

# Quick Start Guide for Omada Controller

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## CHAPTERS

1. Determine the Network Topology
2. Install Omada Controller Software
3. Inform the EAPs of the Controller Host's Address
4. Start and Log In to the Omada Controller
5. Create Sites and Adopt EAPs
6. Monitor and Manage the EAPs



## This guide applies to:

Omada Controller 3.2.1.

Omada Controller is a management software for TP-Link EAPs. With this software, you can centrally manage your EAPs, such as configure EAPs in batches and conduct real-time monitoring of EAPs locally or remotely through Omada Cloud service.

Follow the steps below to complete the basic settings of Omada Controller.

1. Determine the Network Topology
2. Install Omada Controller Software
3. Inform the EAPs of the Controller Host's Address
4. Start and Log In to the Omada Controller
5. Create Sites and Adopt EAPs
6. Monitor and Manage the EAPs

# 1 Determine the Network Topology

There are two methods to centrally manage EAPs via Omada Controller:

- Management on the Local Network
- Management via Cloud Access

Determine your management method according to your need and refer to the following introductions to build your network topology.

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## Note:

Omada app offers a convenient way to access the Omada Controller and adopt EAPs. With Local Access and Cloud Access function on the Omada app, you can manage the controller at local and remote sites. For more detailed information about Omada app, refer to [Configuring Omada APP for Omada Controller](#).

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## 1.1 Management on the local Network

There are two kinds of network topologies to centrally manage EAPs on the local network:

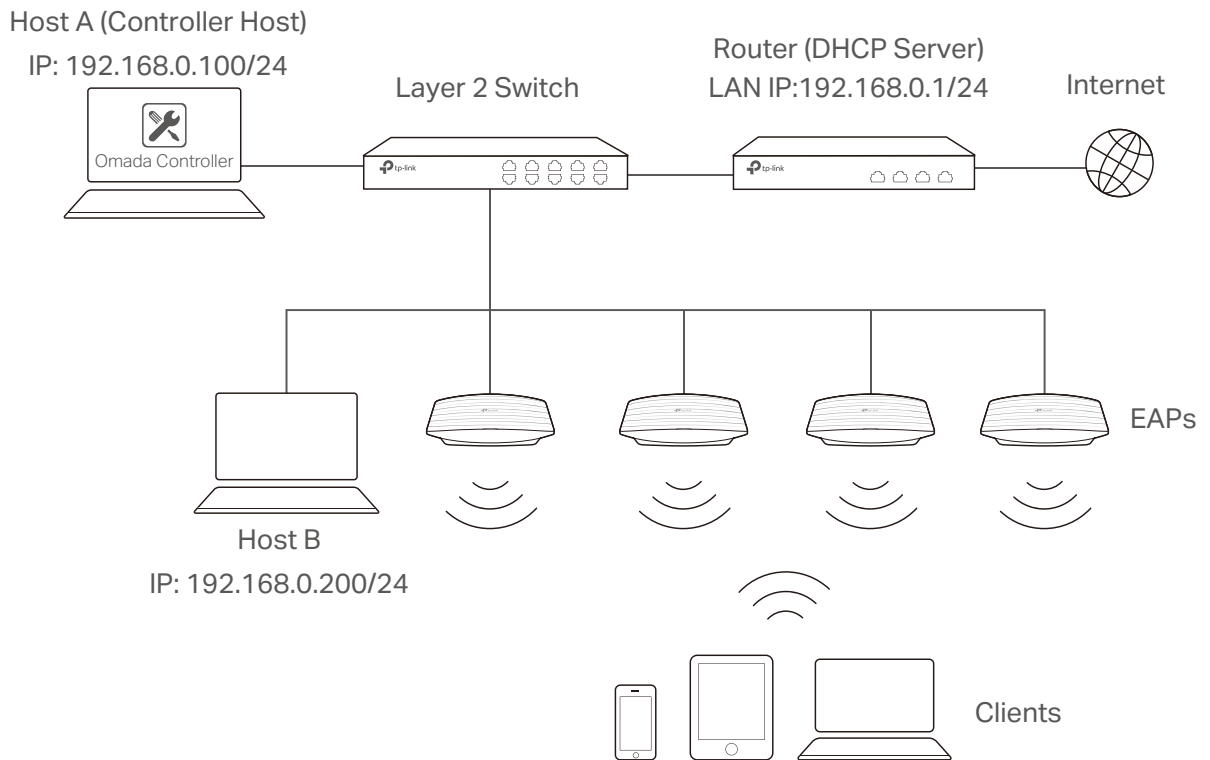
- Omada Controller and EAPs are in the same subnet.
- Omada Controller and EAPs are in different subnets.

Determine your management method according to your need and refer to the following introductions to build your network topology.

### Management in the Same Subnet

If your Omada Controller and EAPs are in the same subnet, refer to the following network topology.

A router acts as a DHCP server to assign IP addresses to EAPs and clients. Omada Controller should be installed on one host, which is called as Controller Host. The other hosts in the same LAN can access the Controller Host to manage the network. Taking the following topology as an example, you can enter "https://192.168.0.100:8043" in a web browser on Host B to visit the Omada Controller interface on Host A. It's recommended to set a static IP address to the Controller Host for the convenient login to the Omada Controller interface.



