

Windows 11 IoT Enterprise LTSC 2024

Upgrade 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

Windows 11 IoT Enterprise LTSC 2024 is the latest release in the Long-Term Servicing Channel. It provides enhanced features and support.

This guide provides information about the available upgrade options and procedures for upgrading Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, covering both remote and local upgrade methods.

For information related to license requirements and upgrade workflows, see [Overview of Windows 11 IoT Enterprise LTSC 2024 upgrade options](#).

Audience

This document is intended for IT administrators. It provides the steps to upgrade supported devices running Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024. Administrators can upgrade multiple devices using the Wyse Management Suite (WMS) or upgrade a device locally with a USB drive.

Supported platforms and application versions

Before upgrading to Windows 11 IoT Enterprise LTSC 2024, check the supported requirements and recommendations for platforms and operating systems.

Supported operating system

- Windows 10 IoT Enterprise LTSC 2021

Supported platforms

- OptiPlex 3000 Thin Client ordered with Windows 10 IoT Enterprise LTSC 2021
- OptiPlex 3000 Thin Client ordered with Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024
- OptiPlex All-In-One 7410
- OptiPlex All-in-One 7420
- OptiPlex Micro Plus 7010
- OptiPlex Micro Plus 7020
- Latitude 3440
- Latitude 5440
- Latitude 5450

Supported applications

- Wyse Management Suite 5.0 Pro or later

You need WMS 5.0 or later with a Pro license to remotely upgrade a group of devices from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024.

WMS Standard does not support remote upgrades. For local upgrades, use a USB drive to upgrade a device from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024.

Minimum hardware requirement

- Ensure the device includes at least 8 GB of RAM and a minimum of 128 GB of non-eMMC storage.

Overview of Windows 11 IoT Enterprise LTSC 2024 upgrade options

This section provides an overview of the available upgrade options for upgrading devices from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024. It details license requirements and provides workflows for both remote and local upgrade methods for supported devices.

The following activation options are available for upgrading to Windows 11 IoT Enterprise LTSC 2024 :

- Product Key Entry Activation (PKEA)—Upgrade with a Product Key Entry Activation (PKEA) license.
- Automatic Activation — Upgrade without manual license entry, using built-in activation capabilities.

Upgrade with a Product Key Entry Activation (PKEA) license

Devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system option require a PKEA license key for upgrade to Windows 11 IoT Enterprise LTSC 2024.

For more information related to PKEA license and enterprise upgrade solutions, see [Acquiring license for Windows 11 IoT Enterprise LTSC 2024 upgrade](#).

You can upgrade supported Windows 10 IoT Enterprise LTSC 2021 devices to Windows 11 IoT Enterprise LTSC 2024, using the following upgrade methods:

- Remote upgrade using Wyse Management Suite (WMS)—

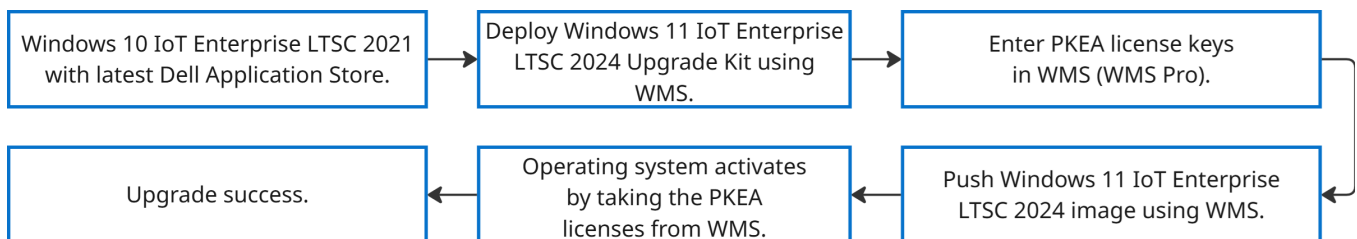


Figure 1. Remote upgrade workflow using WMS for devices ordered with—Windows 10 IoT Enterprise LTSC 2021

To perform a remote upgrade, see [Upgrade devices remotely using WMS](#).

- Local upgrade using a USB drive—

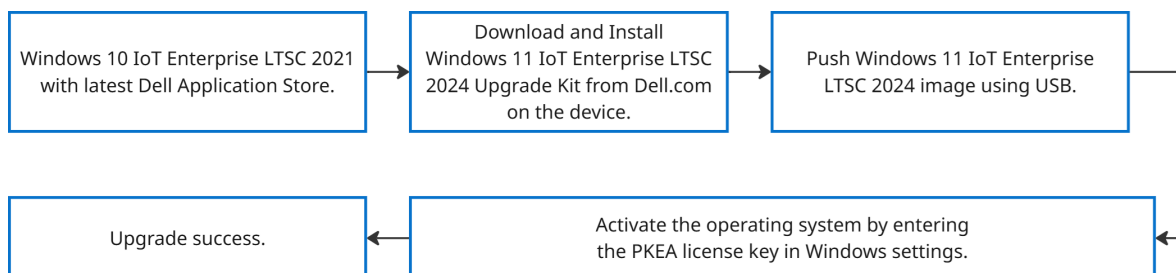


Figure 2. Local upgrade workflow using USB for devices ordered with—Windows 10 IoT Enterprise LTSC 2021

To perform a local upgrade, see [Upgrade your device locally using a USB drive](#).

Automatic activation during upgrade

OptiPlex 3000 Thin Client devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** operating system option activate automatically when upgraded to Windows 11 IoT Enterprise LTSC 2024. A separate license key is not required because the device contains an embedded Windows 11 IoT Enterprise LTSC 2024 license.

You can upgrade supported Windows 10 IoT Enterprise LTSC 2021 devices to Windows 11 IoT Enterprise LTSC 2024, using the following upgrade methods:

- Remote upgrade using Wyse Management Suite (WMS)—

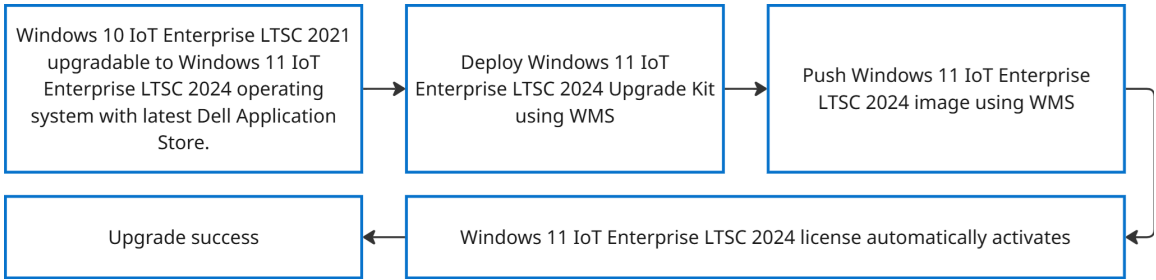


Figure 3. Remote upgrade using WMS for Optiplex 3000 devices ordered with—Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024

To perform a remote upgrade, see [Upgrade devices remotely using WMS](#).

- Local upgrade using a USB drive—

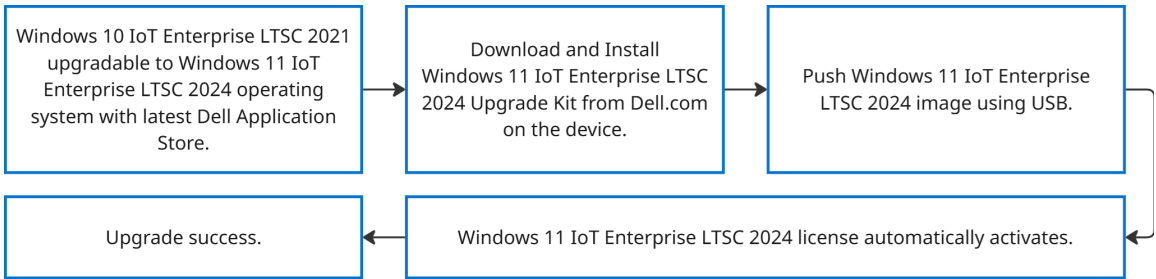


Figure 4. Local upgrade using USB for Optiplex 3000 devices ordered with—Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024

To perform a local upgrade, see [Upgrade your device locally using a USB drive](#).

Acquiring license for Windows 11 IoT Enterprise LTSC 2024 upgrade

This section details information about available upgrade solutions and their specific licensing requirements.

