Omada Controller Upgrade Guide

Omada SDN Controller 4.1.5 is a major update to the Omada Controller, representing TP-Link's work in developing an integrated and efficient network solution covering nearly all modules and functions. TP-Link Team has strived to maintain the commitment to backward compatibility and straight-forward upgrade process. However, given the vast scope of changes in Omada SDN Controller 4.1.5, there are inevitably special considerations to be evaluated and actions to be taken in order to successfully upgrade from your current controller. This guide provides instructions for upgrading your Omada Controller to Release 4.1.5, which maintains your configurations and reduces the overall upgrade downtime.

The guide includes the following sections:

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Introduction to Omada SDN Controller Solution

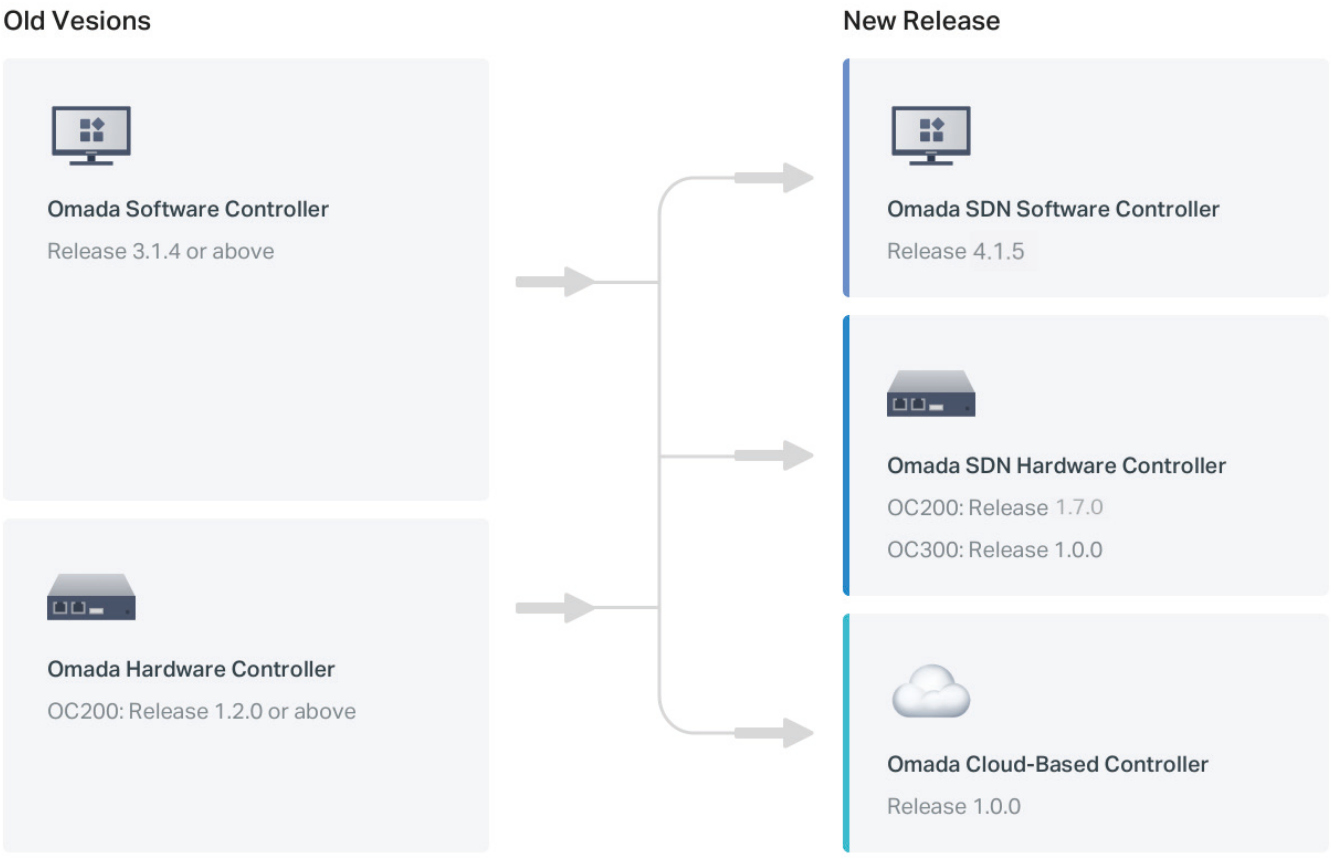
Omada SDN Controller Solution is designed to provide business-class networking solutions for demanding and high-traffic environments, such as campuses, hotels, malls, and offices. Developed from Omada Controller that can centrally manage wireless access points, Omada SDN Controller acts as the command center of the network and provides a unified approach to configuring enterprise networks comprised of routers, switches, and wireless access points. Omada SDN Controller simplifies managing large-scale networks and offers easy maintenance, ongoing monitoring, and flexible scalability.

Tailored to different needs and applications, Omada SDN Controller offers diverse deployment solutions: Omada Software Controller, Omada Hardware Controller, and Omada Cloud-Based Controller. Newly developed Omada Cloud-Based Controller controller is deployed on the Omada Cloud server. With a paid subscription to Omada Cloud Service, you need not install the software on the host or purchase an additional hardware device. Three types of Controller differ in forms, but they serve the same functions with management of networks.

Before You Upgrade

1 Upgrade Paths and Version Considerations

Regardless of which type of Omada Controller you are using, you can upgrade it to different forms of Omada SDN Controller.



If you are using a version earlier than Omada Software Controller, Release 3.1.4 (Omada Hardware Controller, Release 1.2.0) you need to first upgrade to one of the releases that are listed above and then follow the upgrade procedure in this guide.

2 Checking Compatibility Matrix

Omada SDN Controller can configure and manage only the certain devices with supported firmwares.

View the compatibility matrix below to check if your device is compatible with Omada SDN Controller. If the firmware version of your device is lower than the version listed, click the button to download the latest firmware and extra the firmware file(.bin), then follow the instructions to upgrade it.

EAP245 V3 2.20.0 Build 20200423 Rel. 36779 and above	EAP225 V3 2.20.0 Build 20200422 Rel. 70513 and above
EAP115 V4 3.20.0 Build 20200525 Rel.36931 and above	EAP110 V4 3.20.0 Build 20200525 Rel. 36899 and above
EAP225-Wall V2 1.20.0 Build 20200422 Rel. 70504 and above	EAP115-Wall V1 1.20.0 Build 20200509 Rel. 63986 and above
EAP225-Outdoor V1 1.20.0 Build 20200422 Rel. 70543 and above	EAP110-Outdoor V3 3.20.0 Build 20200511 Rel. 33388 and above

3 Feature Updates

Two levels of functional changes that you should pay attention to when upgrading a controller: features to be configured and adjusted features.

- Features to be configured

  These features will require manual configuration. In other words, these are features that have a direct corresponding solution, but for various reasons cannot be automatically upgraded.

Wireless Control > Access Control	Access Control has been updated to ACL in the Network Security module in Omada SDN Controller 4.1.5. The new function can be applied to specific clients or groups whose traffic passes through the gateway, switches and EAPs. If you want to restore Access Control configurations, go to **Settings > Network Security > ACL** and configure the EAP ACL rules manually after upgrading.

Wireless Control > Portal	Portal has been improved in Omada SDN Controller 4.1.5, which can take effect on SSIDs and LAN networks. Only one portal is allowed for a single site and supports one authentication type (including No Authentication, Simple Password, Hotspot, External RADIUS Server, and External Portal Server). For Hotspot, you can select one or more authentication modes from Voucher, Local User, SMS, RADIUS, and Facebook. If you want to restore Portal configuration, go to **Settings > Authentication** and configure Portal manually after upgrading.
Wireless Control > Free Authentication Policy	Free Authentication Policy has been changed to Authentication-Free Policy as a subordinate function of Portal in Omada SDN Controller 4.1.5, which can allow certain clients to access the internet without Portal authentication.

- Adjusted features

These are features that have been adjusted or replaced by new designs.

Wireless Control > Scheduler Wireless Control > Scheduler Association	The two modules are adjusted to the Profile module in Omada SDN Controller 4.1.5, which provides a more flexible and practical approach for Time Range customization and association.
Insight > Untrusted Rogue APs Insight >Trusted Rogue APs	The two modules are adjusted in Omada SDN Controller 4.1.5. Rogue APs Detection can scan all channels to detect all nearby APs by an optimized mechanism, but will not sort the rouge APs into Trusted or Untrusted in the new release, which simplifies the configuration.
Site Settings > Log Settings	For old versions, you need to set both the sender's and receiver's email address to receive system logs, and set Time Mode to determine system logs to be sent at a specific time or time interval. With Mail Server configured on the Controller module, Omada SDN Controller 4.1.5 can send emails for resetting your password, pushing notifications, and delivering the system logs. And the system logs will be automatically emailed to the mailbox bound with the administrator account at a regular interval.
Controller Settings > User Account	The tiered roles of system administrators have been redefined. The system administrators of the old controller have three types of roles with a descending priority: Administrator (including Root Administrator), Operator, and Observer. Correspondingly, Three roles of the new release are Master Administrator, Administrator, and Viewer.

Upgrade Your Controller

1 Prepare for Upgrade

To successfully upgrade a current controller, ensure that you have performed the following tasks before you upgrade:

1. Download the upgrade bundles and place them in the repository.
2. Read carefully this guide and know the process of upgrading, then plan for an upgrade with minimum downtime.

2 Upgrade Procedure

Upgrading is a multistep process and must be performed in the order that is specified in this guide.

According to your upgrade target, click the tab below to jump quickly to the corresponding page and select the suitable scheme for your upgrade.