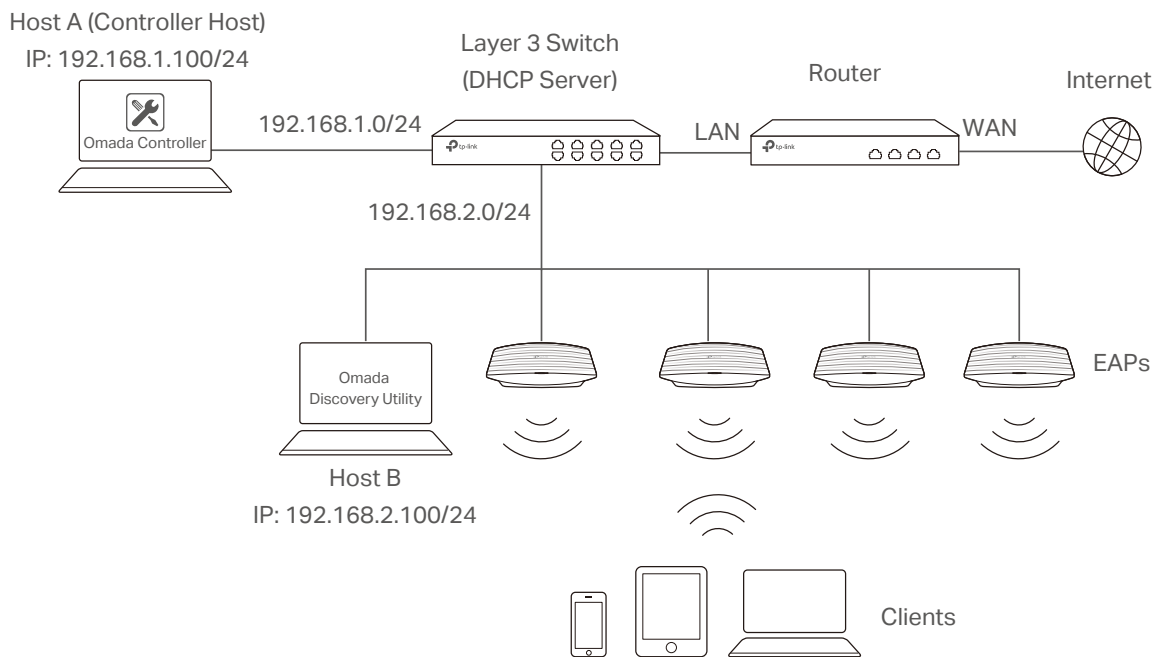
**Note:**

- Omada Controller must be running all the time when you manage the network.
- Omada Controller can be running on only one host in a LAN. When other users in the LAN try to launch Omada Controller on their own hosts, they will be redirected to the host that is already running Omada Controller.

## Management in Different Subnets

If your Omada Controller and EAPs are in different subnets, refer to the following topology.

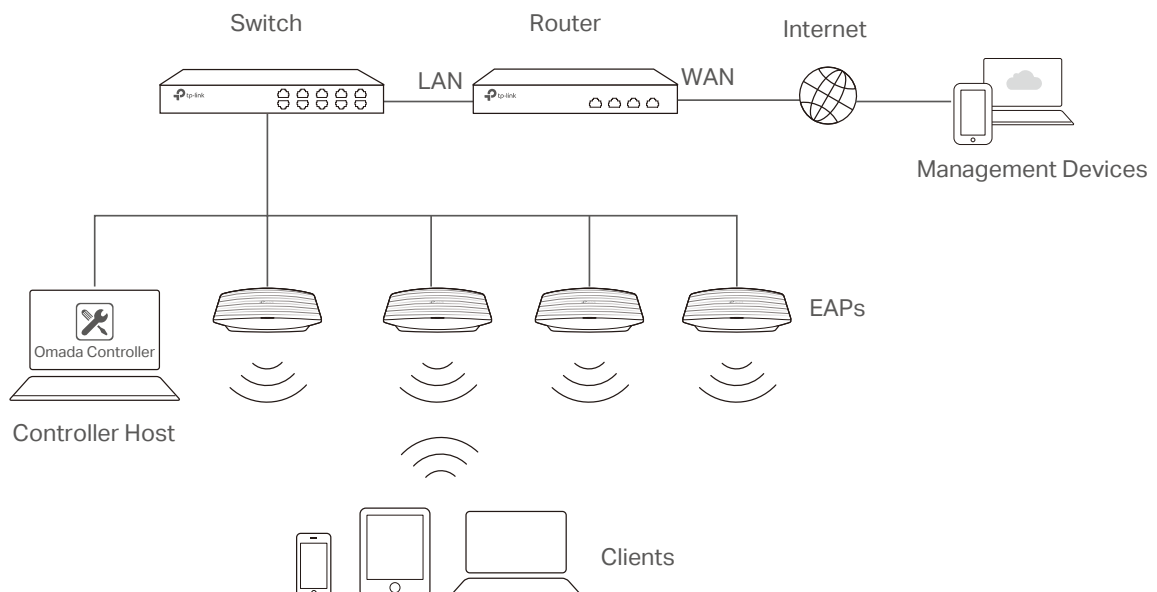
A router acts as the gateway of the network. A layer 3 switch acts as a DHCP server to assign IP addresses to EAPs and clients. The Controller Host and the EAPs are connected to the switch's different network segments. To help EAPs find the Controller Host, Omada Discover Utility should be installed on Host B which is in the same subnet with the EAPs. For how to use Omada Discovery Utility, refer to [Inform the EAPs of the Controller Host's Address](#).



## 1.2 Management via Cloud Access

With Cloud Access enabled on the Omada Controller, you can use <https://omada.tplinkcloud.com> to remotely access and monitor multiple controllers. If you want to manage EAPs remotely via Omada Cloud, refer to the following topology.

A router acts as the gateway of the network. A Layer 3 switch acts as a DHCP server to assign IP addresses to EAPs and clients. The management device is not on the local network. On the management device, you can launch a web browser to remotely launch Omada Controller to manage EAPs via Omada Cloud. For more details about Cloud Access, refer to [Configuring Omada Cloud Service for Omada Controller](#).



# 2 Install Omada Controller Software

We provide Omada Controller for both Windows and Linux operating systems. Determine your operation system and follow the introductions below to install Omada Controller.

## 2.1 Installation on Windows Host

Make sure your PC meets the following requirements of hardware and system, then properly install the Omada Controller software.

### Hardware Requirements

Omada Controller can manage up to 1500 EAPs if the Controller Host has enough hardware resources. To guarantee operational stability for managing 1500 EAPs, we recommend that you use the hardware which meets or exceeds the following specifications:

**CPU:** Intel Core i3-8100, i5-6500, or i7-4700 with 2 or more cores and 4 or more threads.

**Memory:** 6 GB RAM or more.

### System Requirements

**Operating System:** Microsoft Windows 7/8/10/Server.

**Web Browser:** Mozilla Firefox 32 (or above), Google Chrome 37 (or above), Opera 24 (or above), or Microsoft Internet Explorer 11 (or above).


