be converted to Dell Hybrid Client. The Dell Hybrid Client licenses can be imported into Wyse Management Suite.
- If Wyse Management Suite is set up on a public cloud and you want to register the conversion image to a public cloud, the on-premise repository should be set up and configured locally. For more information about this feature, see the Dell Wyse Management Suite Administrator's Guide at <https://www.dell.com/support>.

About this task

The process of converting Windows 10 IoT Enterprise LTSB, Windows 10 IoT Enterprise LTSC, ThinLinux 2.x and ThinOS 8.6 to Dell Hybrid Client removes the contents and partition structure of the existing drive. The conversion process preserves only the certificates and settings relevant to register the device to Wyse Management Suite. All other data, certificates and configuration settings are not preserved. After the conversion to Dell Hybrid Client, it is not possible to convert the device back to the original state. However, you can restore the original operating system using the Dell Wyse USB Imaging Tool 3.4 or later from the <https://www.dell.com/support>. The existing data and settings are not restored.

Steps

1. Register the Dell Hybrid client image to Wyse Management Suite. For details about how to register, see [Adding Hybrid Client images to repository](#).
 - If the storage size of the device is more than 16 GB, use DHC_CONVERSION_5070.exe.
 - If the storage size of the device is 16 GB, use DHC_CONVERSION_5070_16GB.exe.
2. Create the Dell Hybrid Client image policy. For details on how to create Hybrid Client image policy, see [Creating Hybrid Client image policies](#).
3. Convert the device to Dell Hybrid Client. For details on how to schedule an image, see [Scheduling the image policy](#).
 - The device receives an image update notification. The boot agent downloads the image from the Wyse Management Suite repository and installs the Dell Hybrid Client image by internally triggering the Dell Recovery Tool. After the imaging is completed, the device boots to Dell Hybrid Client.
 - Dell Client Agent registers the device, as Dell Hybrid Client to Wyse Management Suite.
 - Wyse Management Suite manages the device as a Dell Hybrid Client device.

Topics:

- [Adding Dell Hybrid Client images to repository](#)
- [Creating Hybrid Client image policies](#)
- [Scheduling the image policy](#)