Upgrade to Omada Software Controller | Upgrade to Omada Hardware Controller (OC200/OC300) | Upgrade to Omada Cloud-Based Controller

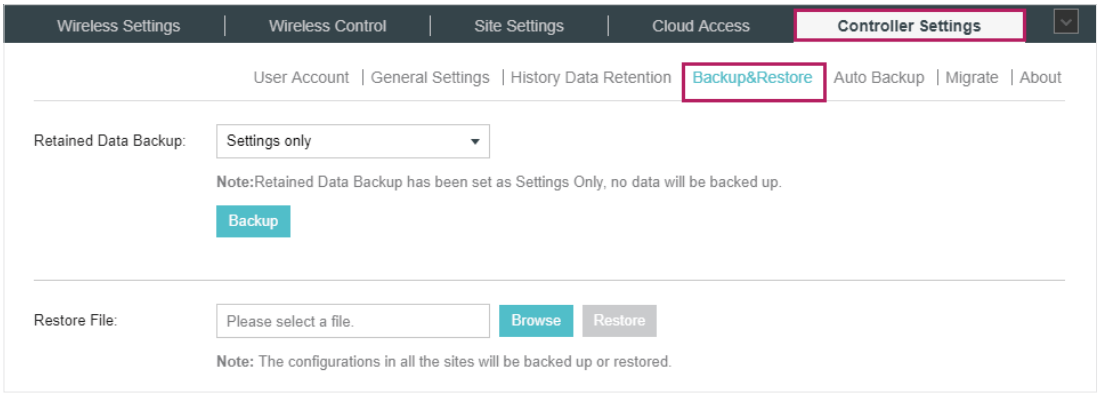
- Upgrade on the Same Computer

If you want to upgrade to Omada Software Controller 4.1.5 on your current controller host, complete the following procedures required for a successful upgrade:

1. Back up your current controller
2. Uninstall the current controller
3. Install Omada Software Controller 4.1.5
4. Import the backup file of the previous controller
5. Upgrade the devices in Omada SDN Controller

▶ Back up your current controller.

Step 1 Go to **Controller Settings > Backup&Restore**.



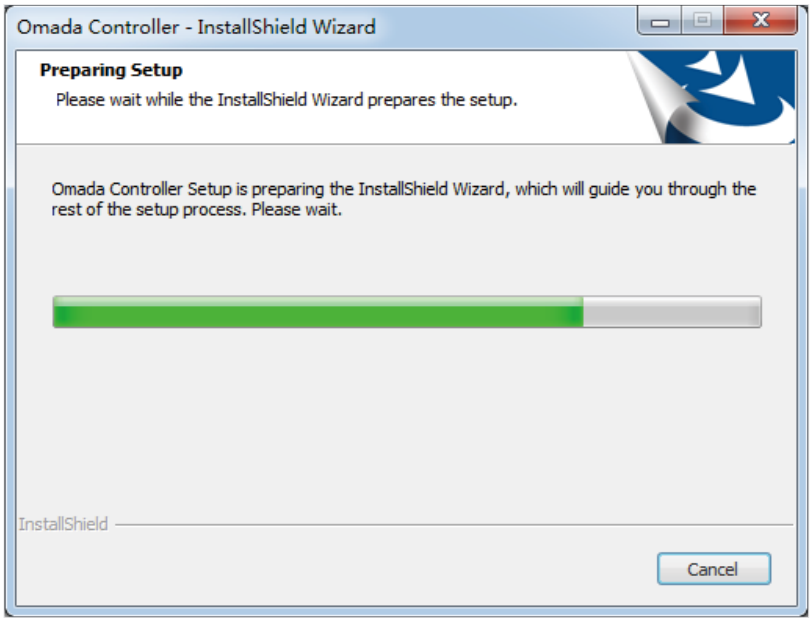
Step 2 Select the length of time in days that data will be backed up in the **Retained Data Backup** drop-down list. For example, with 7 days selected, the data only in recent 7 days will be backed up.

Step 3 Click **Backup** to save the current configuration and data in the controller as a backup file.

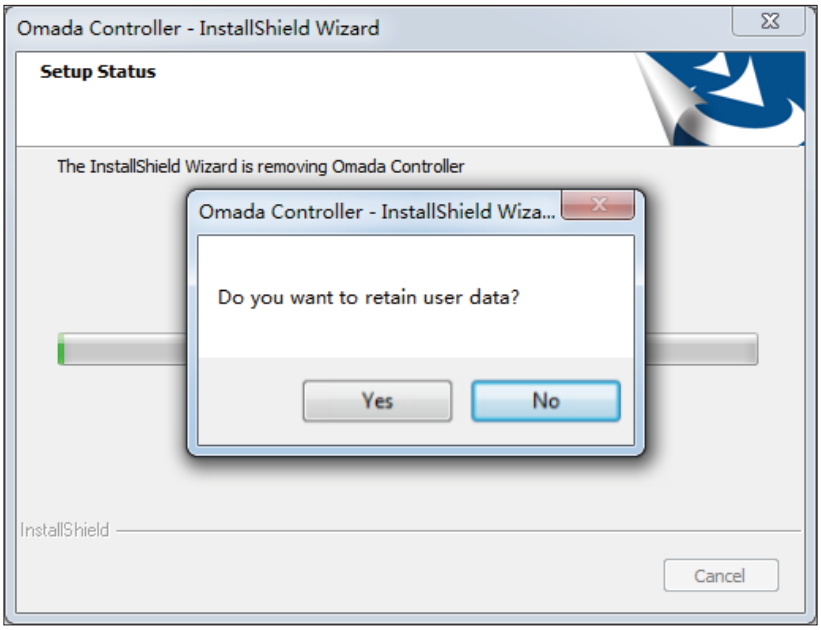
▶ Uninstall the current controller.

Step 1 In the search box on the taskbar of the controller host, type Control Panel and select it from the results. Select Programs > Programs and Features.

Press and hold (or right-click) on the program you want to remove and select Uninstall. Then follow the directions on the screen.



Step 2 Click No to completely remove all data of the controller.



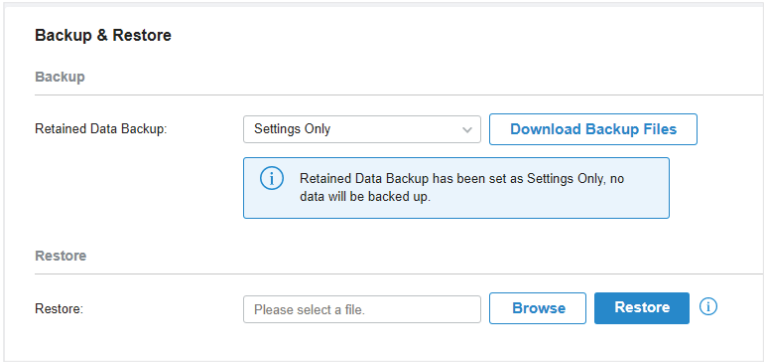
► Install Omada Software Controller 4.1.5.

Step 1 Run the installation file and follow the wizard to install the Omada SDN Controller. The installation file can be downloaded from https://www.tp-link.com/support/download/omada-software-controller/.

Step 2 Launch the Omada SDN Controller and follow the step-by-step instructions to complete the Quick Setup. After the wizard is finished, a login screen will appear. Enter the username and password you created and click **Log in**.

► Import the backup file of the previous controller.

Step 1 Go to **Settings > Maintenance > Backup & Restore**.

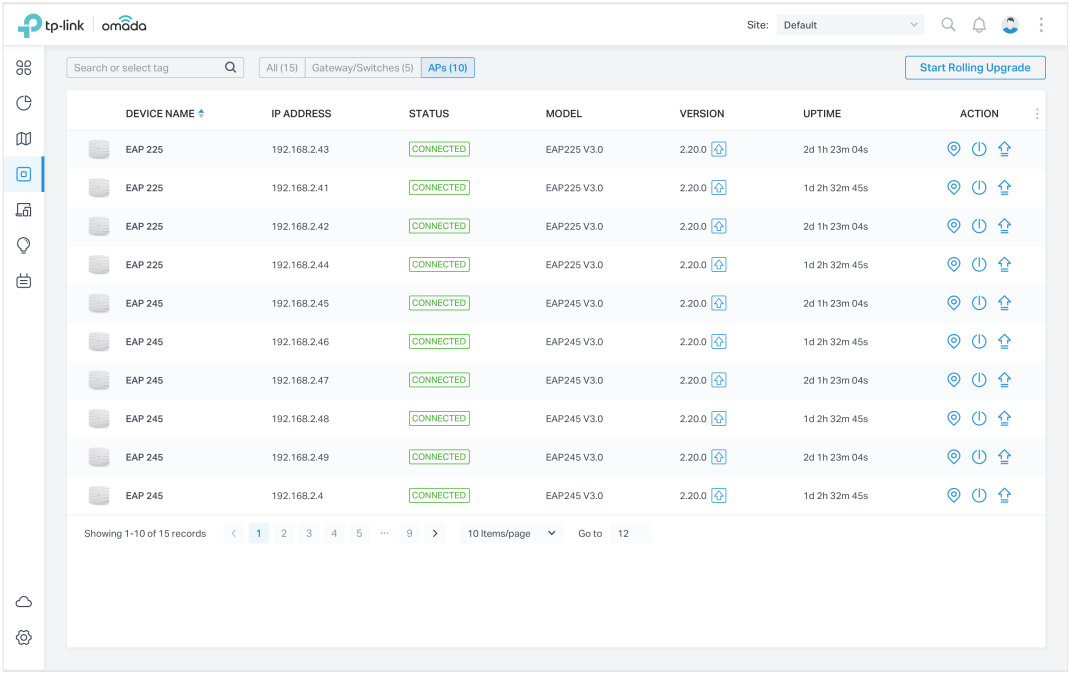


Step 2 Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

► Upgrade the devices in Omada SDN Controller.

Step 1

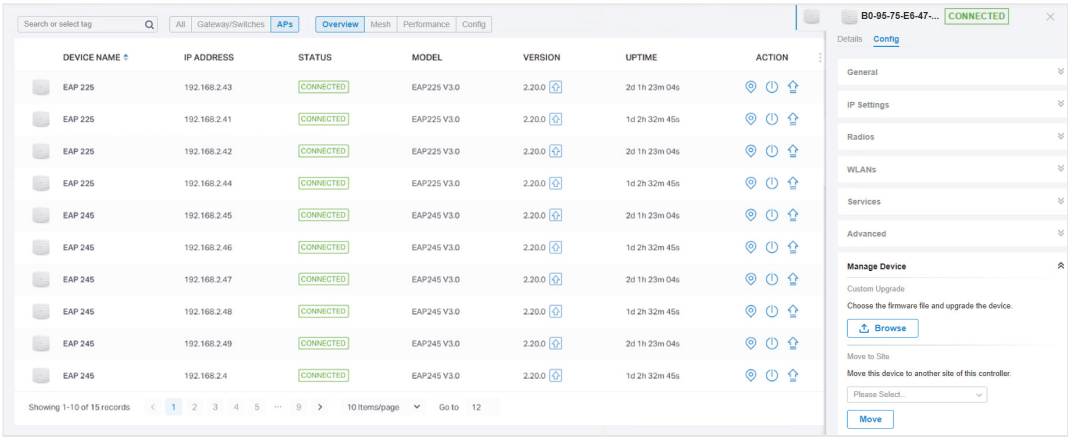
After the backup files imported, the devices will be automatically discovered and adopted by the controller. Go to **Devices**, and click ⇧ to upgrade the devices one by one. Or you can click Start Rolling Upgrade to upgrade the devices in batch.