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 **Note:**

We recommend that you deploy Omada Controller on a 64-bit operating system to guarantee the software stability.

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### Install Omada Controller

Download the installation file of Omada Controller from the [website](#). Then follow the instructions to properly install the Omada Controller software. After successful installation, a shortcut icon  of the Omada Controller will be created on your desktop.

## 2.2 Installation on Linux Host

Two versions of installation package are provided: **.tar.gz** file and **.deb** file. The **.tar.gz** file can be used in multiple versions of Linux operating system. And the **.deb** file can be used in Ubuntu and Debian.

Make sure your PC meets the following requirements of hardware and system, then choose the proper installation files to install the Omada Controller software.

## Hardware Requirements

Omada Controller can manage up to 1500 EAPs if the Controller Host has enough hardware resources. To guarantee operational stability for managing 1500 EAPs, we recommend that you use the hardware which meets or exceeds the following specifications:

**CPU:** Intel Core i3-8100, i5-6500, or i7-4700 with 2 or more cores and 4 or more threads.

**Memory:** 6 GB RAM or more.

## System Requirements

**Operating System:** 64-bit Linux operating system, including Ubuntu 14.04/16.04/17.04, CentOS 6.x/7.x, Fedora 20 (or above) and Debian 9.8.

**Web Browser:** Mozilla Firefox 32 (or above), Google Chrome 37 (or above), Opera 24 (or above), or Microsoft Internet Explorer 11 (or above).

## Install the Omada Controller

Download the installation file of Omada Controller from the [website](#).

Make sure you have **jsvc** and **curl** installed in your system before installation, which is vital to the smooth running of the system. If your system does not have **jsvc** or **curl** installed, you can install it manually with the command: **apt-get install** or **yum install**. For example, you can use the command: **apt-get install jsvc** or **yum install jsvc** to get **jsvc** installed. And if dependencies are missing, you can use the command: **apt-get -f install** to fix the problem.

### ■ Install the *.tar.gz* file

Follow the steps below to install Omada Controller on your Linux PC:

1. Make sure your PC is running in root mode. You can use this command to enter root mode:

```
sudo
```

2. Extract the tar.gz file using the command:

```
tar zxvf Omada_Controller_v3.0.5_linux_x64_targz.tar.gz
```

3. Install Omada Controller using the command:

```
sudo./install.sh
```

### ■ Install the *.deb* file

Follow the steps below to install Omada Controller on your Linux PC:

1. Make sure your PC is running in root mode. You can use this command to enter root mode:

**sudo**

2. Install the .deb file using the command:

**dpkg -i Omada\_Controller\_v3.0.5\_linux\_x64.deb**

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 **Note:**

- For installing the **.tar.gz**, if you want Omada Controller to run as a user (it runs as root by default) you should modify OMADA\_USER value in bin/control.sh.
  - To uninstall Omada Controller, go to the installation path: /opt/tplink/EAPController, and run the command: sudo ./uninstall.sh.
  - During uninstallation, you can choose whether to backup the database. The backup folder is /opt/tplink/eap\_db\_backup.
  - During installation, you will be asked whether to restore the database if there is any backup database in the folder /opt/tplink/eap\_db\_backup.
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# 3 Inform the EAPs of the Controller Host's Address

If your Controller Host and EAPs are in the same network segment, you can skip this section.

If your Controller Host and EAPs are in different subnets, you need to install Omada Discovery Utility on a host that is in the same network segment with the EAPs. Omada Discovery Utility can help EAPs find the Controller Host.

## System Requirements

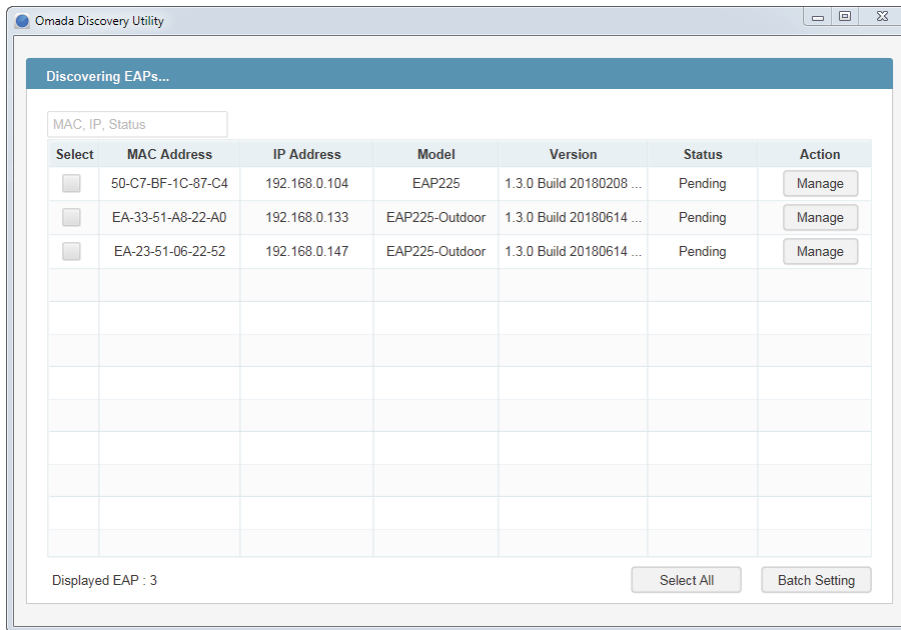
Windows 7/8/10/Server

Mac OS X 10.7/10.8/10.9/10.10/10.11

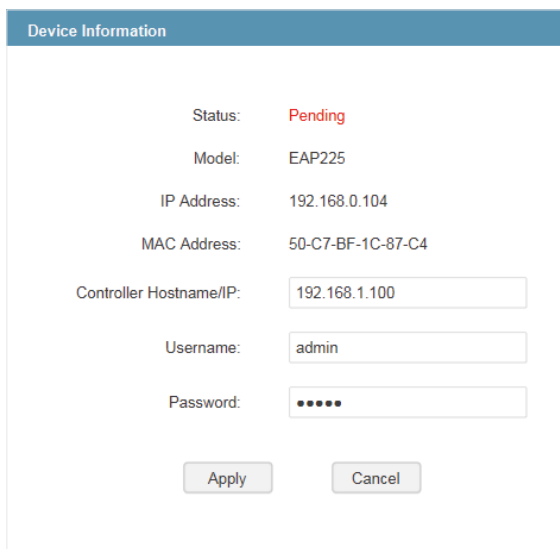
## Install and Use Omada Discovery Utility