NOTE: When you upgrade from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, you must obtain a new license. According to Microsoft, upgrading to a newer version of Windows IoT Enterprise LTSC requires a new OS and a new license, which you can get through your device manufacturer or a Microsoft Volume License program. For more information, see [Microsoft Windows IoT Enterprise FAQ](#).

This is a Microsoft operating system licensing requirement that is defined and enforced by Microsoft, not Dell. However, Dell, as a device manufacturer, can provide the Windows 11 IoT Enterprise LTSC 2024 upgrade license in the form of a physical Product Key Entry Authorization (PKEA) license key. Dell does not produce the PKEA license or define its format. Dell distributes the license as provided by Microsoft. To purchase the license, see the [Windows IoT Enterprise](#) page.

Purchase upgrade license

The following information details the licensing requirements for upgrading devices from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024:

- Devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system require the purchase of an upgrade solution containing the PKEA license from the [Windows IoT Enterprise](#) webpage.
- Devices such as the OptiPlex 3000 Thin Client, ordered with **Windows 10 IoT Enterprise LTSC 2021 and upgradable to Windows 11 IoT Enterprise LTSC 2024** come with an embedded Windows 11 IoT Enterprise LTSC 2024 license. An additional license is not required.

Upgrade solutions for acquiring PKEA license

Dell offers a range of enterprise upgrade solutions that are tailored to your device and processor type. You can access these solutions on the [Windows IoT Enterprise](#) webpage. The available enterprise upgrade solutions are as follows:

Table 1. Enterprise upgrade solutions for acquiring PKEA license

Upgrade solution	Compatibility	
	Device type	Processor type
Entry upgrade solution	OptiPlex 3000 Thin Client	Intel Celeron or Pentium
	OptiPlex All-in-One 7410	Intel Celeron or Pentium
	Latitude 3440	Intel Celeron or Pentium
Value upgrade solution	OptiPlex Micro 7010 and 7020	Intel Core i3, Intel Core i5 or Intel Core Ultra 5
	Latitude 3440	Intel Core i3, Intel Core i5 or Intel Core Ultra 5
	Latitude 5440	Intel Core i3, Intel Core i5 or Intel Core Ultra 5
	Latitude 5450	Intel Core i3, Intel Core i5 or Intel Core Ultra 5

Table 1. Enterprise upgrade solutions for acquiring PKEA license (continued)

Upgrade solution	Compatibility	
	Device type	Processor type
	Optiplex All-in-One 7410	Intel Core i3, Intel Core i5 or Intel Core Ultra 5
	Optiplex All-in-One 7420	Intel Core i3, Intel Core i5 or Intel Core Ultra 5
High End upgrade solution	Dell OptiPlex Micro 7020	Intel Core i7 processor

- Entry upgrade solution—See [Windows 11 IoT Enterprise LTSC 2024 Entry upgrade solution](#).
- Value upgrade solution—See [Windows 11 IoT Enterprise LTSC 2024 Value upgrade solution](#).
- High End upgrade solution—See [Windows 11 IoT Enterprise LTSC 2024 High End upgrade solution](#).

You can access the upgrade solution directly through these links or go to [Dell | Support](#) and enter the name of the upgrade solution in the search bar.

PKEA license overview

This overview covers everything that you need to know about the PKEA license, including acquisition and reallocation procedures.

PKEA delivery

After purchasing an upgrade solution, it is delivered in a physical package. The upgrade kit includes:

- Activation key on a physical scratch card for a single device only.
- The physical scratch card has the 5x5 license key.
- The 5x5 license key is covered with a silver scratch-off layer for theft protection.

i **NOTE:** Product Key Entry Activation (PKEA) license key can be used with any supported device. To activate multiple devices, you must track each license key and its associated Service Tag using the CSV template file in Wyse Management Suite (WMS). For more information, see [Add PKEA license keys for activation](#)

License retrieval

When the Windows 11 IoT Enterprise upgrade kit is delivered, you can view the 5x5 license key by scratching off the silver security layer.

i **NOTE:** The barcode and QR code on the scratch card cannot be scanned to retrieve the license key.

License reusability information

For efficient reuse of PKEA keys within your organization, Microsoft allows the removal of a PKEA key from the original device, provided the system verifies the removal before reallocating the key to a new device.

WMS policy migration

Windows 11 IoT Enterprise LTSC 2024 uses WinIoT 2.x policies by default.

WMS 4.1 and later versions offer enhanced support for WinIoT 2.x policies through a new user interface that includes a search function for efficiently locating configuration options.

When upgrading devices from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024:

- Devices using WinIoT (WES) policies: These devices require manual configuration of each parameter after the upgrade.
- Devices using WinIoT 2.x policies: These devices do not require any manual configuration after the upgrade, as all configurations related to the WinIoT 2.x policy are automatically migrated.

Upgrading to Windows 11 IoT Enterprise LTSC 2024

The devices can be upgraded to Windows 11 IoT Enterprise LTSC 2024 using any of the two methods:

- Remote upgrade using WMS: You can remotely upgrade multiple devices in a WMS group. For more information, see [Upgrade your device remotely using WMS](#).
- Local upgrade using a USB Drive: You can perform a local upgrade by using a device-specific operating system image and a USB drive. For more information, see [Upgrade your device locally using a USB drive](#).

Important notes

- Back up your data before starting the upgrade. All data on the hard drive will be erased when upgrading from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024.
- For OptiPlex 3000 Thin Clients with the **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** operating system the upgrade process remains the same. The device activates automatically, and a PKEA key is not required.

Upgrade devices remotely using WMS

This section lists the prerequisites and steps to upgrade Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024.

Prerequisites

Before upgrading supported devices from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, complete the following tasks:

- Devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system need a PKEA license for upgrading to Windows 11 IoT Enterprise LTSC 2024. For more information, see [Acquiring license for Windows 11 IoT Enterprise LTSC 2024 upgrade](#).
- OptiPlex 3000 Thin Client, ordered with **Windows 10 IoT Enterprise LTSC 2021 and upgradable to Windows 11 IoT Enterprise LTSC 2024**, do not require a PKEA license.
- Download the Windows 11 IoT Enterprise LTSC 2024 image for the platform which you need to upgrade. The image can be downloaded from the **Drivers & Downloads** section by entering the Service Tag or the platform name on [Dell | Support](#).
- Back up WMS policy configurations, important custom data, and files to prevent data loss. For additional information about the WMS policy, see [WMS policy migration](#).

Steps

To upgrade Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, follow these steps:

1. Deploy the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit package file remotely using WMS on supported Windows 10 IoT Enterprise LTSC 2021 devices.
2. Upload the CSV file with PKEA license keys for the devices requiring an upgrade from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024. For more information, see [Managing PKEA License Keys for Service Tags in WMS](#).
3. Deploy the Windows 11 IoT Enterprise LTSC 2024 image. For more information, see [Deploying Windows 11 IoT Enterprise LTSC 2024 ISO image using WMS](#).

Deploying Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit file using WMS

This chapter details the steps to remotely deploy the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit to devices registered with WMS, enabling the upgrade to Windows 11 IoT Enterprise LTSC 2024.

Prerequisites

- NOTE:** To ensure proper functionality, do not install Dell Application Store (DAS) version 2505 or below after installing Dell Imaging Manager (DIM) or Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit Version 2.0.0.2 or above. If you install the Dell Application Store (DAS) version 2505 or below versions, then the imaging solution will not work and you have to reimage the device.
- NOTE:** If Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit v1.0.0.19 is already installed, do not install Upgrade Kit v2.0.0.2 on top of it, as this may lead to compatibility issues.
- NOTE:** If Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit v1.0.0.19 is already installed, do not install Dell Imaging Manager v2.0.0.2 on top of it, as this may cause compatibility issues. It is recommended to first complete the upgrade process and then install the latest version of Dell Imaging Manager on the Windows 11 IoT Enterprise LTSC 2024 device.

Table 2. Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit details

Latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit	Description
Purpose	Prepares Windows 10 Enterprise LTSC 2021 devices for upgrade to Windows 11 IoT Enterprise LTSC 2024.
Compatibility	Applicable only to devices running Windows 10 IoT Enterprise LTSC 2021.
Support for Dell Imaging Manager (DIM)	The Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit, enables DIM functionality on Windows 11 IoT Enterprise LTSC 2024. This upgrade kit also removes the existing Merlin imaging solution.
Activation support	Verifies and maintains PKEA activation compliance for devices administered using Wyse Management Suite (WMS).