Step 2

(Optional)

To realize custom upgrade, you can click the entry of the device to open the Properties window, click **Config** and then you can upgrade the device's firmware version manually in **Manage Device** section.



■ Upgrade Across Devices

If you want to upgrade to Omada software Controller 4.1.5 on another host or from an OC200, complete the following procedures required for a successful upgrade:

1. Install Omada Software Controller 4.1.5
2. Migrate your configurations and data from the current controller to the new controller.
3. Upgrade the devices in Omada SDN Controller

▶ Install Omada Software Controller 4.1.5.

Step 1

Run the installation file and follow the wizard to install the Omada SDN Controller. The installation file can be downloaded from https://www.tp-link.com/support/download/omada-software-controller/.

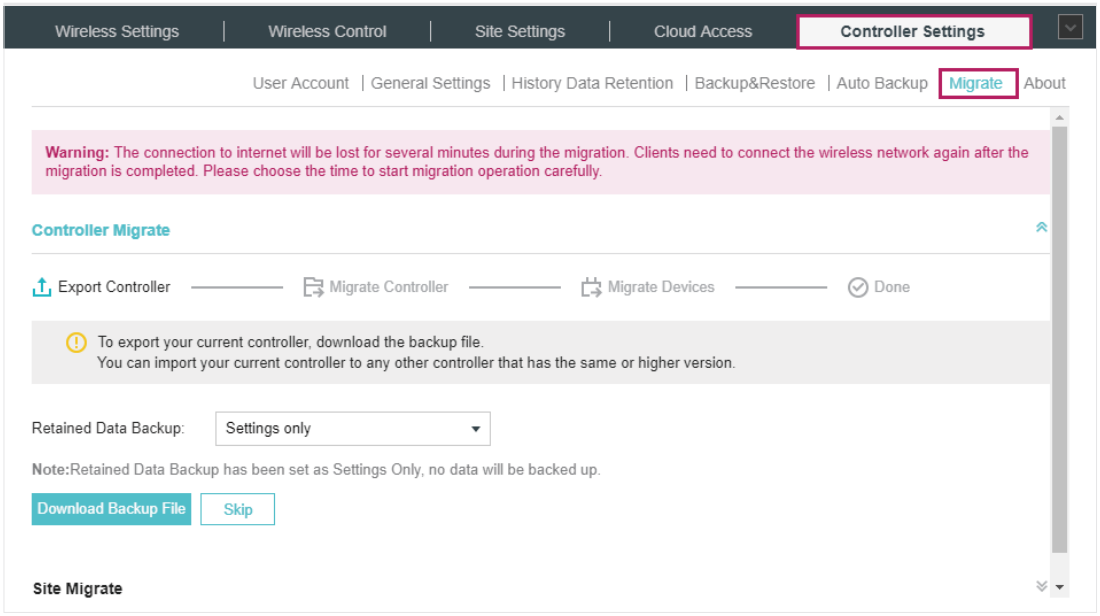
Step 2

Launch the Omada SDN Controller and follow the step-by-step instructions to complete the Quick Setup. After the wizard is finished, a login screen will appear. Enter the username and password you created and click **Log in**.

▶ Migrate your configurations and data from the current controller to the new controller.

Step 1

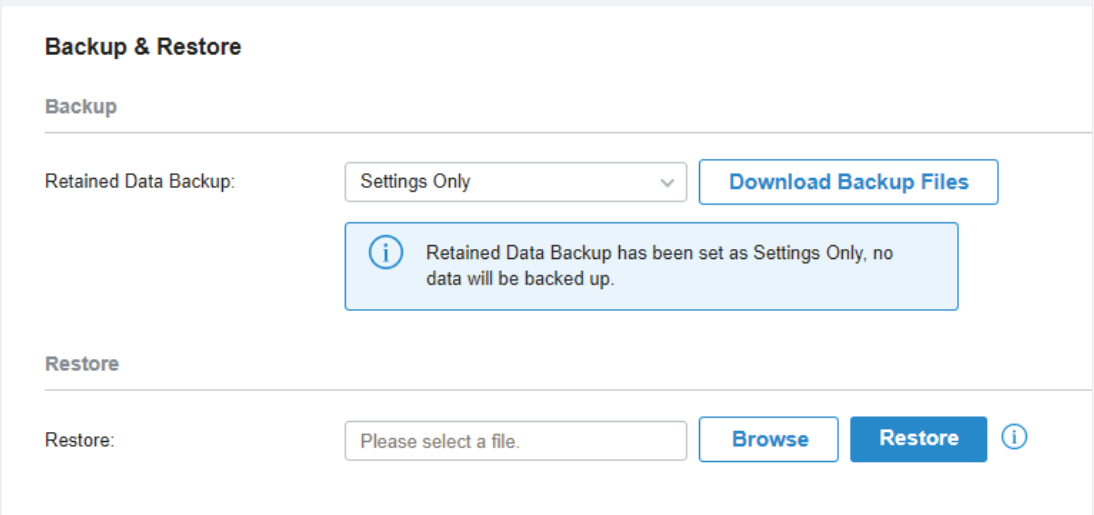
On the current controller, go to **Controller Settings > Migrate > Controller Migrate**, select the length of time in days that data will be backed up in the **Retained Data Backup**, and click **Download Backup File** to export the configurations and data of your current controller as a backup file. If you have backed up the file, click **Skip**.



Step 2

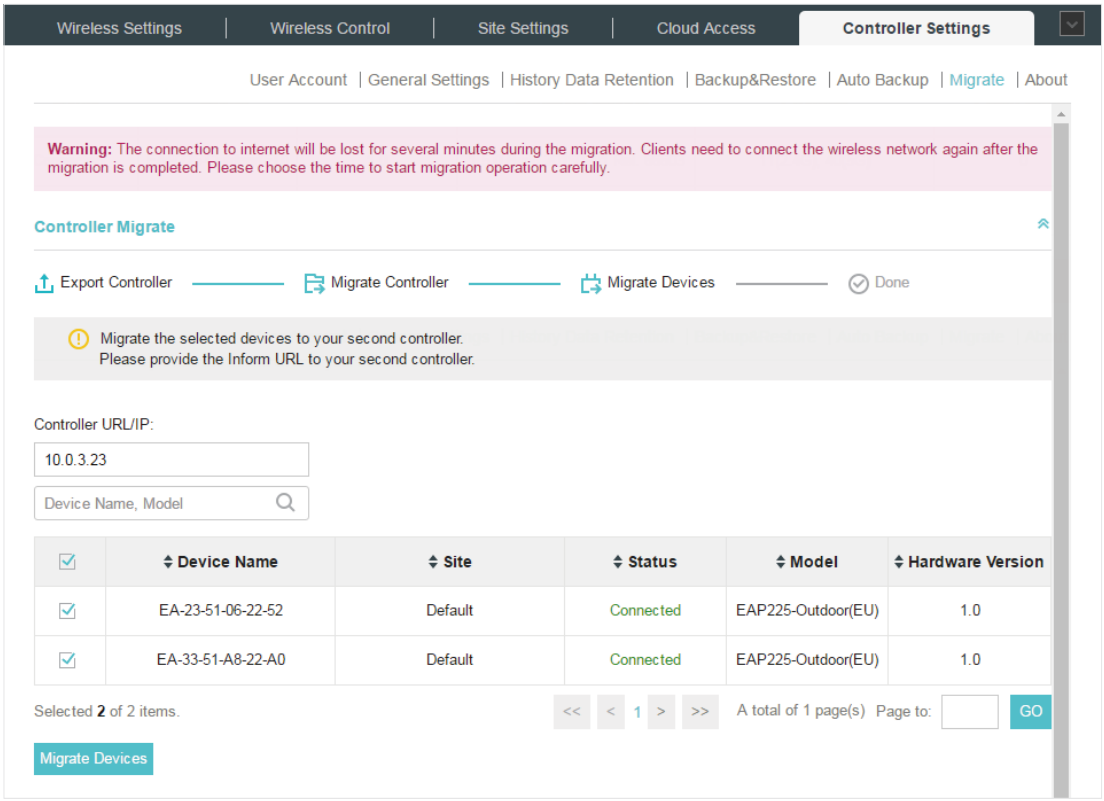
Log in to the new controller, go to **Settings > Maintenance > Backup & Restore**. Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

After the file has been restored to the new controller, go back to the previous controller and click **Confirm**.



Step 3

On the current controller, enter the IP address or URL of the new controller into Controller URL/IP input field. Then click **Migrate Devices** to migrate the devices to the new controller.

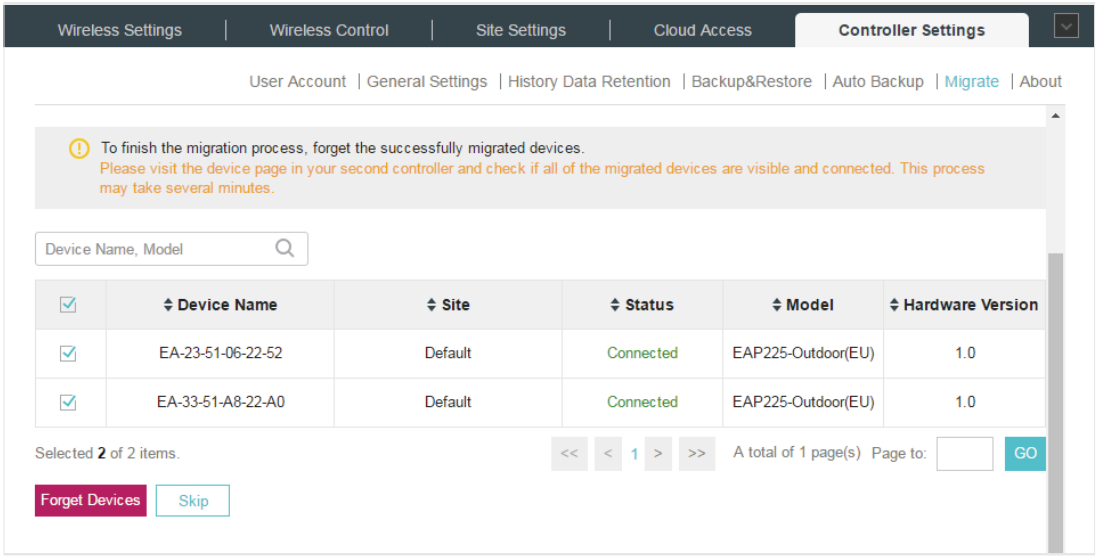


Note:

Make sure that TCP/UDP ports 29810–29813 is enabled on the computer. So the EAPs can communicate with the controller via the ports. If the firewall and antivirus software block these ports, they also block the packets between the controller and EAPs.