Follow the steps below to install Omada Discovery Utility and use it to inform the EAPs of the Controller Host's IP address:

1. Download the installation file with the latest version from the [website](#).
2. Make sure you have **JRE (Java Runtime Environment)** with version 1.8 installed on your system before installation. If your system loses **JRE**, download **JRE** from the [website](#) and install it on your system.
3. For Windows OS, run the **start-omada-discovery-utility.bat** to open the Omada Discovery Utility. For Mac OS, use the command **java -jar \*\*** to open the Omada Discovery Utility. Then the following window will pop up. This window shows the information of all EAPs in the same LAN.



4. Click **Manage** in the **Action** column or select multiple EAPs and click **Batch Setting**.
5. Enter the hostname or IP address of the Controller Host.
6. Enter the EAP's username and password (both are admin by default).




7. Click **Apply** to inform the EAP of the Controller Host's hostname or IP address. And then the connection can be established between the EAP and the Controller Host.

# 4 Start and Log In to the Omada Controller

Launch Omada Controller and follow the instructions to complete the basic configurations, and then you can log in to the management interface.

## 4.1 Launch Omada Controller

Double click the icon  and the following window will pop up. You can click **Hide** to hide this window but do not close it. After a while, your web browser will automatically open.



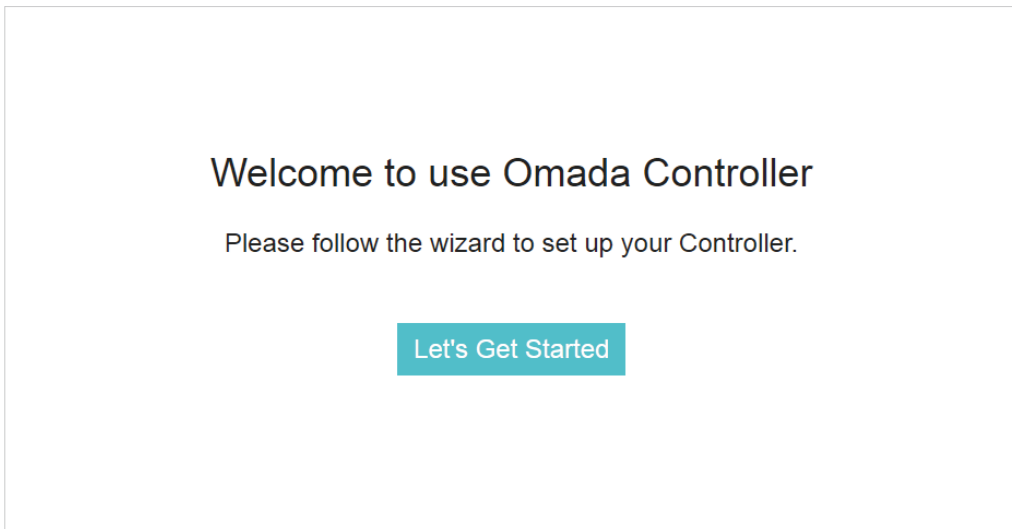
### Note:

- If your browser does not open automatically, click **Launch a Browser to Manage Wireless Network**. You can also launch a web browser and enter `http://127.0.0.1:8088` in the address bar.
- If your web browser opens but prompts a problem with the website's security certificate, click **Continue**.
- Only one Omada Controller can run in a LAN. If an Omada Controller has already been running on a host that is in your LAN, you will be redirected to the Omada Controller interface on that host.

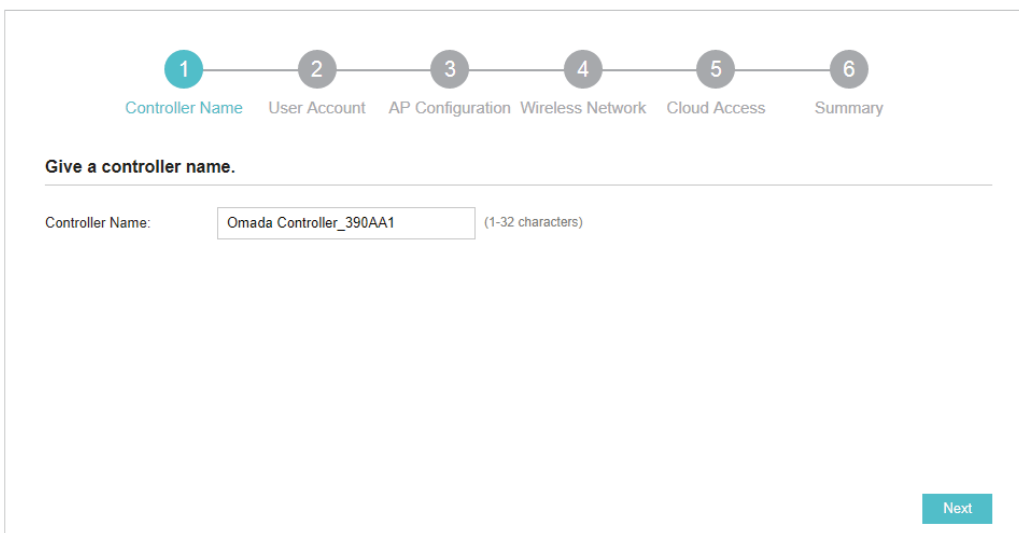
## 4.2 Do the Basic Configurations

In the web browser you can see the configuration page. Follow the setup wizard to complete the basic settings for Omada Controller.