- NOTE:** Ensure that **Enable Pre-Boot DMA Support** and **Enable OS Kernel DMA Support** are disabled in **BIOS Setup > Virtualization Support > DMA Protection**.
- If you are using the WMS cloud, the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit can be deployed directly from the cloud. To view the packages in WMS cloud, go to **Apps & Data > App Inventory** and select **Operator Cloud WMS** from the **File repository** drop-down menu.
- If you are using the Wyse Management Suite on-premises environment, you must download the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit from the respective hardware landing page on [Dell | Support](#) and upload to the repository.

Steps

- Log in to WMS as an administrator.
- Go to **Apps & Data > App Policies > Thin Client**.
- Click **Add Advanced Policy**.
The **Add Advanced App Policy** page is displayed.
- Enter the **Policy Name**.
- From the **Group** drop-down list, select one or more groups to which you want to deploy the application.
- Select the **Include All Subgroups** checkbox to apply the policy to subgroups.
- From the **Task** drop-down list, select **Install Application**.
- From the **OS Type** drop-down list, select **Windows IoT Enterprise**.
- Select the **Filter files based on extensions** checkbox to filter the applications. If you select this option, only the applications that are associated with the selected operating system type are displayed.

10. From the **Filter Devices** drop-down list, select one of the following options:
 - **Apply On All Devices:** To apply the policy to all devices.
 - **Filter already updated devices:** To prevent previously deployed applications using WMS from being redeployed.
 - **Filter devices with policy already applied:** To exclude devices that have already received the same policy from the new application.
11. Click **Add app**.
 - a. Select the package containing the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit from the **Apps (Applied in the order shown.)** drop-down menu.
 - b. Enter `--silent` to set the **Install Parameters** for silent installation.
 - c. Enter a value for **Install Timeout**. Allowed values range from 5 to 360 minutes, with a default value is of 60 minutes to support silent installations and safe exits.

Apps (Applied in the order shown.)	Pre-Install	Post-Install	Install Parameters	Install Timeout * ?	Reboot
☐ Windows11IoTUpgradeKit.exe -	Choose one of the following... ▾	Choose one of the following... ▾	<code>--silent</code>	60	☐

Figure 5. Add app

12. Select **Enable app dependency** to stop the application policy at first failure.
13. From the **OS Subtype Filter**, select **WIE10 (Windows 10 IoT Enterprise)**.
14. From the **Platform Filter**, select the device model to which you want to deploy the application.
15. In the **Timeout** field, enter the number of minutes the message dialog box should be displayed on the device. It allows the users to save work before the installation begins.
16. To enable delay in the implementation of the policy for the user, select the **Allow delay of policy execution** checkbox. If this option is selected, the following drop-down menus are enabled:
 - From the **Max Hours per Delay** drop-down list, select the maximum hours (1–24 hours) to delay the policy execution.
 - From the **Max delays** drop-down list, select the number of times (1–3) you can delay running the policy.
17. From the **Apply Policy Automatically** drop-down list, select any of the following options:
 - **Do not apply automatically**—This option does not apply a policy automatically to the devices.
 - **Apply the policy to new devices**—This option automatically applies the policy to a registered device. It applies the policy to devices that belong to the selected group or to devices moved to the selected group. When this option is selected, the policy is applied to all the new devices that are registered to the group. To run the job on the existing devices present in the group, you must schedule the policy. After you schedule the policy, the job status displays the count of devices that are already present in the group. The job status of the newly added device count that is registered is not displayed.
 - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in. When this option is selected, the policy is applied to all the devices present in the group. To run the job on existing devices present in the group immediately or at a scheduled time before the device check-in, you must schedule the policy. After you schedule the policy, the job status displays the count of devices that are already present in the group.
18. Select the **Skip write filter check** checkbox if you want to skip the write filter cycles.
The option is applied only if the policy is applied using a job.
19. Click **Save**.
An **Alert** window is displayed.
20. Click **Later** to exit. If you select **Yes**, then an **App Policy Job** window is displayed.

Figure 6. App Policy Job

21. In the **App Policy Job** window, select the **Policy**.
22. Enter the description for the job.
23. From the **Run** drop-down list, select any of the following options:
 - **Immediately**
 - **On selected time zone and date/time**
 - **On selected date/time(of device time zone)**
24. Select the **Exclude Offline Devices** if you want to exclude the offline devices while creating the job.
You can view the list of excluded offline devices on the **Jobs** page. You can later restart the job for the offline devices from the jobs list.
25. Select the time zone if you have selected **On selected time zone and date/time** in Step 23.
26. Enter or select the following details if you have selected **On selected time zone and date/time** or **On selected date/time(of device time zone)** in Step 23:
 - **Effective**—Enter the starting and ending date.
 - **Start between**—Enter the starting and ending time.
 - **On day(s)**—Select the days of the week.
27. Click the **Preview** option to view the details of the scheduled job.
The job schedule preview is displayed.
28. Click the **Schedule** option to initiate the job.
29. Go to **Jobs** and filter by **Configuration Groups** to check the application policy job status for devices.
When a **WindowsUpgradeKit.exe** job policy from WMS is applied as per the schedule, a **Wyse Device Agent: Software Update Alert** window is displayed on the devices.

Wyse Device Agent : Software Update Alert

WMS administrator has deployed a software update for this device. The device may reboot during the update which will automatically apply after the last modification.

Time to select 00h:00m:48s

Update notification 1 of 2

Postpone and remind me in Hours

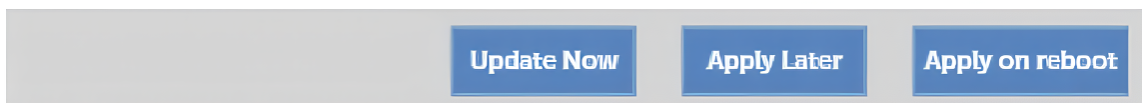


Figure 7. Wyse Device Agent: Software Update Alert

The implementation of the policy on device can be postponed based on displayed configurations. The options available include selecting a time to postpone the update, applying the update immediately, applying it later, or applying it upon rebooting the device.

Results

- The status for devices with the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit deployment is indicated as **Success:1** in **Jobs**.
- Upon successful deployment of the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit the devices are now capable to support upgrade of Windows 11 IoT Enterprise LTSC 2024, and the **Serial Numbers** are displayed in **Portal Administration — Your Subscription** page. Follow these steps to view the **Serial Numbers** of the upgrade-supported devices:
 1. Log in to the WMS as an administrator.
 2. Go to **Portal Administration > Account > Subscription**. The **Portal Administration — Your Subscription** page is displayed.
 3. Go to **License Usage > Windows 11 IoT Enterprise LTSC 2024 License usage** and click **View/Upload License Keys**.

The **Windows 11 IoT Enterprise LTSC 2024 License usage** page is displayed.

The **Serial Numbers** is displayed in the first column of the table.

Next steps

To add the PKEA license keys for the upgrade-supported devices, see [Managing PKEA License Keys for Service Tags in WMS](#).

Managing PKEA license keys for Service Tags in WMS

Managing PKEA license keys within the Wyse Management Suite (WMS) involves uploading PKEA license keys to activate Windows 11 IoT Enterprise LTSC 2024 on supported devices.

This feature is available in WMS 5.0 or later and in WMS Pro licenses.

Add PKEA license keys for activation

This section provides the steps to upload PKEA license keys to activate Windows 11 LTSC Enterprise 2024 for devices before deploying the image.

Steps

1. Log in to the WMS as an administrator.
2. Go to **Portal Administration > Account > Subscription**.
The **Portal Administration — Your Subscription page** is displayed.
3. Go to **License Usage > Windows 11 IoT Enterprise LTSC 2024 License usage** and click **View/Upload License Keys**.