Step 4

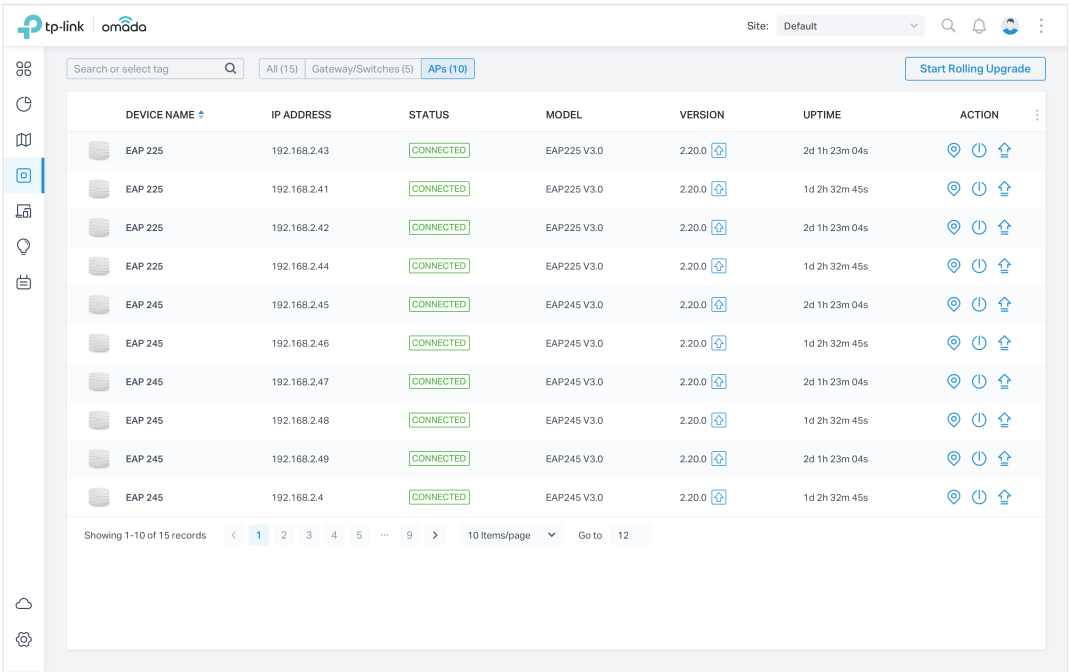
Verify that all the migrated devices are visible and connected on the new controller. When all the migrated devices are in Connected status on the **Device** page on the new controller, click **Forget Devices** to finish the migration process.



► Upgrade the devices in Omada SDN Controller.

Step 1

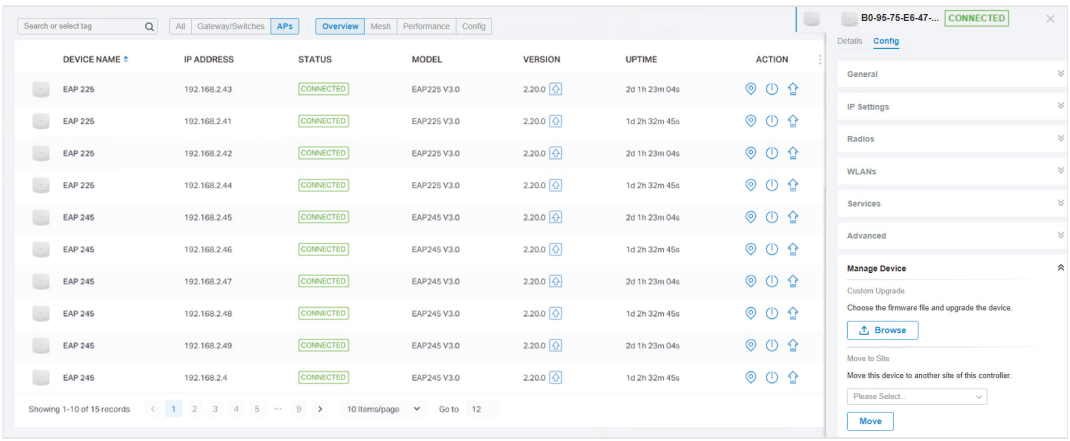
After the backup files imported, the devices will be automatically discovered and adopted by the controller. Go to **Devices**, and click ⇧ to upgrade the devices one by one. Or you can click Start Rolling Upgrade to upgrade the devices in batch.



Step 2

(Optional)

To realize custom upgrade, you can click the entry of the device to open the Properties window, click **Config** and then you can upgrade the device's firmware version manually in **Manage Device** section.



Upgrade to Omada Software Controller | Upgrade to Omada Hardware Controller (OC200/OC300) | Upgrade to Omada Cloud-Based Controller

■ Upgrade on the Same Omada Hardware Controller

If you want to upgrade your OC200 to Omada SDN Hardware Controller (OC200), Release 1.7.0, complete the following procedures required for a successful upgrade:

1. Upgrade the firmware of your current controller
2. Import the backup file of the previous controller
3. Upgrade the devices in Omada SDN Controller

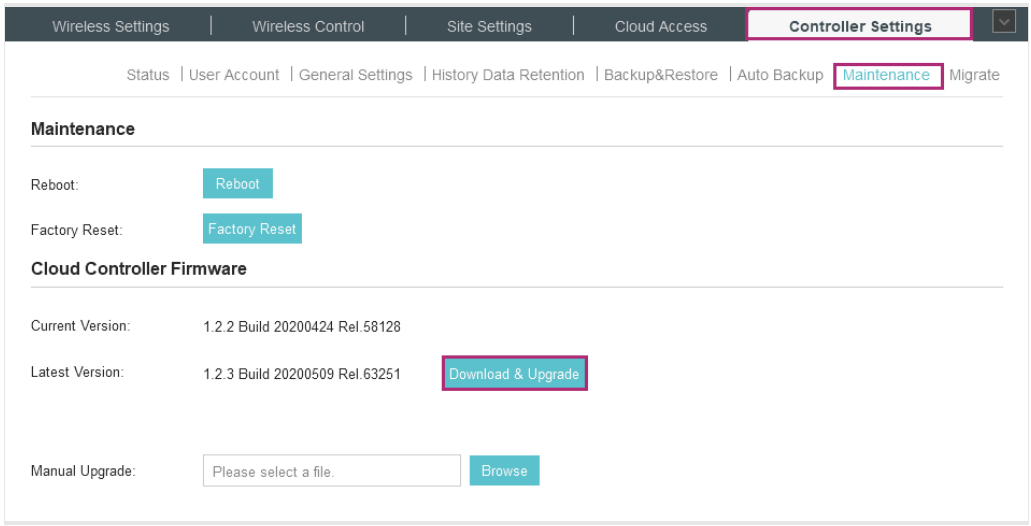
► Upgrade the firmware of your current controller.

The hardware controller can be upgraded online, or manually in a slightly different way.

Online Upgrade

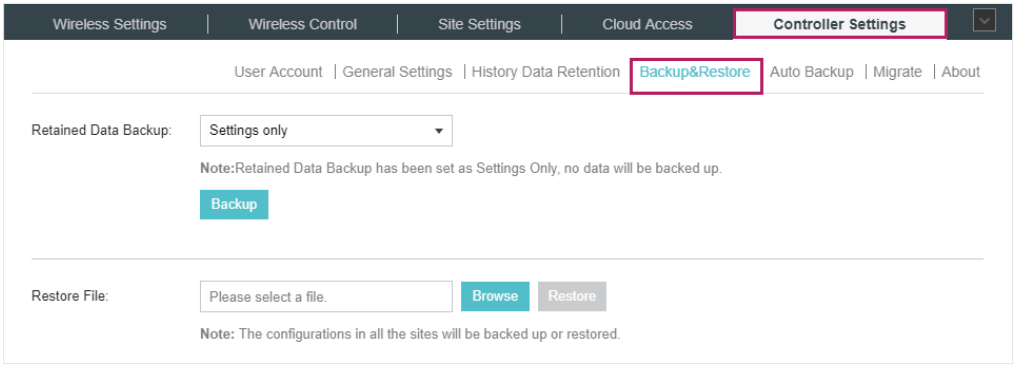
Step 1

Go to **Controller Settings > Maintenance**, click **Download & Upgrade** to upgrade the controller to interim version 1.2.3.



Step 2

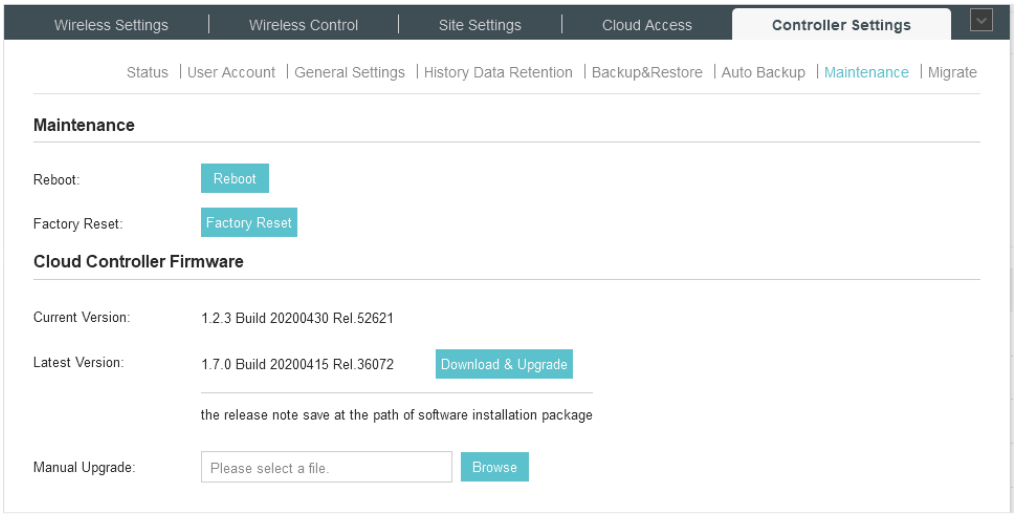
Go to **Controller Settings > Backup&Restore**.