Adding Dell Hybrid Client images to repository

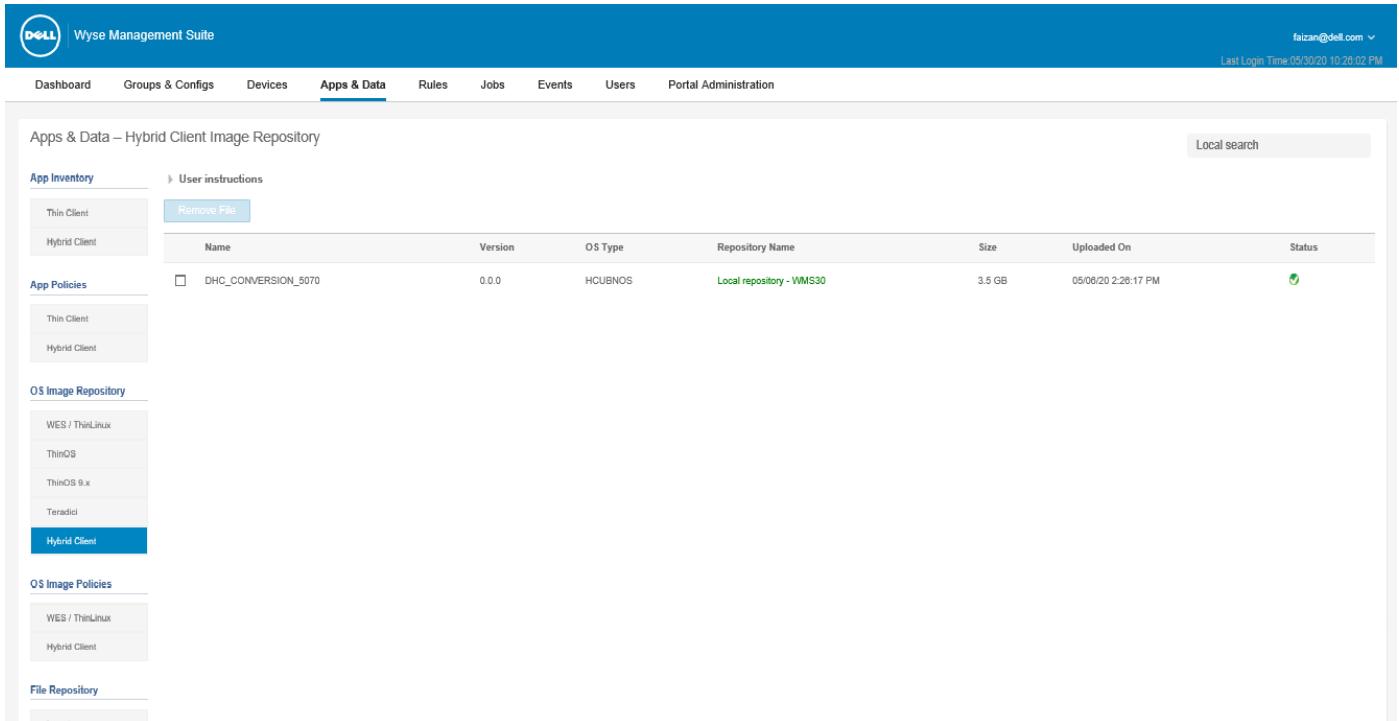
Steps

1. Copy the Dell Hybrid Client conversion image to the repository location or the operating system images folder using Wyse Management Suite.

NOTE: Dell Technologies recommends to copy the image file to the local system and then copy the file to Wyse Management Suite repository location. Wyse Management Suite extracts the files from the zipped folder and uploads the files to the repository location or operating system images folder.

The image is added to the repository.

2. Go to **Apps & Data > OS Image Repository > Hybrid Client** to view the saved image.



The screenshot shows the Wyse Management Suite dashboard with the 'Apps & Data' tab selected. On the left, a sidebar lists categories: App Inventory, App Policies, OS Image Repository, OS Image Policies, and File Repository. Under 'OS Image Repository', the 'Hybrid Client' option is selected and highlighted in blue. The main content area displays a table of saved images. The table has columns: Name, Version, OS Type, Repository Name, Size, Uploaded On, and Status. One entry is shown: 'DHC_CONVERSION_5070' with Version '0.0.0', OS Type 'HCUBNOS', Repository Name 'Local repository - WMS30', Size '3.5 GB', Uploaded On '05/06/20 2:28:17 PM', and Status 'OK' (indicated by a green checkmark).

Figure 1. Adding Dell Hybrid Client images to repository

Creating Hybrid Client image policies

Steps

1. Go to **Apps & Data**, click **Hybrid Client** under **OS Image Policies**.
 2. Click **Add Policy** and go to **Edit Hybrid Client Policy** tab.
 3. Enter the **Policy name** and select a group from the drop-down menu of the **Group** tab.
 4. Select the operating system type from the drop-down menu of the **OS Type** tab.
 5. Select an operating system subtype filter from the drop-down menu of the **OS Subtype Filter** tab.
- NOTE:** If you want to deploy an image to a specific operating system or platform, select either **OS Subtype Filter** or **Platform Filter**.
6. Select an image file from the drop-down menu of the **OS image** tab.
 7. Select **Force this version** from the drop-down menu of the **Rule** tab.
 8. Select one of the following option from the drop-down menu of the **Apply Policy Automatically** tab:

- **Do not apply automatically**—The image policy is not applied automatically to a device registered with Wyse Management Suite.
 - **Apply the policy to new devices**—The image policy is applied to a new device registered with Wyse Management Suite.
9. Click **Save**.

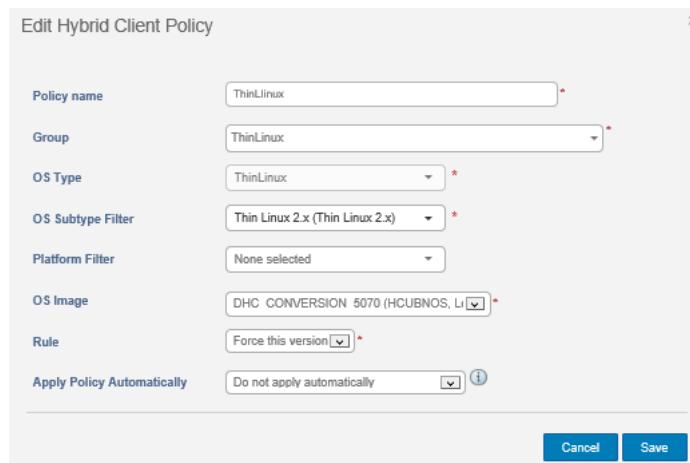


Figure 2. Creating Hybrid Client image policies

Scheduling the image policy

Steps

1. Go to **Jobs** and click the **Schedule Image Policy** tab.
The **Image Update Job** tab is displayed.
2. Select a policy from the drop down menu of the **Policy** tab.
3. Enter the job description on the **Description** tab.
4. Select the date or time from the drop down list of the **Run** tab as following:
 - **Effective**— Enter the start and end date
 - **Start between**— Enter the start and end time
 - **On day(s)**— Select the days of the week
5. Click **Preview** to view details of the scheduled job.
6. Click **Schedule** to initiate the job.