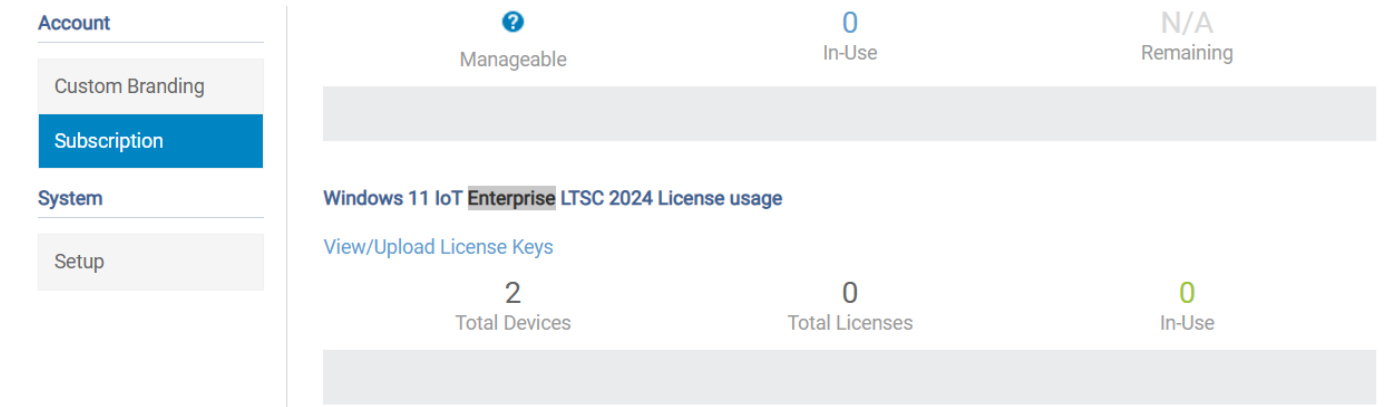


Figure 8. View/Upload License Keys

The **Windows 11 IoT Enterprise LTSC 2024 License usage** page is displayed.

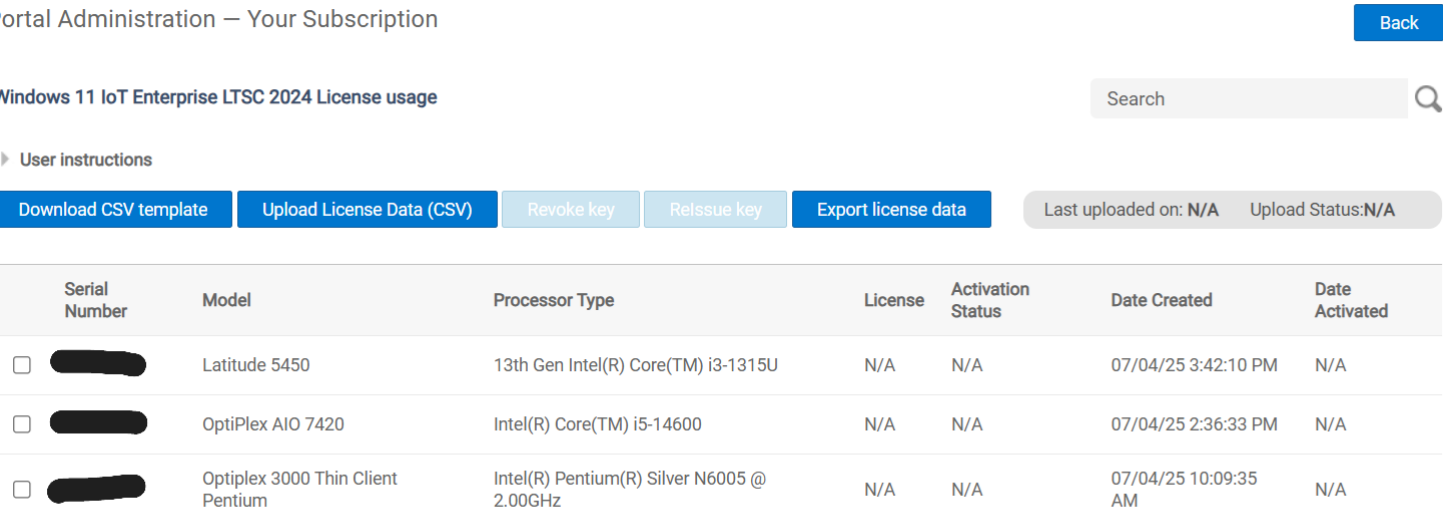


Figure 9. Windows 11 IoT Enterprise LTSC 2024 License usage

4. Click **Download CSV template** to download the prefilled CSV template file.
NOTE: The CSV template file has four columns—*Serial Number*, *Model*, *ProcessorType* and *License Key*.

	A	B	C	D	E
1	Serial Number	Model	ProcessorType	License Key	
2		Optiplex 3000 Thin Client Pentium	Intel(R) Pentium(R) Silver N6005 @ 2.00GHz	null	
3		Optiplex 3000 Thin Client Pentium	Intel(R) Pentium(R) Silver N6005 @ 2.00GHz	null	
4		OptiPlex Micro Plus 7010	13th Gen Intel(R) Core(TM) i7-13700	null	
5		Optiplex 3000 Thin Client Pentium	Intel(R) Pentium(R) Silver N6005 @ 2.00GHz	null	
6		OptiPlex Micro Plus 7010	13th Gen Intel(R) Core(TM) i5-13500T	null	
7		Latitude 3440	12th Gen Intel(R) Core(TM) i3-1215U	null	
8		OptiPlex Micro Plus 7010	13th Gen Intel(R) Core(TM) i5-13500T	null	
9		OptiPlex AIO 7420	Intel(R) Core(TM) i5-14600	null	
10		Optiplex 3000 Thin Client Celeron	Intel(R) Celeron(R) N5105 @ 2.00GHz	null	

Figure 10. CSV template

5. Enter the PKEA license keys in the *License Key* column of the CSV template file. Save the CSV file.
6. Click **Upload License Data (CSV)** to browse for the CSV file.
7. Click **Upload**.
The **Choose a file to upload** window is displayed.
8. Select the CSV file and click **Upload**.

NOTE: When you upload the CSV file, the upgrade-supported devices are associated with the PKEA license keys, and their information is updated on **Windows 11 IoT Enterprise LTSC 2024 License usage** page.

The device **Serial Numbers**, the **Activation Status**, and **License** keys are displayed in **Windows 11 IoT Enterprise LTSC 2024 License usage** page.

Results

PKEA license keys are uploaded to the **Portal Administration — Your Subscription** page. PKEA license keys can be revoked and reissued as needed for selected devices. For more information, see [Revoke and reissue PKEA license key](#).

Revoke and reissue PKEA license key

This section outlines the steps to revoke and reissue PKEA license keys for selected upgrade-supported devices.

Steps

1. To revoke the PKEA license key, follow these steps:
 - a. Select the **Serial Number** of the devices with successful activation.
 - b. Click **Revoke Key**.
Confirm the operation to revoke the keys for selected devices.
2. To reuse the PKEA license keys, follow these steps:
 - a. Select the **Serial Number** of the devices with revoked **License** keys.
 - b. Click **Reissue Key**.
 - c. Select the **Serial Number** of the devices to reissue the license keys.
Confirm the operation to reissue the keys for selected devices.

Deploy Windows 11 IoT Enterprise LTSC 2024 ISO image using WMS

This section outlines the steps to deploy the Windows 11 IoT Enterprise LTSC 2024 image to devices in the WMS group.

Prerequisites

- The latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit should be deployed to the devices to enable the upgrade operation.
- The CSV file containing the PKEA license keys be uploaded to the Portal Administration in WMS.

- The Windows 11 IoT Enterprise LTSC 2024 ISO image for the upgrade-supported devices must be uploaded to the WMS repository. For more information, see *Add Windows Embedded Standard operating system and ThinLinux images to repository* in the Dell Wyse Management Suite Version 5.0 Administrator Guide on [Dell | Support](#).