Select the length of time in days that data will be backed up in the **Retained Data Backup** drop-down list. Click **Backup** to save the current configuration and data in the controller as a backup file.

Step 3

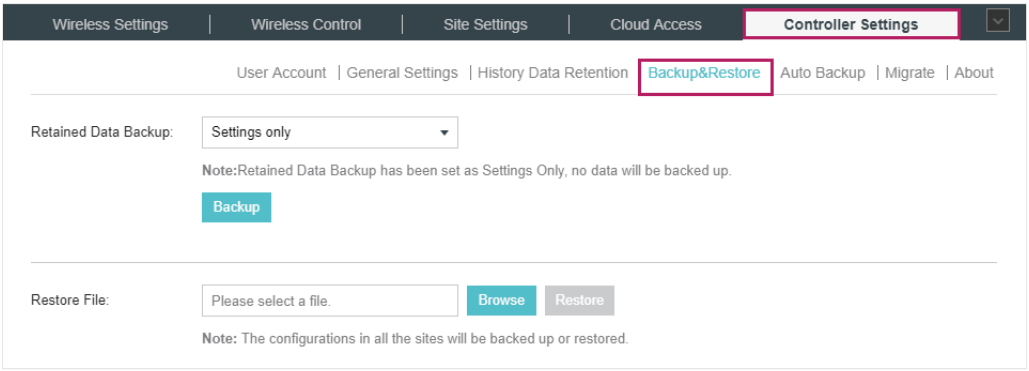
After backup finished, go to **Controller Settings > Maintenance**, click **Download & Upgrade** to upgrade the controller to the new version 1.7.0, which is the Omada SDN Controller.



Manual Upgrade

Step 1

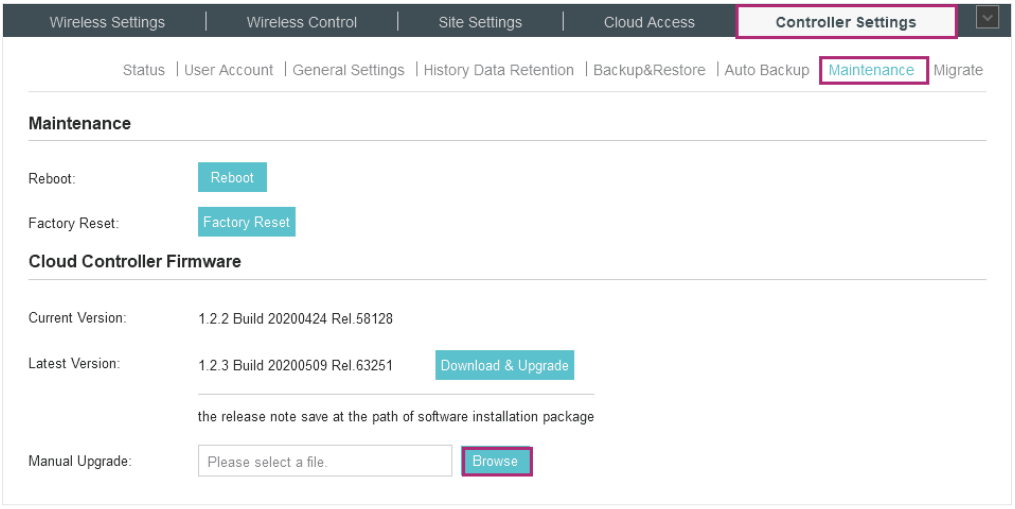
Go to **Controller Settings > Backup&Restore**.



Select the length of time in days that data will be backed up in the **Retained Data Backup** drop-down list. Click **Backup** to save the current configuration and data in the controller as a backup file.

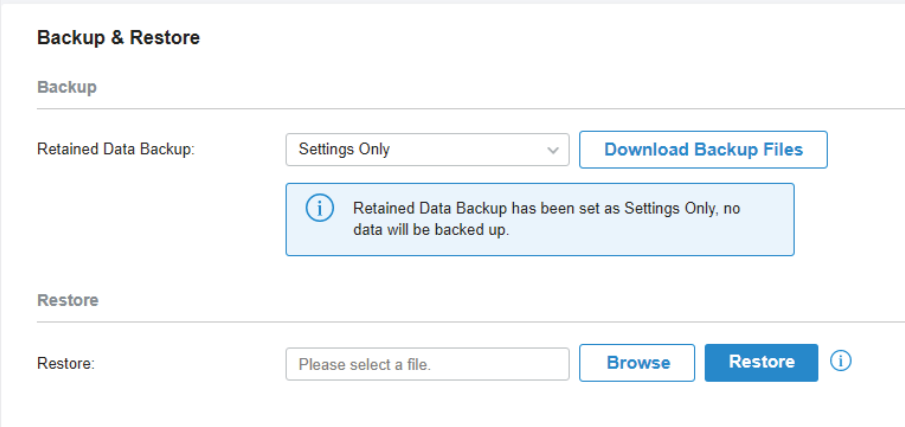
Step 2

Go to **Controller Settings > Maintenance**, click **Browse to** locate and choose proper firmware file of the new version 1.7.0, which is the Omada SDN Controller.



► Import the backup file of the previous controller

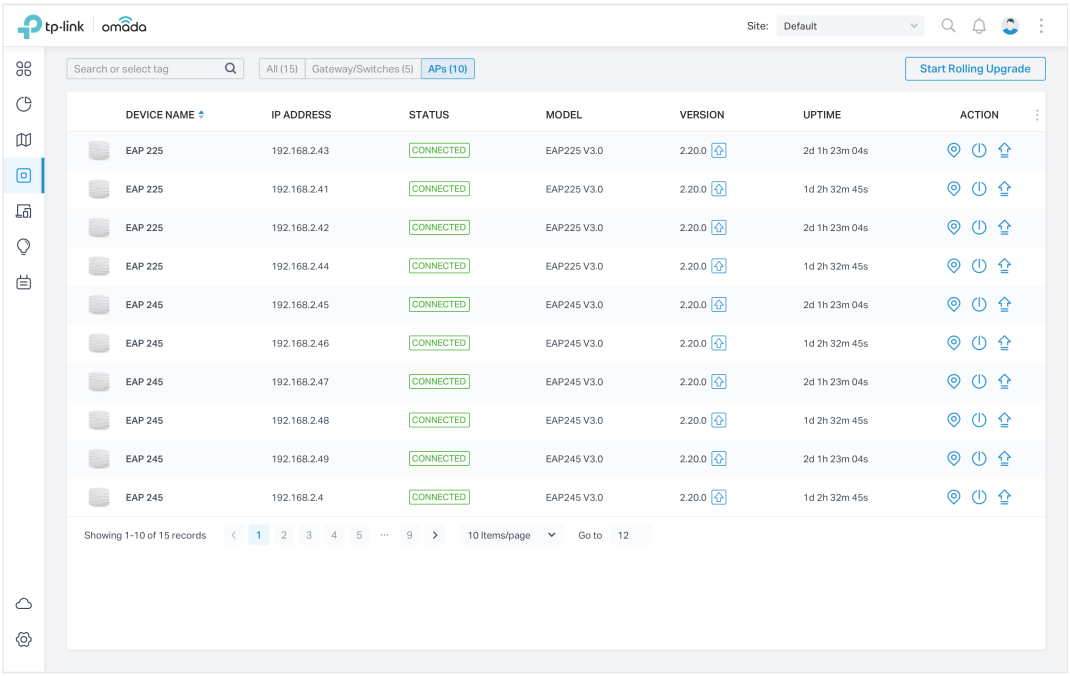
Step 1 Go to **Settings > Maintenance > Backup & Restore**.



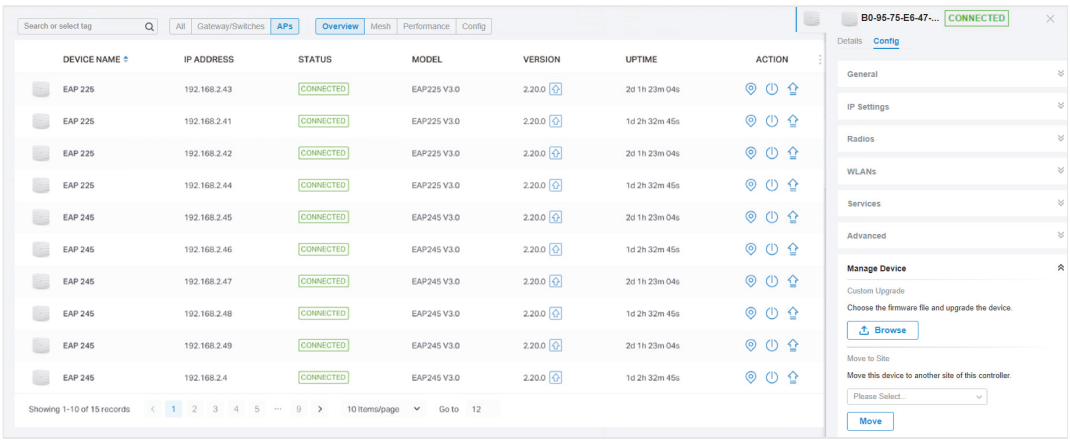
Step 2 Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

► Upgrade the devices in Omada SDN Controller.

Step 1 After the backup files imported, the devices will be automatically discovered and adopted by the controller. Go to **Devices**, and click to upgrade the devices one by one. Or you can click Start Rolling Upgrade to upgrade the devices in batch.



Step 2 (Optional)	To realize custom upgrade, you can click the entry of the device to open the Properties window, click **Config** and then you can upgrade the device's firmware version manually in **Manage Device** section.



■ Upgrade to Another Omada Hardware Controller

If you want to upgrade your OC200 or Omada Software Controller to another Omada SDN Hardware Controller, complete the following procedures required for a successful upgrade:

1. Deploy Omada SDN Hardware Controller.
2. Migrate your configurations and data from the current controller to the new controller.
3. Upgrade the devices in Omada SDN Hardware Controller.