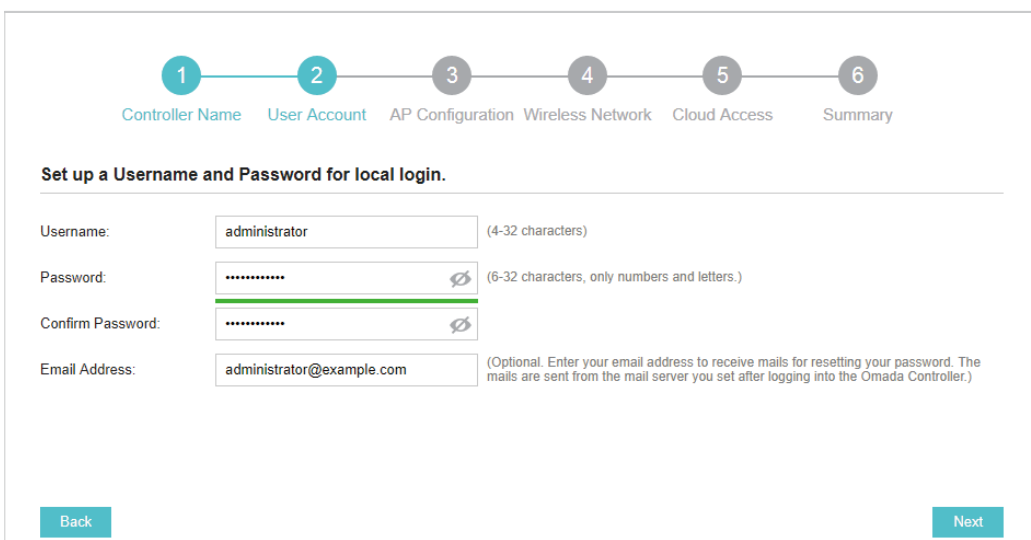
1. Click **Let's Get Started**.



2. Specify a name for Omada Controller. Click **Next**.



3. Specify a username and password for the login account. Specify the email address for resetting your password in case that you forget the password. After logging in Omada Controller, set a mail server so that you can receive emails and reset your password. For how to set a mail server, refer to [Configure Mail Server](#). Click **Next**.



4. The setup page displays all the detected EAPs in the network. Select one or more EAPs to be managed and click **Next**.

The screenshot shows a progress bar at the top with six steps: 1. Controller Name, 2. User Account, 3. AP Configuration, 4. Wireless Network, 5. Cloud Access, and 6. Summary. Step 3 is currently active. Below the progress bar, the heading reads "Please select the devices you would like to configure". A table lists detected devices with columns for AP Name, IP Address, Model, and Hardware Version. One device is selected with a checkmark in the first column. Below the table is a pagination control showing "A total of 1 page(s)" and a "GO" button. At the bottom of the page are "Back", "Skip", and "Next" buttons.

| <input checked="" type="checkbox"/> | ↕ AP Name         | ↕ IP Address  | ↕ Model    | ↕ Hardware Version |
|-------------------------------------|-------------------|---------------|------------|--------------------|
| <input checked="" type="checkbox"/> | 50-C7-BF-0B-BE-00 | 192.168.0.164 | EAP225(US) | 1.0/2.0            |

5. Set an SSID name (wireless network name) and password for the EAPs to be managed. Omada Controller will create two wireless networks, a 2.4GHz one and a 5GHz one, both encrypted in WPA2-PSK mode. Click **Next**.

The screenshot shows the same progress bar as the previous page, with step 4, "Wireless Network", now active. The heading reads "Create a wireless network". There are two input fields: "Network Name:" with the value "SSID1" and a character count "(1-32 characters)"; and "Password:" with a masked password "....." and a lock icon, with "(WPA2-PSK)" indicated to the right. At the bottom of the page are "Back", "Skip", and "Next" buttons.

6. If you want to manage EAPs via Omada Cloud, enable the **Cloud Access** button, and bind your TP-Link ID to your Omada Controller, and then click **Next**. If you want to manage EAPs on the local network, you can just click **Skip**. For more details about Omada Cloud, please refer to [Configuring Omada Cloud Service for Omada Controller](#).

7. Review your settings and click **Finish**.

## 4.3 Log In to the Management Interface

Once the basic configurations are finished, the browser will be redirected to the following page. Log in to the management interface using the username and password you have set in the basic configurations.

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 **Note:**

In addition to the Controller Host, other hosts in the same LAN can also manage EAPs via remote access to the Controller Host. For example, if the IP address of the Controller Host is 192.168.0.100 and Omada Controller is running normally on this host, you can enter **https://192.168.0.100:8043/login**, or **https://192.168.0.100:8043**, or **http://192.168.0.100:8088** in the web browser of other hosts in the same LAN to log in to the Omada Controller and manage EAPs. Or you can log in to Omada Controller on the management devices through Omada Cloud service.

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# 5 Create Sites and Adopt EAPs

Omada Controller can manage multiple EAP networks, which are called sites. Multiple sites are logically separated, and each site has its own configurations. There is an initial site named **Default**. The **Default** site cannot be deleted. If you have no need to manage EAPs with different sites, you can edit the default site and skip the [Create Sites](#) section. However, [Adopt the EAPs](#) is a necessary step to manage the EAPs.