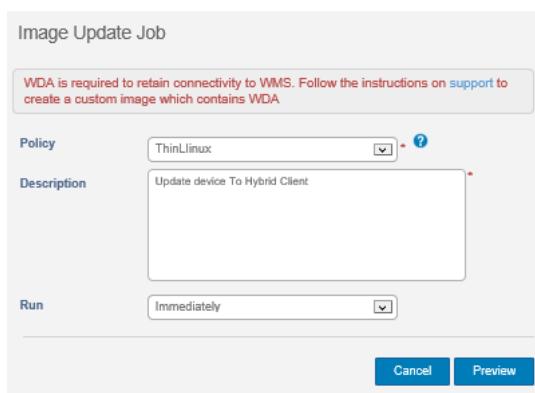


Figure 3. Schedule a job

Dell OptiPlex 7070 Ultra Conversion

Prerequisites

- Ensure that you have configured the USB bootable drive with the ISO image.
 1. Go to <https://www.dell.com/support> and search for OptiPlex 7070 Ultra device product page or the Dell Hybrid Client product page.
 2. Click **Drivers and Downloads** and download the zip file under Dell Hybrid Client – Conversion image for 7070 Optiplex Ultra.
 3. Extract the ISO file from the zip file.
 4. Create a USB bootable media using one of the following methods:
 - If using Windows, do the following:
 - a. Download and install the OS Recovery tool from <https://www.dell.com/support/home/en-in/drivers/osiso/recoverytool>.
 - b. Open the Dell OS Recovery Tool and select the **SWITCH TO ADVANCED RECOVERY** option.
 - c. Under **Select an OS** Image, browse to the ISO file and open.
 - d. Click **NEXT**.
 - e. Plug in a USB drive and select the USB drive on the screen.
 - f. Click **BURN OS**.
 - If using Linux, you can follow the steps mentioned in <https://www.dell.com/support/article/en-in/sln301761/how-to-use-the-dell-hosted-recovery-image-of-linux>.
 - You can also use other Third party tools to prepare a bootable USB drive with the ISO.
- Ensure that the number of Hybrid Client licenses is more than the number of devices to be converted to Dell Hybrid Client. The Dell Hybrid Client licenses can be imported into Wyse Management Suite.

About this task

The process of converting Ubuntu and Windows 10 to Dell Hybrid Client does not preserve any data, certificates or configuration settings from the original operating system. However, you can restore the original operating system using the OS Recovery Tool from the <https://www.dell.com/support>. The existing data and settings are not restored.

Steps

1. Go to **BIOS setup > Secure Boot** and uncheck **Secure Boot Enable**.
2. Go to **BIOS setup > System Configuration** and select **SATA Operation** as AHCI.
3. Plug in the bootable USB drive into the device and boot the device to USB drive.
4. Select **restore entire hard drive** option on the Dell recovery screen and continue.

 **NOTE:** Select a drive, if device has multiple drives available.

The device boots into Dell Hybrid Client when the installation is completed. The device registers to Wyse Management Suite by the auto discovery method. Alternatively, you can register the device manually to Wyse Management Suite using the Dell Client Agent user interface.

For information about how to use the Dell Client Agent window to manually register the device to Wyse Management Suite, see the *Dell Hybrid Client Administrator's Guide* at <https://www.dell.com/support>.

Frequently asked questions

The FAQs mentioned in this section are applicable to Wyse 5070 devices with 16 GB storage capacity.

1. Why is the 16 GB image required separately?

The existing Dell Hybrid Client 1.0 image when deployed to a 16 GB eMMC, provides a free space of approximately 1.9 GB or less. This amount of space is not sufficient to install your local applications or store your local files, or cache requirements.

2. How do I create additional free space on my USB drive?

Uninstall or delete applications and files that are not in use.

3. Which are the default VDI applications available on Wyse 5070 devices with 16 GB storage?

By default, no VDI applications are preinstalled in the Dell Hybrid Client image for Wyse 5070 devices with 16 GB storage. The following VDI applications are available as Dell-signed add-on packages:

- Citrix Workspace App
- VMWare View Horizon client
- Zoom Client

4. What is the amount of free space available after the conversion process?

The amount of free space available after the conversion process is around 4.5 GB.