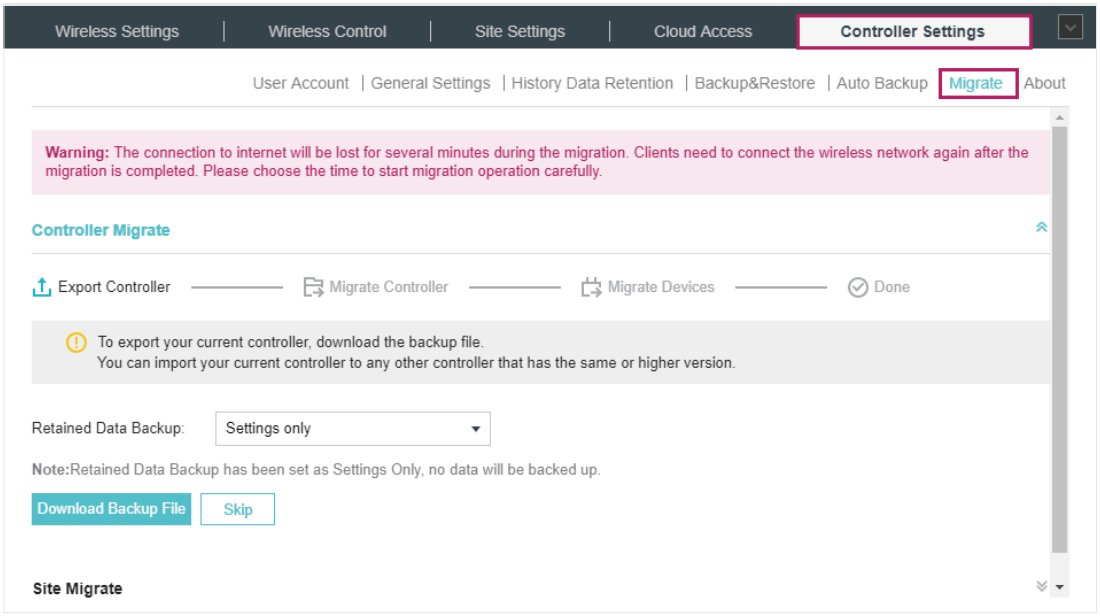
► Deploy Omada SDN Hardware Controller.

Deploy your new hardware controller according to your need and network topology. Then launch the controller and follow the step-by-step instructions to complete the Quick Setup.

▶ Migrate your configurations and data from the current controller to the new controller.

Step 1

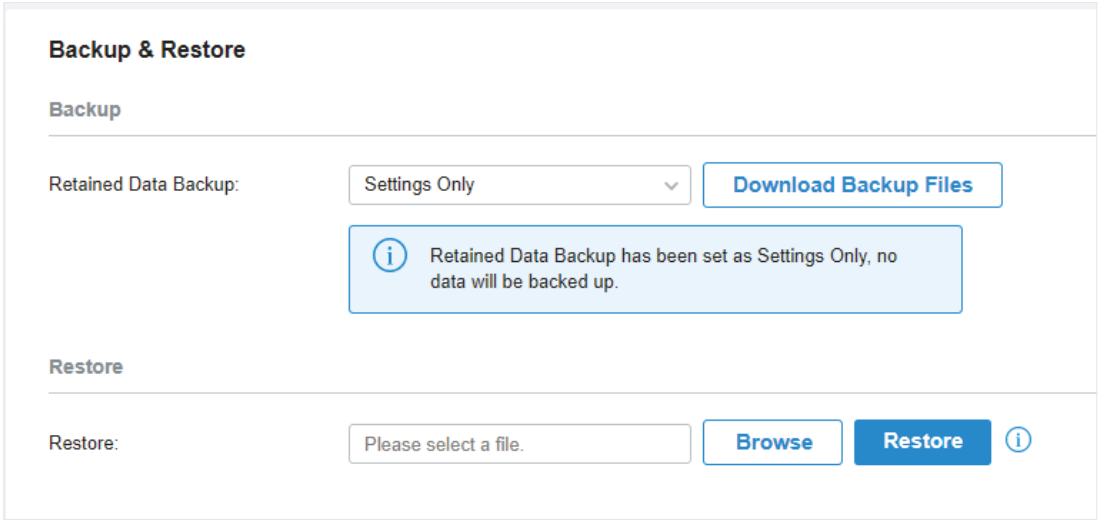
On the current controller, go to **Controller Settings > Migrate > Controller Migrate**, select the length of time in days that data will be backed up in the **Retained Data Backup**, and click **Download Backup File** to export the configurations and data of your current controller as a backup file. If you have backed up the file, click **Skip**.



Step 2

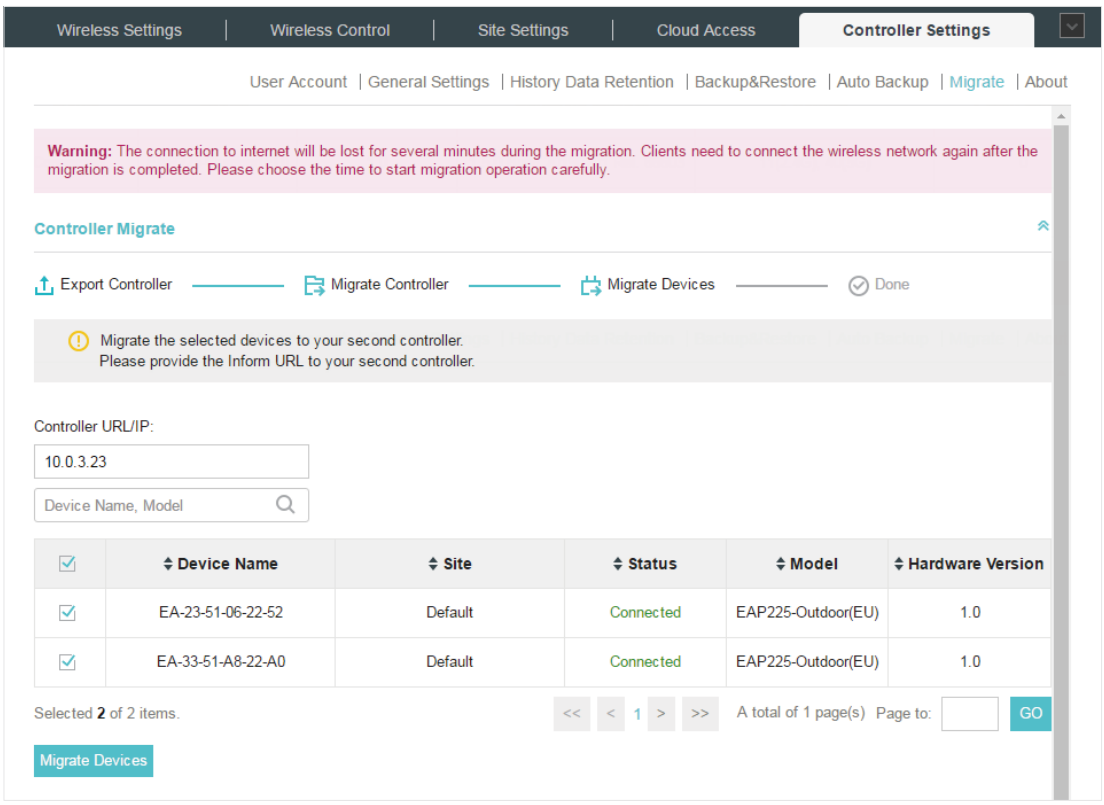
Log in to the new controller, go to **Settings > Maintenance > Backup & Restore**. Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

After the file has been restored to the new controller, go back to the previous controller and click **Confirm**.



Step 3

On the current controller, enter the IP address or URL of the new controller into Controller URL/IP input field. Then click **Migrate Devices** to migrate the devices to the new controller.

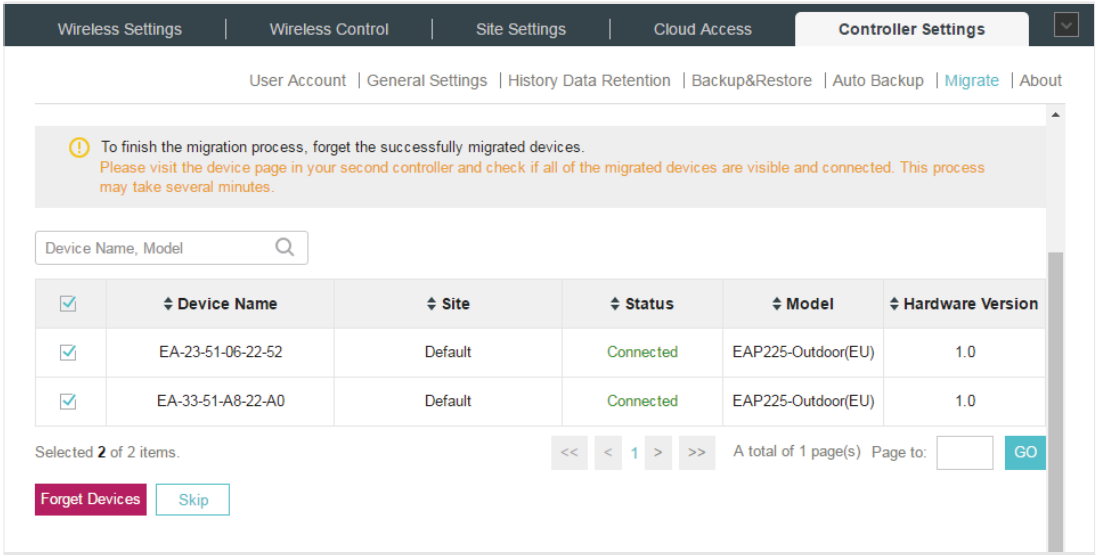


Note:

Make sure that TCP/UDP ports 29810–29813 is enabled on the computer, so the EAPs can communicate with the controller via the ports. If the firewall and antivirus software block these ports, they also block the packets between the controller and EAPs.