Steps

1. Log in to the WMS as an administrator.
 2. Go to **Apps & Data > OS Image Policies > WinIoT/Thin Linux**.
The **Apps & Data – Windows IoT Enterprise / ThinLinux OS Image Policies** window is displayed.
 3. Click **Add Policy**.
The **Add Windows IoT Enterprise / ThinLinux Policy** window is displayed.
 4. Enter a name for the policy.
 5. Select the group to schedule the image policy from the **Group** drop-down menu.
 6. Select **Windows IoT Enterprise** from the **OS Type** drop-down menu.
 7. Select **WIE10 (Windows 10 IoT Enterprise)** from the **OS Subtype Filter** drop-down menu.
 8. Select the compatible Windows 11 IoT Enterprise LTSC 2024 for your device from the **OS Image** drop-down menu.
- NOTE:** The **OS Image** drop-down menu shows images that are compatible for specific devices and platforms. You must agree to the End User License Agreement (EULA) for images that are registered in **Apps & Data > Windows IoT Enterprise / ThinLinux OS Image Repository** before pushing the image.
9. Select one of the following options from the **Rule** drop-down list:
 - **Force this version.**
 - **Upgrade Only.**
 10. From the **Apply Policy Automatically** drop-down list, select any of the following options:
 - **Do not apply automatically**—This option does not apply a policy automatically to the devices.
 - **Apply the policy to new devices**—This option automatically applies the policy to a registered device. It applies the policy to devices that belong to the selected group or to devices moved to the selected group. When this option is selected, the policy is applied to all the new devices that are registered to the group. To run the job on the existing devices present in the group, you must schedule the policy. After you schedule the policy, the job status displays the count of devices that are already present in the group. The job status of the newly added device count that is registered is not displayed.
 - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in. When this option is selected, the policy is applied to all the devices present in the group. To run the job on existing devices present in the group immediately or at a scheduled time before the device check-in, you must schedule the policy. After you schedule the policy, the job status displays the count of devices that are already present in the group.
 11. Click **Save**.
An **Alert** window is displayed.
 12. Select one of the following options in the **Alert** window:
 - Click **Later** to exit.
 - Click **Yes** to schedule the image update job.
 13. If you clicked **Yes** in the **Alert** window, the **Image Update Job** window is displayed.

Figure 11. Image Update Job

14. In the **Image Update Job** window, select the **Policy**.
15. Enter the description for the job.
16. From the **Run** drop-down list, select any of the following options:
 - **Immediately**
 - **On selected time zone and date/time**
 - **On selected date/time(of device time zone)**
17. Select the **Time zone** if you have selected **On selected time zone and date/time** in Step 16.
18. Enter or select the following details if you have selected **On selected time zone and date/time** or **On selected date/time(of device time zone)** in Step 16:
 - **Effective**—Enter the starting and ending date.
 - **Start between**—Enter the starting and ending time.
 - **On day(s)**—Select the days of the week.
19. Click the **Preview** option to view the details of the scheduled job.
20. On the next page, click the **Schedule** option to initiate the job.
21. Go to **Jobs** and filter by **Configuration Groups** to check the image update job status for the devices.
On the devices, a notification is displayed to upgrade Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024.

Results

- The status for devices that are upgraded to Windows 11 IoT Enterprise LTSC is indicated as **Success:1** in **Jobs**.
- The upgrade operation is performed on the devices according to the job schedule, and the devices automatically log in the user account.
- You can verify the **Activation Status** after the upgrade in the **Windows 11 IoT Enterprise LTSC 2024 License usage** window of **Portal Administration — Your Subscription**, where it updates to **Activated** upon a successful upgrade.
 - The **Activation Status** for OptiPlex 3000 Thin Clients running with **Windows 10 IoT Enterprise 2021 upgradeable to Windows 11 IoT Enterprise LTSC 2024** remains **Not Activated** in the **Windows 11 IoT Enterprise LTSC 2024 License usage** window of **Portal Administration — Your Subscription** even when it is activated after the upgrade.

NOTE: The default password credentials for the ISO image are as follows:

- Administrator account: Admin#<Service Tag of the device>
- User account: User#<Service Tag of the device>

Replace <Service Tag of the device> with the actual Service Tag for your device.

Upgrade your device locally using a USB drive

Local upgrades can be performed using a bootable USB drive .

Prerequisites

Before upgrading the device from Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, complete the following tasks:

- IT Administrators must download and install the [Dell OS Recovery Tool](#).
- IT Administrators must download the Windows 11 IoT Enterprise LTSC 2024 image for the platform that supports the upgrade. The image can be downloaded from the **Drivers & Downloads** section by entering the service tag or platform name of the device on [Dell | Support](#).
- Devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system need a PKEA license for upgrading to Windows 11 IoT Enterprise LTSC 2024.
- OptiPlex 3000 Thin-Client devices, ordered with **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** come with an embedded Windows 11 IoT Enterprise LTSC 2024 license. Therefore, they do not require a PKEA license.

For more information related to Windows 11 IoT Enterprise 2024 license, see [Acquiring license for Windows 11 IoT Enterprise LTSC 2024 upgrade](#).

Steps

You can upgrade Windows 10 IoT Enterprise LTSC 2021 to Windows 11 IoT Enterprise LTSC 2024, by performing the following steps:

1. IT Administrators must configure a USB drive with a device-specific ISO image. For more information, see [Configure USB drive with ISO Imaging](#).
2. Download and install the latest Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit package file on the supported Windows 10 IoT Enterprise LTSC 2021 device to enable upgrade. Next, you must apply the Windows 11 IoT Enterprise LTSC 2024 image specific to the platform to the Windows 10 IoT Enterprise LTSC 2021 supported device. For more information, see [Upgrade to Windows 11 IoT Enterprise LTSC 2024 using USB](#).
3. Activate the devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system using a PKEA license key. For more information, see [Activate Windows 11 IoT Enterprise LTSC 2024 with PKEA license key](#).

OR

OptiPlex 3000 Thin-Client devices, ordered with **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** will automatically activate the Windows 11 IoT Enterprise LTSC 2024 operating system after pushing the image.

Configure USB drive with ISO Imaging

Steps

1. Launch the Dell OS Recovery Tool and click **INSTALL**.
2. Click **CLOSE** and launch the application from the desktop shortcut.
3. Click **SWITCH TO ADVANCED RECOVERY**.