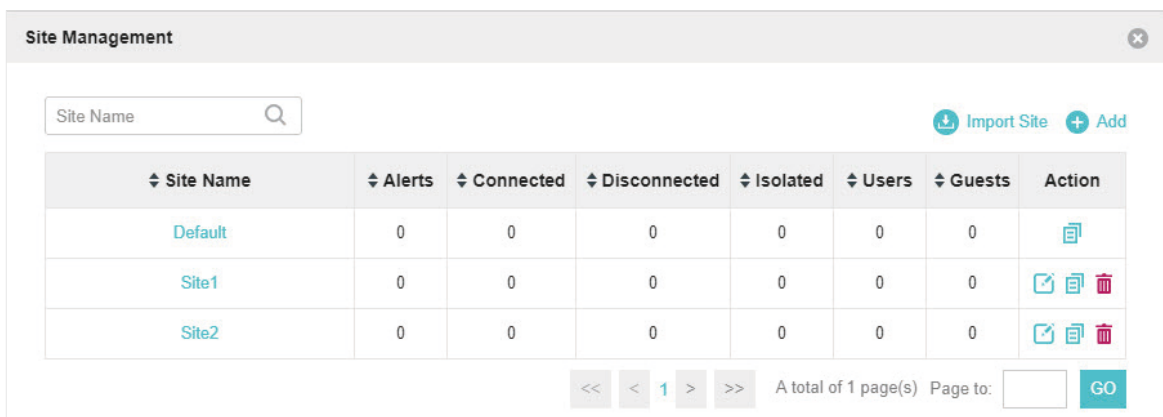
## 5.1 Create Sites

There are three methods to create sites: [Add Sites](#), [Import Sites](#), and [Copy Sites](#). Determine the method according to your need and refer to the following introductions to create sites.

### Add Sites

Follow the steps below to add a new site directly.

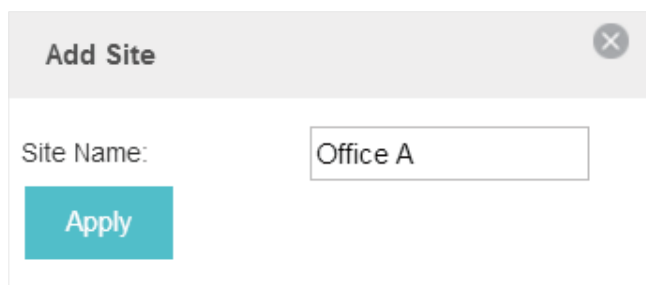
1. Click **Sites: Default** in the top left corner of the page and select **Site Manager**, and then the following window will pop up.



The screenshot shows the 'Site Management' window. At the top, there is a search bar for 'Site Name' and two buttons: 'Import Site' and '+ Add'. Below this is a table with the following columns: Site Name, Alerts, Connected, Disconnected, Isolated, Users, Guests, and Action. The table contains three rows: 'Default', 'Site1', and 'Site2'. The 'Default' row has a copy icon in the Action column. The 'Site1' and 'Site2' rows have checkmark, copy, and delete icons in the Action column. At the bottom of the table, there are navigation controls: '<<', '<', '1', '>', '>>', and a footer that says 'A total of 1 page(s) Page to: [input] GO'.

| Site Name | Alerts | Connected | Disconnected | Isolated | Users | Guests | Action |
|-----------|--------|-----------|--------------|----------|-------|--------|--------|
| Default   | 0      | 0         | 0            | 0        | 0     | 0      |        |
| Site1     | 0      | 0         | 0            | 0        | 0     | 0      |        |
| Site2     | 0      | 0         | 0            | 0        | 0     | 0      |        |

2. Click **+ Add** and enter a unique name for the new site.



The screenshot shows the 'Add Site' dialog box. It has a title bar with 'Add Site' and a close button. Below the title bar, there is a label 'Site Name:' followed by a text input field containing 'Office A'. At the bottom left of the dialog, there is a blue 'Apply' button.

3. Click **Apply** to create the site.



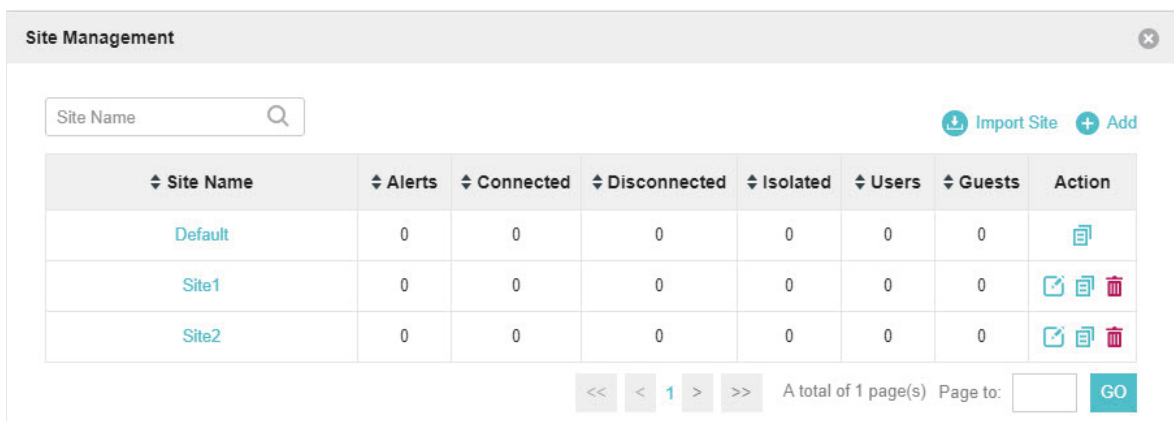
## Import Sites

You can import the site from another controller. The site settings and EAPs in the site will be imported to the new site.

### Note:

- The site to be imported must come from a different controller.
- Importing sites is available only for local logged-in users.

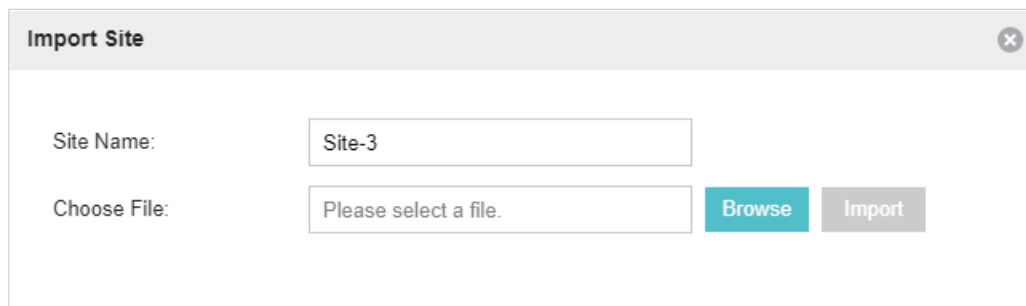
1. Click **Sites: Default** in the top left corner of the page and select **Site Manager**, and then the following window will pop up.