Step 4

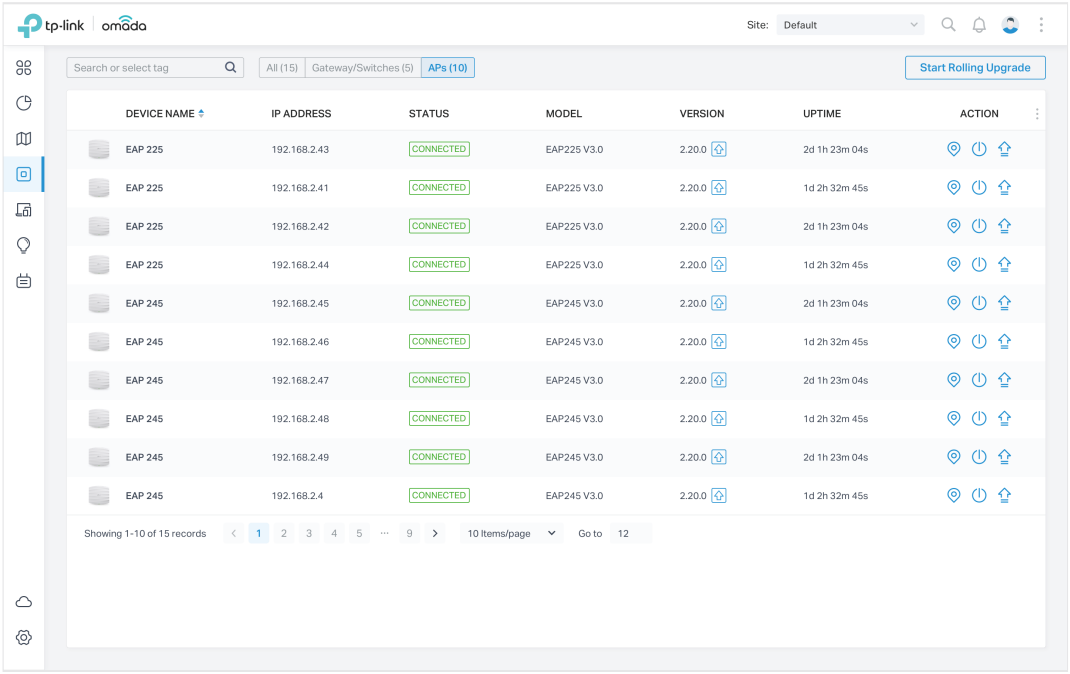
Verify that all the migrated devices are visible and connected on the new controller. When all the migrated devices are in Connected status on the **Device** page on the new controller, click **Forget Devices** to finish the migration process.



▶ Upgrade the devices in Omada SDN Controller

Step 1

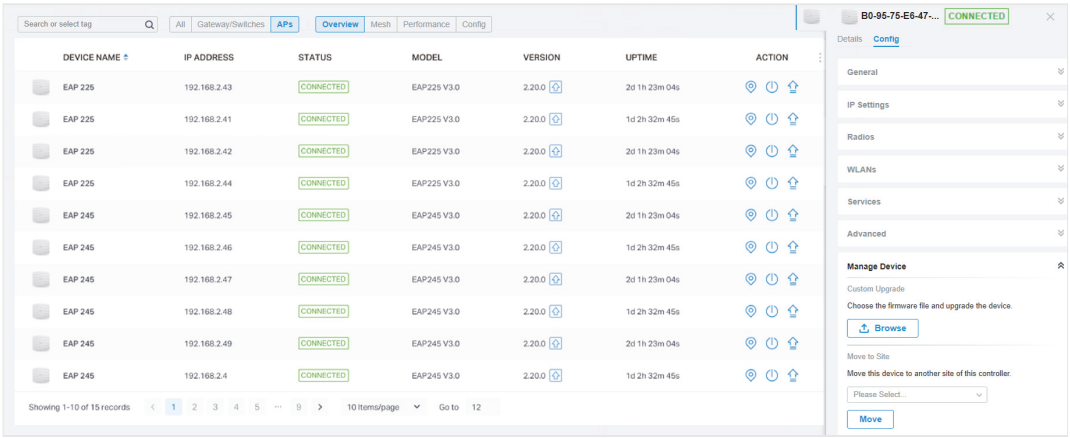
After the backup files imported, the devices will be automatically discovered and adopted by the controller. Go to **Devices**, and click ⇧ to upgrade the devices one by one. Or you can click Start Rolling Upgrade to upgrade the devices in batch.



Step 2

(Optional)

To realize custom upgrade, you can click the entry of the device to open the Properties window, click **Config** and then you can upgrade the device's firmware version manually in **Manage Device** section.



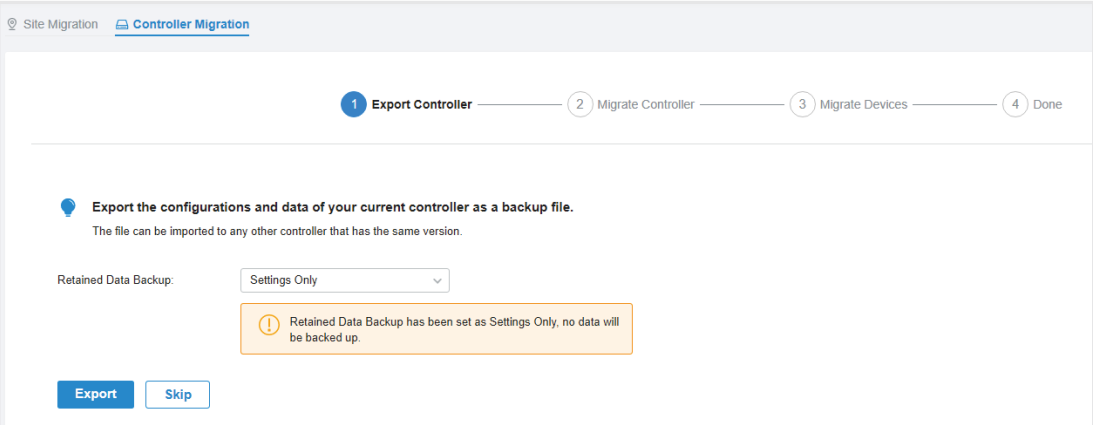
Upgrade from Omada Software Controller

To upgrade to Omada Cloud-Based Controller, you need to upgrade to Omada Software Controller 4.1.5 on your current controller host first. And then migrate the configurations and data from the current controller to the Omada Cloud-Based Controller.

1. Refer to Upgrade to Omada Software Controller.
2. Migrate your configurations and data from the current controller to the new controller.

Step 1

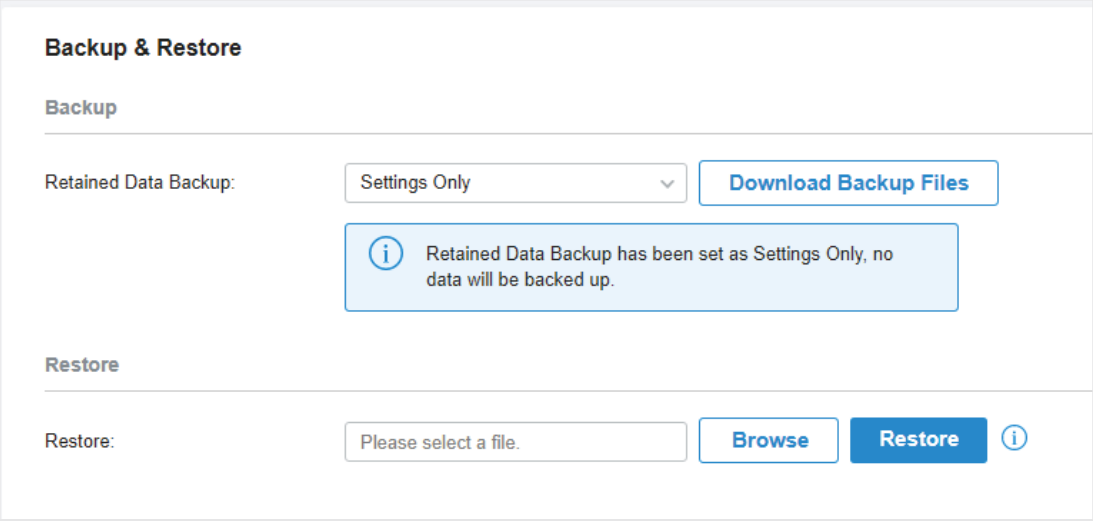
On the current controller, go to **Controller Settings > Migrate > Controller Migrate**, select the length of time in days that data will be backed up in the **Retained Data Backup**, and click **Export** to export the configurations and data of your current controller as a backup file. If you have backed up the file, click **Skip**.



Step 2

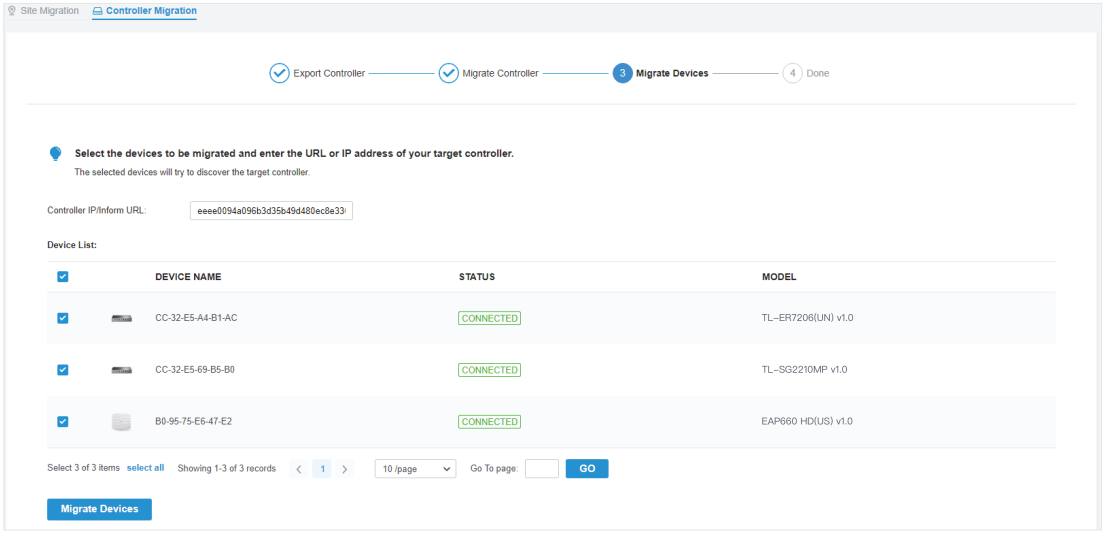
Log in to the cloud-based controller, go to **Settings > Maintenance > Backup & Restore**. Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

After the file has been restored to the new controller, go back to the previous controller and click **Confirm**.