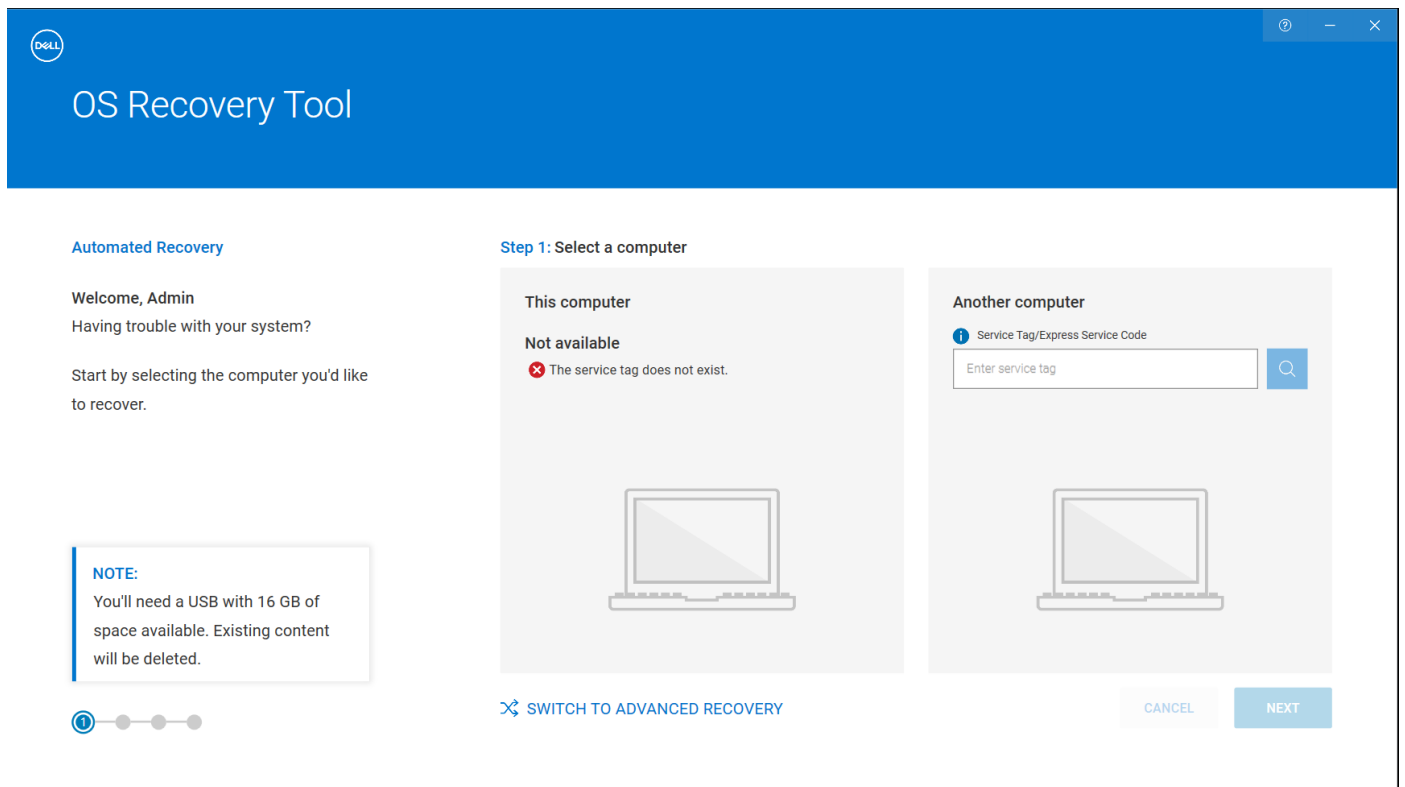


Figure 12. OS Recovery Tool

4. Browse to the Windows 11 IoT Enterprise LTSC 2024 ISO image, select it and click **NEXT**.
5. Click **BURN OS**.

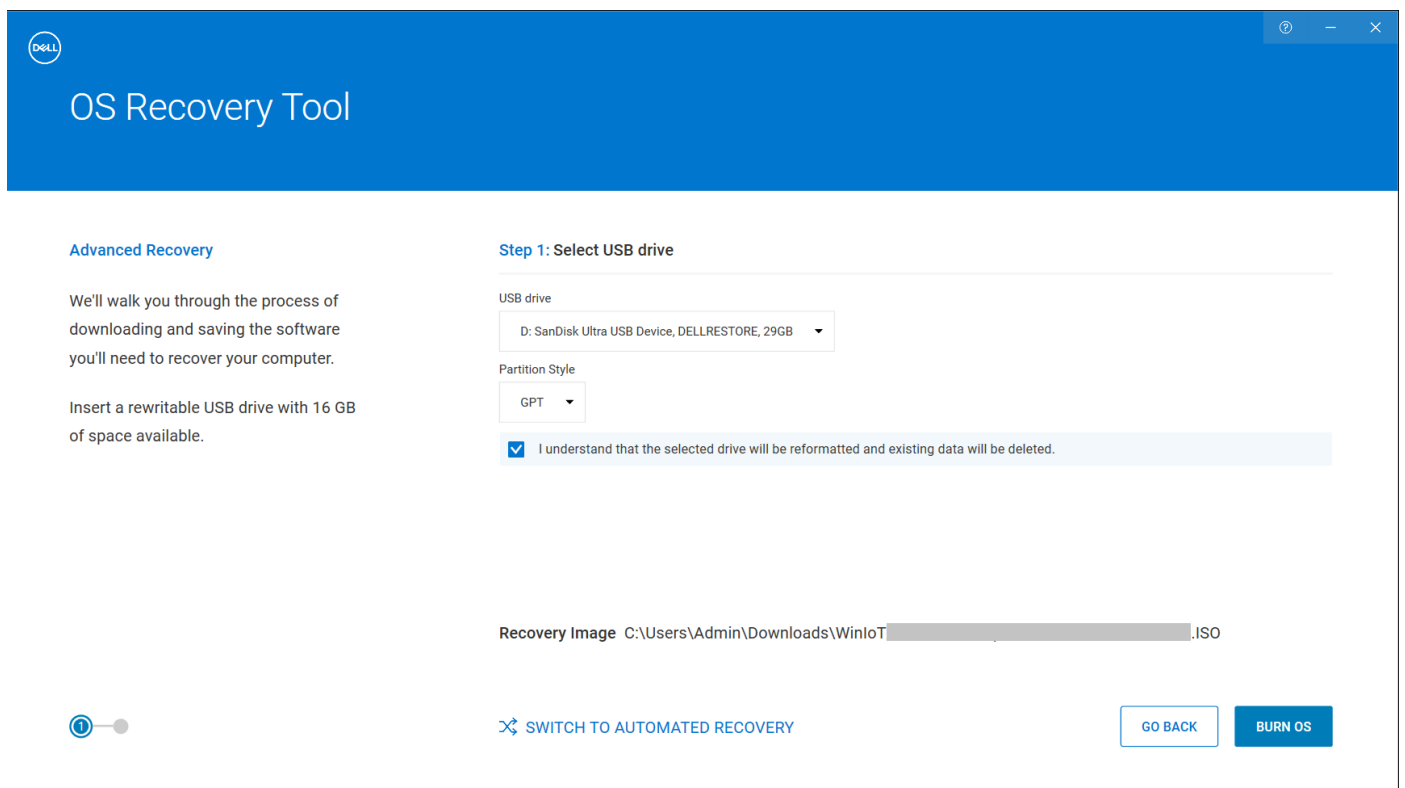


Figure 13. OS Recovery Tool

6. Wait for image registration to complete.

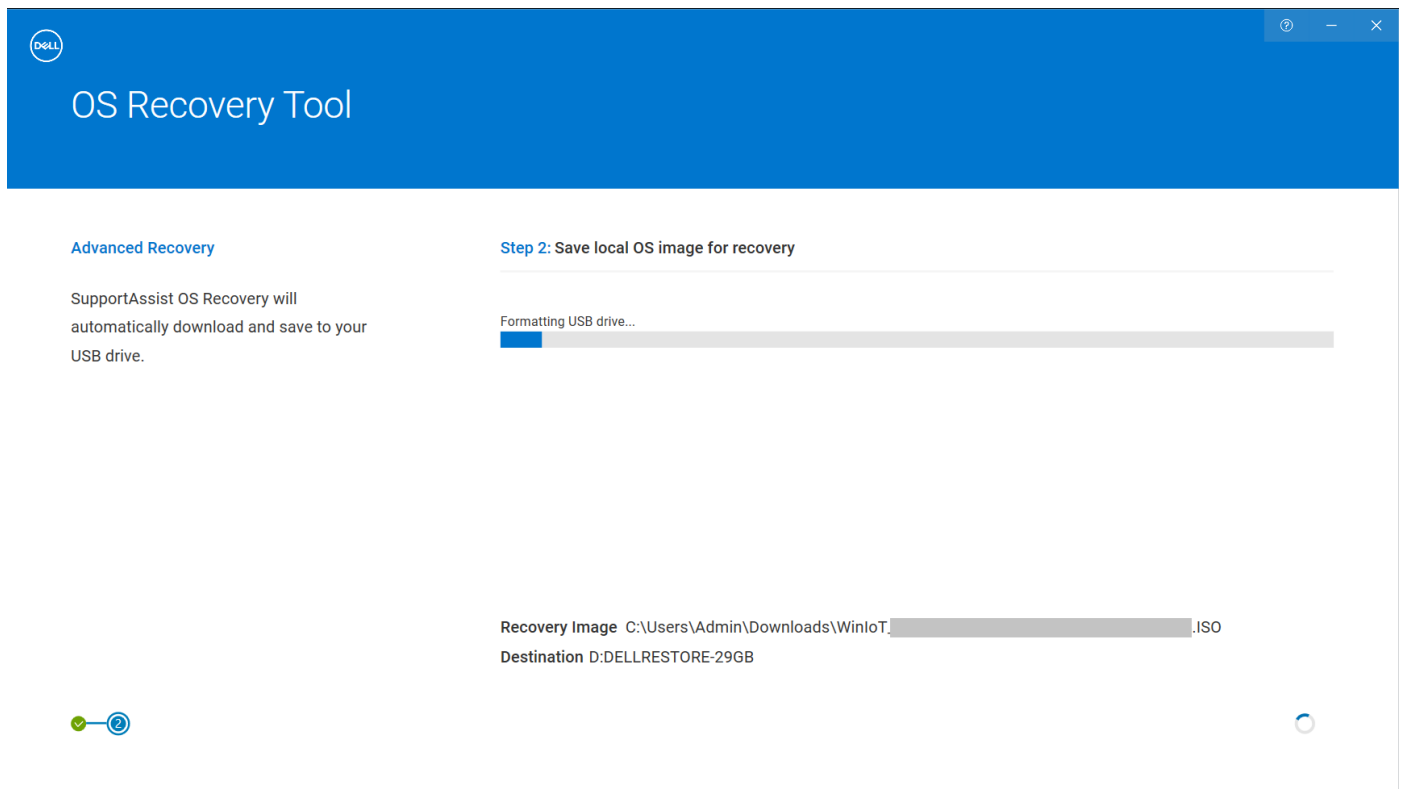


Figure 14. OS Recovery Tool

7. Click **Close**.
8. Remove the USB drive.
The USB drive is configured with the device-specific Windows 11 IoT Enterprise LTSC 2024 image.

Upgrade to Windows 11 IoT Enterprise LTSC 2024 using USB drive

This section outlines the steps to install the **Windows11IoTUpgradeKit.exe** and upgrade your device to Windows 11 IoT Enterprise LTSC 2024 using USB drive configured with ISO imaging.