The screenshot shows the 'Site Management' window. At the top, there is a search bar for 'Site Name' and two buttons: 'Import Site' (with a download icon) and 'Add' (with a plus icon). Below this is a table with the following columns: Site Name, Alerts, Connected, Disconnected, Isolated, Users, Guests, and Action. The table contains three rows: 'Default', 'Site1', and 'Site2'. Each row has '0' in the Alerts, Connected, Disconnected, and Isolated columns. The Action column contains icons for edit, copy, and delete. At the bottom of the table, there are navigation arrows and a page indicator showing 'A total of 1 page(s) Page to: [ ] GO'.

| Site Name | Alerts | Connected | Disconnected | Isolated | Users | Guests | Action                 |
|-----------|--------|-----------|--------------|----------|-------|--------|------------------------|
| Default   | 0      | 0         | 0            | 0        | 0     | 0      | [edit] [copy] [delete] |
| Site1     | 0      | 0         | 0            | 0        | 0     | 0      | [edit] [copy] [delete] |
| Site2     | 0      | 0         | 0            | 0        | 0     | 0      | [edit] [copy] [delete] |

2. Click **Import Site** and enter a unique name for the new site.



The screenshot shows the 'Import Site' dialog box. It has a title bar with 'Import Site' and a close button. Inside, there are two input fields: 'Site Name' with the value 'Site-3' and 'Choose File' with the placeholder text 'Please select a file.'. To the right of the 'Choose File' field are two buttons: 'Browse' and 'Import'.

3. Click **Browse** to upload the backup file of other site and click **Import** to import the site.



The screenshot shows the 'Import Site' dialog box after a file has been selected. The 'Site Name' field still contains 'Site-3'. The 'Choose File' field now contains the file name 'Site\_A\_sitebackup.cfg'. The 'Browse' and 'Import' buttons are still present.

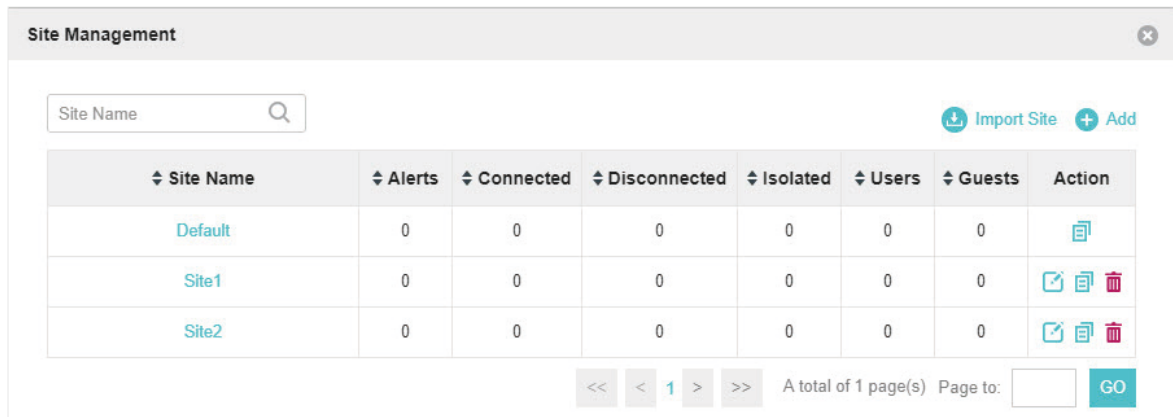
### Note:

To export sites (including site settings and EAPs in the sites) from one controller to another, use the **Migrate** function. For more details about **Migrate**, refer to [Migrate](#).

## Copy Sites

With **Site Copy**, you can create a new site with the same settings as the existing sites on your controller. Note that only the site settings will be copied. The EAPs will be still managed at the original site.

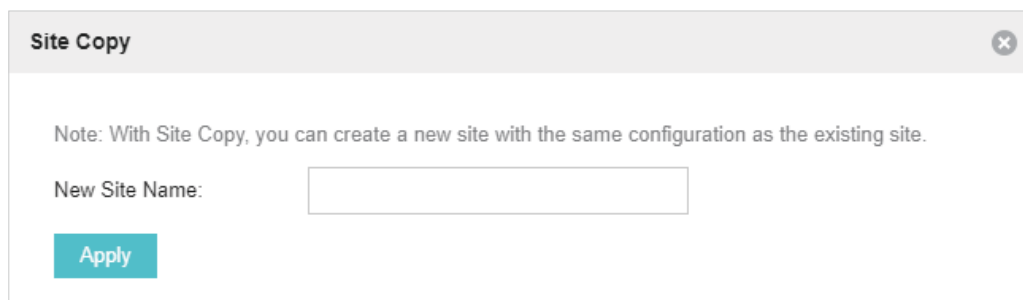
1. Click **Sites: Default** in the top left corner of the page and select **Site Manager**, and then the following window will pop up.



The screenshot shows the 'Site Management' window. At the top, there is a search bar for 'Site Name' and two buttons: 'Import Site' and 'Add'. Below this is a table with the following columns: Site Name, Alerts, Connected, Disconnected, Isolated, Users, Guests, and Action. The table contains three rows: 'Default', 'Site1', and 'Site2'. Each row has a copy icon in the Action column. At the bottom of the table, there are navigation arrows and a page indicator showing 'A total of 1 page(s) Page to: [input] GO'.

| Site Name | Alerts | Connected | Disconnected | Isolated | Users | Guests | Action |
|-----------|--------|-----------|--------------|----------|-------|--------|--------|
| Default   | 0      | 0         | 0            | 0        | 0     | 0      |        |
| Site1     | 0      | 0         | 0            | 0        | 0     | 0      |        |
| Site2     | 0      | 0         | 0            | 0        | 0     | 0      |        |

2. Select a site that you want copy all the settings and click in the **Action** column. Then enter a unique name for the new site.