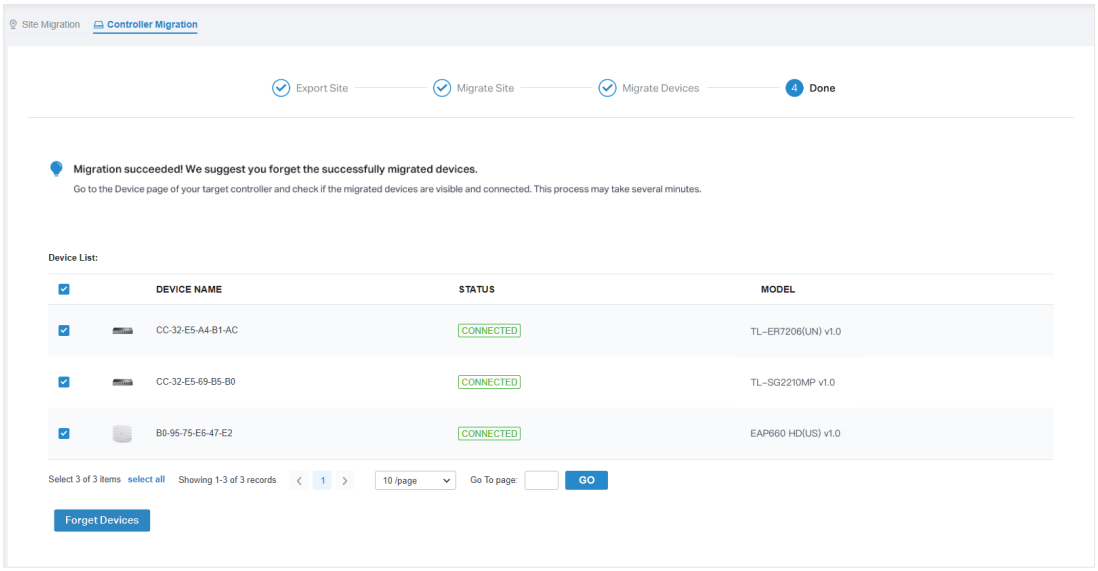
Step 3

On the current controller, enter the IP address or URL of the new controller into Controller IP/Inform URL input field. Then click **Migrate Devices** to migrate the devices to the new controller.



Step 4

Verify that all the migrated devices are visible and connected on the new controller. When all the migrated devices are in Connected status on the **Device** page on the new controller, click **Forget Devices** to finish the migration process.



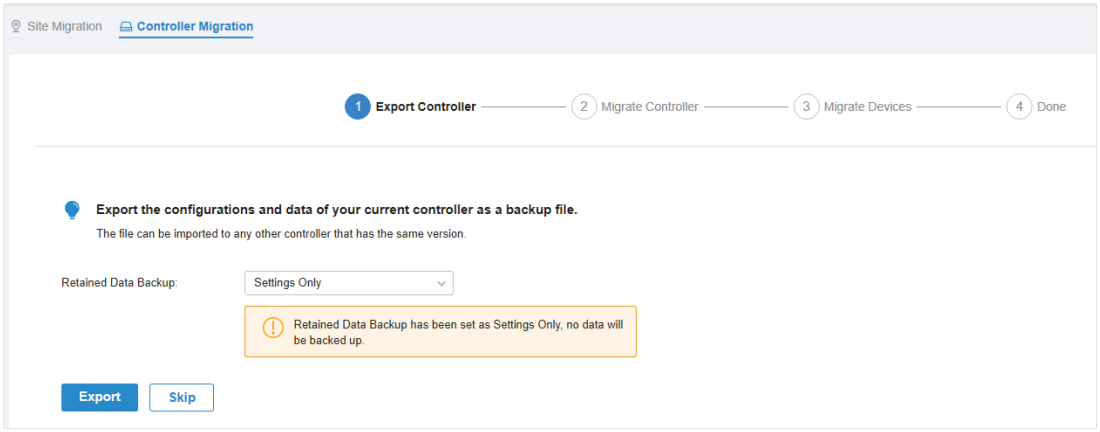
- Upgrade from Omada Hardware Controller(OC200/OC300)

To upgrade to Omada Cloud-Based Controller, you need to upgrade to Omada SDN Hardware Controller first. And then migrate the configurations and data from the current controller to the Omada Cloud-Based Controller.

1. Refer to Upgrade to Omada Hardware Controller.
2. Migrate your configurations and data from the current controller to the new controller.

Step 1

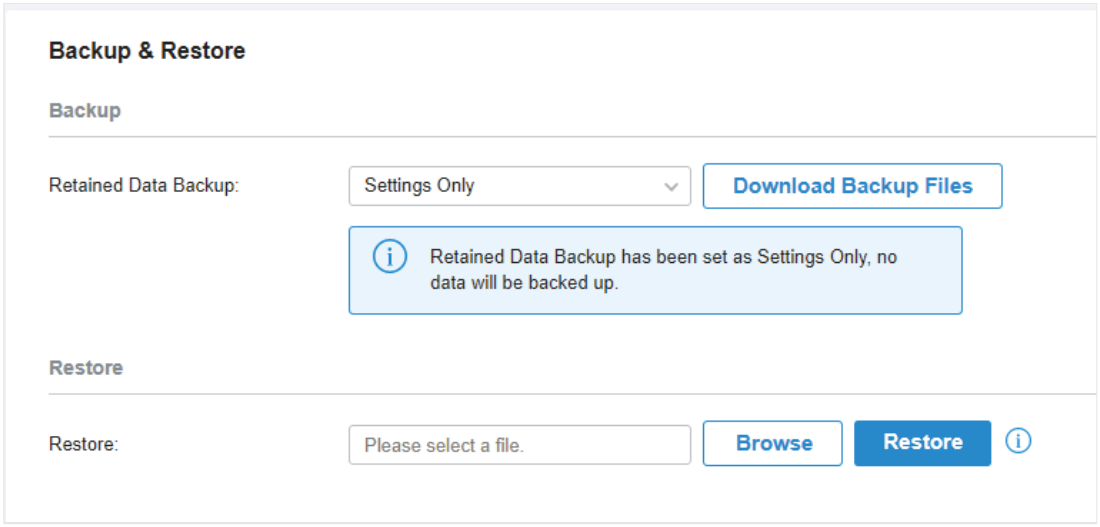
On the current controller, go to **Controller Settings > Migrate > Controller Migrate**, select the length of time in days that data will be backed up in the **Retained Data Backup**, and click **Export** to export the configurations and data of your current controller as a backup file. If you have backed up the file, click **Skip**.



Step 2

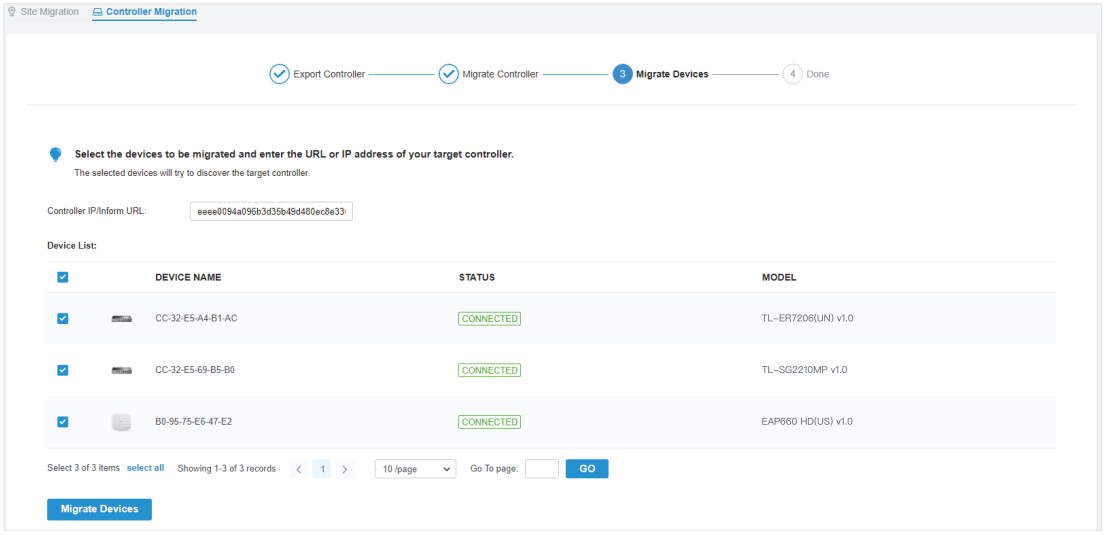
Log in to the cloud-based controller, go to **Settings > Maintenance > Backup & Restore**. Click **Browse** to locate and choose the backup file of the previous controller. Then click **Restore** to upload the file.

After the file has been restored to the new controller, go back to the previous controller and click **Confirm**.



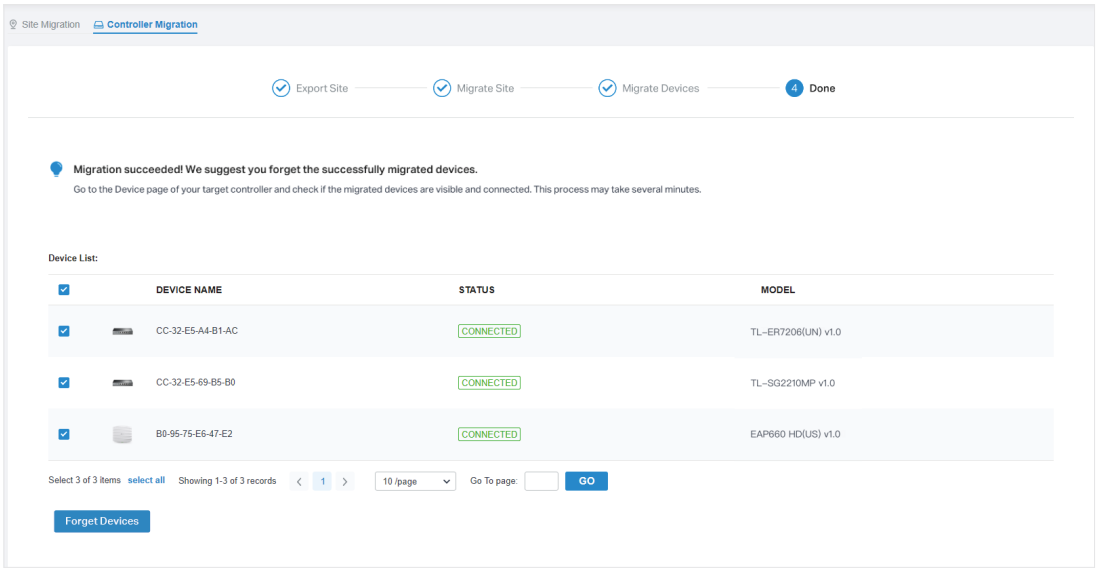
Step 3

On the current controller, enter the IP address or URL of the new controller into Controller IP/Inform URL input field. Then click **Migrate Devices** to migrate the devices to the new controller.



Step 4

Verify that all the migrated devices are visible and connected on the new controller. When all the migrated devices are in Connected status on the **Device** page on the new controller, click **Forget Devices** to finish the migration process.



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