Prerequisites

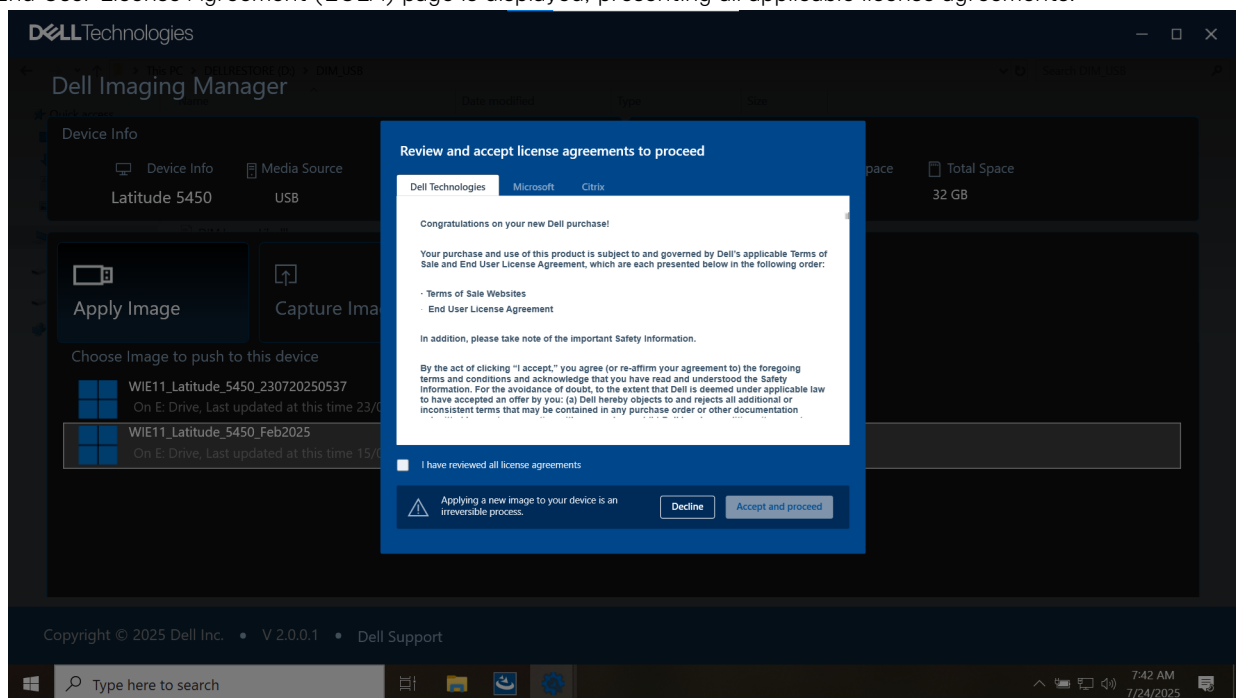
- To ensure proper functionality, do not install Dell Application Store (DAS) version 2505 or below after installing Dell Imaging Manager (DIM) or Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit Version 2.0.0.2 or above. If you install the Dell Application Store (DAS) version 2505 or below versions, then the imaging solution will not work and you have to reimage the device.
- **NOTE:** Ensure that **Enable Pre-Boot DMA Support** and **Enable OS Kernel DMA Support** are disabled in **BIOS Setup > Virtualization Support > DMA Protection**.
- **NOTE:** If Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit v1.0.0.19 is already installed, do not install Upgrade Kit v2.0.0.2 on top of it, as this may result in compatibility issues.
- **NOTE:** If Windows 11 IoT Enterprise LTSC 2024 Upgrade Kit v1.0.0.19 is already installed, do not install Dell Imaging Manager v2.0.0.2 on top of it, as this may cause compatibility issues. It is recommended to first complete the upgrade to Windows 11 IoT Enterprise LTSC 2024, and then install the latest version of Dell Imaging Manager on the upgraded device.

Steps

1. Log in to the device as an administrator.
2. Double-click the **Dell Wyse WF Disable** icon on the desktop to disable the WF.

The device restarts automatically once the WF is disabled.

3. Log in to the device as an administrator.
4. Download and install the **Windows11IoTUpgradeKit.exe** from [Dell | Support](#).
The **Windows11IoTUpgradeKit.exe** configures the device for enabling upgrade to Windows 11 IoT Enterprise LTSC 2024.
5. Connect the USB drive configured with ISO imaging.
6. Go to **This PC** and double-click the USB drive that is configured with ISO imaging.
7. Double-click the **DIM_USB** folder.
8. Launch the **DIM.USBImaging.exe** application.
The **Dell Imaging Manager** is displayed.
9. Click **Apply Image**.
The Windows 11 IoT Enterprise LTSC 2024 image file is displayed.
10. Select the Windows 11 IoT Enterprise LTSC 2024 image.
11. Click **Apply Image**.
The End User License Agreement (EULA) page is displayed, presenting all applicable license agreements.



The screenshot of the **Dell Imaging Manager** varies based on the device.

12. Review the EULA carefully.
Follow these steps:
 - a. Select **I have reviewed all license agreements**.
 - b. Click **Accept and Proceed**.

NOTE: It is mandatory to review and accept EULA before you proceed.

13. Click **Confirm**.

Results

1. The device enters recovery mode. The **Applying Image** process is displayed with progress indicators. You can safely disconnect the USB drive while the system is in the recovery mode.
2. The device reboots and displays progress indicators for critical tasks. After a final reboot, the device upgrades to Windows 11 IoT Enterprise LTSC 2024.

NOTE: The default password credentials for the ISO image are as follows:

- Administrator account: Admin#<Service Tag of the device>
- User account: User#<Service Tag of the device>

Replace <Service Tag of the device> with the Service Tag for your device.

Activate Windows 11 IoT Enterprise LTSC 2024 on the device using the PKEA license key

This section outlines the steps to enter PKEA license key to activate Windows 11 IoT LTSC 2024 on a recently upgraded device. You can check the **Activation state** as in **Start > Settings > System > Activation**.

About this task

As an administrator, you can follow these steps on a device to check and activate the operating system:

NOTE: Upgrading to Windows 11 IoT Enterprise LTSC 2024 from Windows 10 IoT Enterprise LTSC 2021 on the same device, after a downgrade, automatically activates Windows 11 IoT Enterprise LTSC 2024.

Steps

1. Log in to the device as an administrator.
2. Double-click the **Dell Wyse WF Disable icon** on the desktop to disable the WF. The icon disables the WF, and the device restarts.
3. Log in to the device as an administrator.
4. Go to **Start > Settings** to access Windows Settings. Alternatively, you can press **Windows Key + I** to open the Settings directly.
5. Go to **System** and select **Activation** to check the status of Windows 11 IoT Enterprise LTSC activation. The **Activation State** shows as **Not Active** for a recently upgraded device.
6. Click **Change** to enter the PKEA license key. The **Enter a product key** window is displayed.

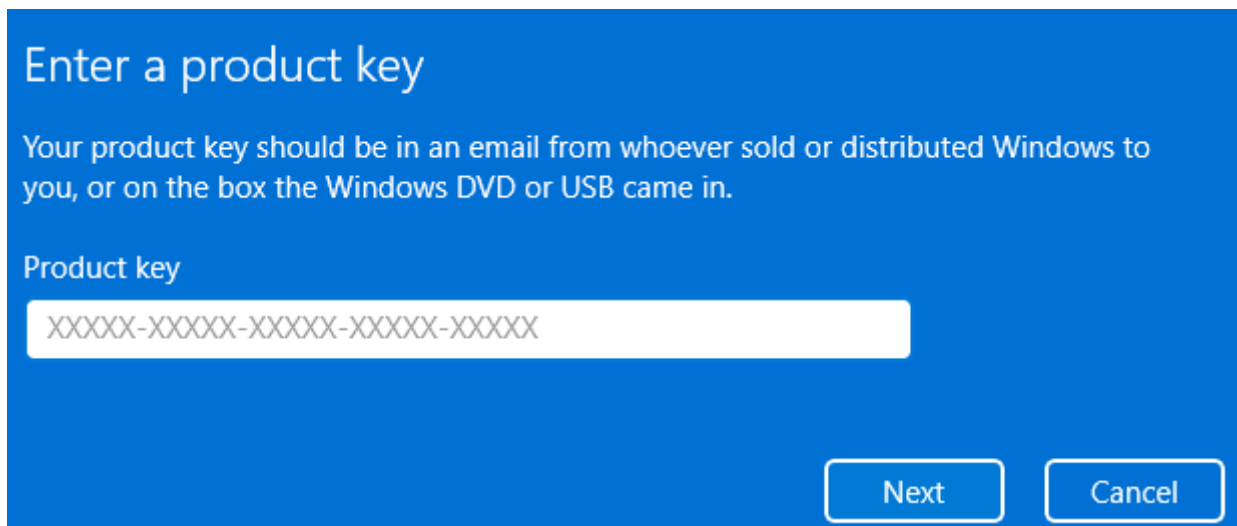


Figure 15. Enter a product key

7. Enter the 5x5 PKEA license key and click **Next**.

Results

The Windows 11 IoT Enterprise LTSC 2024 is activated upon successful validation. For more information, see [Microsoft Activate Windows](#).