The screenshot shows the 'Site Copy' dialog box. It contains a note: 'Note: With Site Copy, you can create a new site with the same configuration as the existing site.' Below the note is a text input field labeled 'New Site Name:'. At the bottom left of the dialog is an 'Apply' button.

3. Click **Apply** to create the site.

## 5.2 Adopt the EAPs

Omada Controller can discover all EAPs currently connected in the network and display their connection status. All EAPs are in **Pending** status when first discovered by Omada Controller. To manage the EAPs, you need to adopt them. In the quick setup process, Omada Controller will automatically adopt the selected EAPs using the default username and password (both are admin). However, if you have changed the username or password of your EAPs before, Omada Controller cannot automatically adopt them, and you need to refer to the following steps to adopt them manually.

To ensure that all EAPs are adopted, follow the steps below:

1. Select a site and go to **Access Points > Pending**. The table displays all the EAPs that have not been adopted.

The screenshot shows the TP-Link Omada Controller interface. At the top, there are navigation tabs: Statistics, Map, Access Points (highlighted), Clients, Insight, and Log. Below the tabs, there are status indicators for APs (0 Connected, 0 Disconnected, 0 Isolated, 1 Pending) and Stations (0 Users, 0 Guests). The main content area is titled 'Pending' and contains a table with the following columns: AP Name, MAC Address, IP Address, Status, Model, Hardware Version, Firmware Version, Channel, Client Number, Download, Upload, and Action. A single row is visible with the following data: AP Name: EA-23-51-06-22-52, MAC Address: EA-23-51-06-22-52, IP Address: 192.168.0.220, Status: Pending, Model: EAP225-Outdoor(EU), Hardware Version: 1.0, Firmware Version: 1.5.0 Build 20181129 Rel. 69517, Channel: --, Client Number: 0, Download: 0 Bytes, Upload: 0 Bytes, and Action: Retry (with a red box around the button). There is also a 'Batch Adopt' button in the top right corner of the table area.

2. Click the **Retry** button in the **Action** column and enter the current username and password of the EAP. Click **Apply**.

The dialog box is titled 'AP username and password required'. It contains the following text: 'Note: The username and password have been changed for this AP. The Omada Controller cannot adopt it automatically. Please manually enter the correct username and password.' Below the note, there are two input fields: 'Username:' and 'Password:'. The 'Password:' field has a toggle icon to the right. At the bottom left of the dialog, there is a blue 'Apply' button.

**Note:**

- If you have a new discovered EAP, you can click the **Adopt** button in the **Action** column to adopt the EAP. Omada Controller will automatically adopt the EAP using the default username and password (both are admin).
- If you have multiple new discovered EAPs, and all of them have the default username and password (both are admin), you can click the **Batch Adopt** button to adopt them in batch. But if there are any EAPs with the Retry button, it means that the username and password of these EAPs have been changed. You need to first adopt them before batch adopt the rest EAPs.

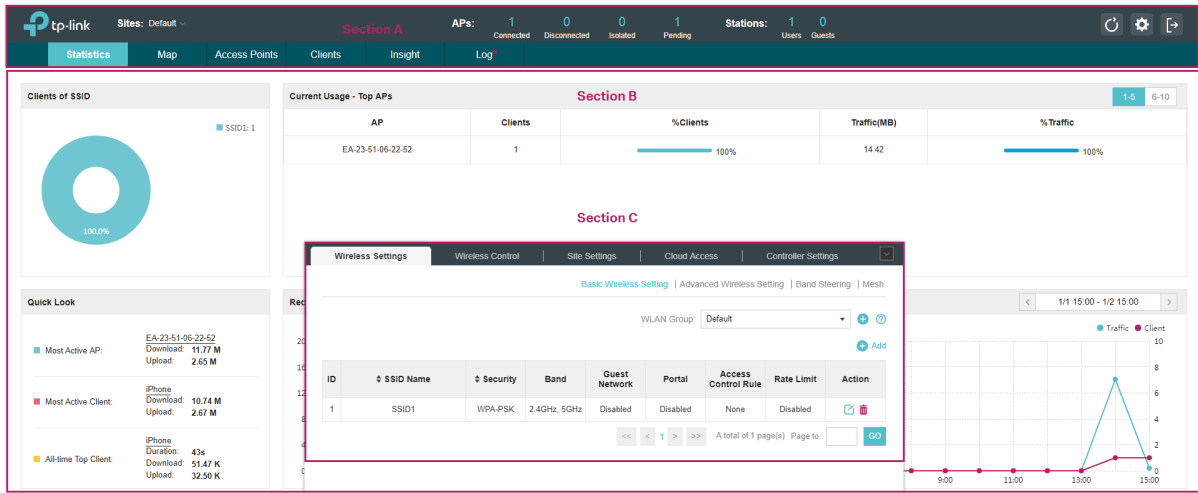
3. After EAPs are adopted, the status will change from **Pending** to **Connected**. All the EAPs' username and password will become the same as those of the Controller's administrator account you created in the [Do the Basic Configurations](#).

**Note:**




If you want to change the EAPs' username and password, refer to [Device Account](#).

# 6 Monitor and Manage the EAPs

When all the configurations above are finished, you can centrally monitor and manage the EAPs via the Omada Controller's management interface. The management interface is divided into three sections as the following figure shows.



## Section A

In Section A, you can check the status of EAPs and clients in the network. Also, you can click  to refresh the current page, click  to globally configure the wireless network, and click  to sign out from the management interface.

Furthermore, the **Sites** allows you to group your EAPs and manage them in batches. To configure sites, refer to [Create Sites](#).

## Section B

In Section B, you can centrally monitor the EAPs and clients.

## Section C

In Section C, you can globally configure the wireless network. The global configurations will take effect on all the adopted EAPs.