5. Is there a separate guide provided for 16 GB kit?

There is no separate guide provided for the 16 GB kit.

i **NOTE:** Ensure that you deploy the correct size image based on the device storage size.

6. What happens if there is a network failure or an interruption during the conversion process?

If there is a network failure or an interruption during the conversion process, the device gets corrupted. The following steps restores the device to its original state:

- a. Unregister and delete the device from Wyse Management Suite.
- b. The device can be imaged with the conversion image using USB Imaging Tool 3.4 and later. This applies only when DHC_CONVERSION_5070.exe or DHC_CONVERSION_5070_16GB.exe is downloaded.
i **NOTE:** For information about how to use USB Imaging Tool, see the *Dell Wyse USB Imaging Tool v3.4 User's Guide* that is available on the Wyse 5070 manuals page at www.dell.com/support.
- c. Cancel the existing **Image Conversion Job** from Wyse Management Suite.
- d. Device registers to Wyse Management Suite by the auto discovery method. However, you must register the device manually using the Dell Client Agent user interface to Wyse Management Suite. The Dell Hybrid Client license is used after the device is registered. For more information on how to register the device manually, see the USB Imaging Tool 3.4 User's Guide at <https://www.dell.com/support>.

7. What changes are made on a 16 GB device to provide free space?

The following are the modules that are deleted as they are not part of the minimal installation of Ubuntu along with other related icon and png files:

- Aisleriot
- Baobab
- Branding-Ubuntu
- Cheese
- deja-dup
- example-content
- gir1.2-rb-3.0:amd64
- gir1.2-totem-1.0:amd64
- gnome-calendar
- gnome-mahjongg
- gnome-mines

- gnome-sudoku
- gnome-todo
- gnome-todo-common
- gnome-video-effects
- guile-2.0-libs
- hyphen-en-us
- libavahi-ui-gtk3-0
- libgnome-games-support-1-3
- libgnome-games-support-common
- libgnome-todo
- libmessaging-menu0
- libminiupnpc10
- libnatpmp1
- librhythmbox-core10
- libtotem0
- mythes-en-us
- python3-uno
- remmina
- remmina-common
- remmina-plugin-rdp
- remmina-plugin-secret
- remmina-plugin-vnc
- rhythmbox
- rhythmbox-data
- rhythmbox-plugin-alternative-toolbar
- rhythmbox-plugins
- Shotwell
- shotwell-common
- simple-scan
- citrix-client
- thunderbird
- thunderbird-gnome-support
- thunderbird-locale-en
- thunderbird-locale-en-us
- totem
- totem-common
- totem-plugins
- transmission-common
- transmission-gtk
- ubuntu-web-launchers
- usb-creator-gtk
- vino
- vmware-client
- zeitgeist-core
- adium-theme-ubuntu
- bolt
- command-not-found-data
- dmz-cursor-theme
- evince-common
- friendly-recovery
- gnome-software
- gnome-software-common
- gnome-accessibility-themes
- gnome-themes-extra-data
- imagemagick-6-common
- netpbm

- speech-dispatcher-audio-plugins
- tcpdump
- ubuntu-release-upgrader-core
- ubuntu-report
- unattended-upgrades
- whoopsie
- xcursor-themes
- yelp-xsl
- gdb
- gnome-mahjongg
- gnome-sudoku
- libqqwing2v5
- gnome-mines
- netcat-openbsd
- vim
- vim-runtime

The following documents are removed to provide free space on a 16 GB device:

- /usr/share/man
- /usr/share/groff
- /usr/share/info
- /usr/share/lintian
- /usr/share/linda
- /var/cache/man

The following steps and commands have been performed to provide free space on a 16 GB device:

- Delete dependent packages that were automatically installed and are no longer needed.
- Clean the local repository of retrieved packages.
- Delete Snap, as it is replaced by Apt-get
- Delete local cache.
- Delete and disable the dpkg log to avoid dynamic memory increase.
- Delete apt caches to avoid dynamic increase of memory utilization.
- Delete the existing cache of Google Chrome and Firefox.
- Limit the cache of Google Chrome and Firefox to 150 MB for future use.

Contacting Dell

Prerequisites

 **NOTE:** If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

About this task

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell sales, technical support, or customer service issues:

Steps

1. Go to www.dell.com/support.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.