Frequently asked questions

This chapter provides FAQs on upgrade process, upgrade requirements, licensing, and upgrade readiness for supported Windows 10 IoT Enterprise LTSC 2021 devices upgrading to Windows 11 IoT Enterprise LTSC 2024.

Upgrade process

This part covers upgrade options and scenarios for supported Windows 10 IoT Enterprise LTSC 2021 devices moving to Windows 11 IoT Enterprise LTSC 2024.

For more information, see [Overview of Windows 11 IoT Enterprise LTSC 2024 upgrade options](#).

1. What types of upgrade options are available to upgrade supported Windows 10 IoT Enterprise LTSC 2021 devices to Windows 11 IoT Enterprise LTSC 2024?

- For devices ordered with **Windows 10 IoT Enterprise LTSC 2021** operating system, see—[Upgrade with a Product Key Entry Activation \(PKEA\) license](#).
- For OptiPlex 3000 Thin Client devices ordered with **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** operating system, see—[Automatic activation during upgrade](#).

2. What are the upgrade methods supported for PKEA license and automatic upgrade options?

You can upgrade supported Windows 10 IoT Enterprise LTSC 2021 devices to Windows 11 IoT Enterprise LTSC 2024, using the following upgrade methods:

- Remote upgrade using Wyse Management Suite (WMS): This method allows you to upgrade multiple devices remotely within a WMS group. To perform a remote upgrade, see [Upgrade devices remotely using WMS](#).
- Local upgrade using a USB Drive: This method using a bootable USB drive with the device-specific operating system image to perform a local upgrade. To perform a local upgrade, see [Upgrade your device locally using a USB drive](#).

 **NOTE:** It is recommended to back up your important data before starting the upgrade process, as data on the hard drive is erased.

Upgrade requirements

This part covers the FAQs related to hardware requirements and software prerequisites for upgrading to Windows 11 IoT Enterprise LTSC 2024.

1. What are the minimum hardware requirements for Windows 11 IoT Enterprise LTSC 2024 and supported hardware for upgrade?

The system must have at least 8 GB of RAM and a minimum of 128 GB of non-eMMC storage. For more information, on supported platforms see [Supported platforms and application versions](#).

2. Is Wyse Management Suite (WMS) Pro required for the upgrade?

Yes, Wyse Management Suite 5.0 or later with a Pro license is needed for remote upgrades of devices that are ordered with **Windows 10 IoT Enterprise LTSC 2021**. However, for OptiPlex 3000 Thin Client devices that are ordered with **Windows 10 IoT Enterprise LTSC 2021 and upgradable to Windows 11 IoT Enterprise LTSC 2024**, the WMS Pro license is not required.

 **NOTE:** WMS Standard does not support remote upgrades.

Licensing

This part covers the FAQs related to license requirements for upgrading to Windows 11 IoT Enterprise LTSC 2024.

1. Do I need a license to upgrade?

- For devices ordered with **Windows 10 IoT Enterprise LTSC 2021** operating system, you need a PKEA license for upgrading to Windows 11 IoT Enterprise LTSC 2024. For more information, see—[Upgrade with a Product Key Entry Activation \(PKEA\) license](#).
- For OptiPlex 3000 Thin Client devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** operating system option activate automatically when upgraded to Windows 11 IoT Enterprise LTSC 2024. A separate license key is not required because the device contains an embedded Windows 11 IoT Enterprise LTSC 2024 license. For more information, see—[Automatic activation during upgrade](#).

2. Is there any offer where I can upgrade to Windows 11 without buying a PKEA license?

Yes, OptiPlex 3000 Thin Client devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021 upgradable to Windows 11 IoT Enterprise LTSC 2024** operating system option activate automatically when upgraded to Windows 11 IoT Enterprise LTSC 2024. A separate license key is not required because the device contains an embedded Windows 11 IoT Enterprise LTSC 2024 license. For information related to OptiPlex 3000 Thin Client, see [OptiPlex 3000 Thin Client product page](#).

3. From where can I get PKEA license to upgrade?

Devices that are ordered with the **Windows 10 IoT Enterprise LTSC 2021** operating system require the purchase of an upgrade solution containing the PKEA license from the [Windows IoT Enterprise](#) webpage.

4. Is the PKEA license dependent on the type of hardware I use?

Dell offers a range of enterprise upgrade solutions that are tailored to your device and processor type. You can access these solutions on the [Windows IoT Enterprise](#) webpage. The available enterprise upgrade solutions are as follows:

- The **Windows 11 IoT Enterprise LTSC 2024 Entry upgrade solution** is for devices with lower computing capabilities: Intel Celeron or Pentium processors. Compatible models include OptiPlex 3000 Thin Client, OptiPlex All-in-One 7410, and Latitude 3440. See [Windows 11 IoT Enterprise LTSC 2024 Entry upgrade solution](#).
- The **Windows 11 IoT Enterprise LTSC 2024 Value upgrade solution** is for devices with Intel Core i3, Intel Core i5, or Intel Core Ultra 5 processors. Compatible models include OptiPlex Micro 7010 and 7020, Latitude 3440, Latitude 5440, and Latitude 5450. See [Windows 11 IoT Enterprise LTSC 2024 Value upgrade solution](#).
- The **Windows 11 IoT Enterprise LTSC 2024 High End upgrade solution** is for devices with higher computing capabilities, such as the OptiPlex Micro 7020 with an Intel Core i7 processor. See [Windows 11 IoT Enterprise LTSC 2024 High End upgrade solution](#).

These different upgrade solutions are categorized under the License Type of **Upgrade License**.

5. In what form will I receive my PKEA license key and how do I use it?

You must purchase an enterprise upgrade solution to acquire a PKEA. The PKEA license is delivered in a physical package containing the Windows 11 IoT Enterprise upgrade kit. The upgrade kit includes:

- Activation key on a physical scratch card for a single device only.
- The physical scratch card has the 5x5 license key.
- The 5x5 license key is covered with a silver scratch-off layer for theft protection.

For information related to purchasing a PKEA license key, see [Upgrade solutions for acquiring PKEA license](#).

Upgrade readiness

1. How can I know that my device is ready to upgrade?

You can confirm that your device is prepared for the Windows 11 IoT Enterprise LTSC 2024 upgrade after the **Windows11IoTUpgradeKit.exe** package has been successfully installed on the Windows 10 IoT Enterprise LTSC 2021 device.

When you remotely deploy the upgrade kit using Wyse Management Suite (WMS), you can check the upgrade readiness of the devices by checking the following:

- Check the **Job Status** in WMS—After deploying the **Windows11IoTUpgradeKit.exe** package remotely using WMS, the status for devices where the deployment was successful is indicated as **Success:1** in the **Jobs** section of WMS. This confirms that the kit has been installed on the device.
- Verify the **Serial Number** in **WMS Portal Administration**—Upon the successful deployment of the **Windows11IoTUpgradeKit.exe**, devices become capable of supporting the Windows 11 IoT Enterprise LTSC 2024 upgrade, and their Serial Numbers are then displayed in the WMS **Portal Administration — Your Subscription**.

Follow these steps to view the Serial Numbers of the upgrade-supported devices:

1. Log in to the WMS as an administrator.
2. Go to **Portal Administration > Account > Subscription**. The **Portal Administration — Your Subscription** page is displayed.
3. Go to **License Usage > Windows 11 IoT Enterprise LTSC 2024 License usage** and click **View/Upload License Keys**.

The **Windows 11 IoT Enterprise LTSC 2024 License usage** page is displayed. The **Serial Numbers** is displayed in the first column of the table.