Installing a Unifi Controller on Linux (Ubuntu server)

The UniFi Controller is a software application from Ubiquiti that allows you to manage your UniFi network devices from a single interface.

In this guide, we will install the required software and add the official Unifi repository.

Step 1

Log into the Virtual Machine (VM). The VM has an IP address x.x.x.x. Use the command below to log in.

ssh <username>@x.x.x.x, where x.x.x.x is the IP address of the VM. The IP addresses and usernames for the different VMs will be provided.

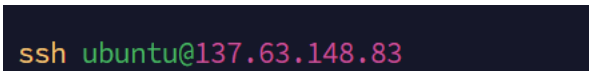

Figure 1: logging into the VM

You will then be prompted to enter a password.

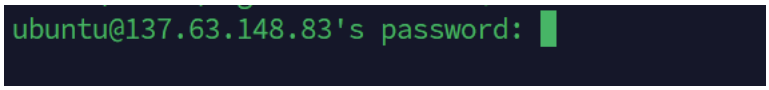

Figure 2: Prompt to enter the password of the VM

The password will be provided.

Note: The commands (in green font) should be copied to a text editor such as Notepad and then copied from the text editor to the VM. Copying from a PDF will have the return key (Enter key) on, for commands that span multiple lines.

Step 2

Before we get started, we will need to update the Ubuntu system package list. The package list is a cache of all packages we can install and where apt can download them.

This can be done using the following command

sudo apt update

Step 3

In this step, we install some packages we will rely on to add the package repositories we require, as well as run the UniFi network controller.

This can be done using the following command.

sudo apt install curl haveged gpg openjdk-17-jre-headless

Adding the Unifi Repository to Ubuntu

Step 4

In this step, we download the UniFi GPG key to our system. This key helps tell the package manager that the packages are valid and have been signed by the repository.

Download this key to your system using the following command within the terminal.

```
curl https://dl.ui.com/unifi/unifi-repo.gpg | sudo tee /usr/share/keyrings/ubiquiti-archive-keyring.gpg >/dev/null
```

Step 5

With the UniFi GPG key saved to our Ubuntu device, we can now add the repository to our sources list.

Adding UniFi to the "apt" sources list is as straightforward as using the following command

```
echo 'deb [signed-by=/usr/share/keyrings/ubiquiti-archive-keyring.gpg]
https://www.ui.com/downloads/unifi/debian stable ubiquiti' | sudo tee
/etc/apt/sources.list.d/100-ubnt-unifi.list > /dev/null
```

Adding the MongoDB Repository

Step 6

With the UniFi repository added to our Ubuntu system, we can move on to adding the one for MongoDB 7.0.

Before adding the MongoDB repository, our first step is to download its GPG key using the command below.

```
curl https://pgp.mongodb.com/server-7.0.asc | sudo gpg --dearmor | sudo tee
/usr/share/keyrings/mongodb-org-server-7.0-archive-keyring.gpg >/dev/null
```

Step 7

Once the GPG key has been added, our next step is to add the MongoDB 7.0 repository to our Ubuntu device. Use the command below in your terminal to add the MongoDB 7.0 repository to the sources list on your system.

```
echo 'deb [arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-org-server-7.0-archive-keyring.gpg] https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 multiverse' | sudo tee /etc/apt/sources.list.d/mongodb-org-7.0.list > /dev/null
```

Installing MongoDB 7.0 on Ubuntu

Step 8

As we changed our sources list, we will need to perform a package list update.

If we don't perform an update, the apt package manager won't be aware of any of our newly added repositories. We can perform an update using the following command.

```
sudo apt update
```

Step 9

We can now install the final piece of software we require to install and run the UniFi controller on Ubuntu.

This final piece of software is called "MongoDB" and is the database server that UniFi requires.

You can install the MongoDB server on Ubuntu by running the command below in the terminal.

```
sudo apt install -y mongodb-org-server
```

Step 10

After installing MongoDB, we want to ensure that its service is enabled to start at boot.

Run the command below to ensure that the MongoDB server is set to start at boot.

```
sudo systemctl enable mongod
```

Step 11

Finally, we can ensure that the MongoDB server is running by using the following command in the terminal.

This command will start up MongoDB on your Ubuntu device immediately.

```
sudo systemctl start mongod
```

Installing the Unifi controller

Step 12

Finally, now that everything is in place, we can install the UniFi controller to Ubuntu by using the following command.

```
sudo apt install unifi
```

Step 13

At this point, you will finally have the UniFi controller up and running on your Ubuntu device.

Over the next section, we will show you how to access this interface and go through the initial setup steps.

Accessing the Unifi controller

Step 14

Before we continue, you will need to know the IP address of your Ubuntu device.

One of the easiest ways to get the IP address assigned to the device is to utilize the hostname command, as shown below.

```
hostname -I
```

Step 15

With the IP address in hand, you will want to go to the following address in your favorite web browser.

Make sure that you replace "IPADDRESS" with the IP of your device. From this, you can see that the UniFi controller will operate its web interface on port 8443.

https://IPADDRESS:8443

You will be redirected to the initial setup page for the controller.

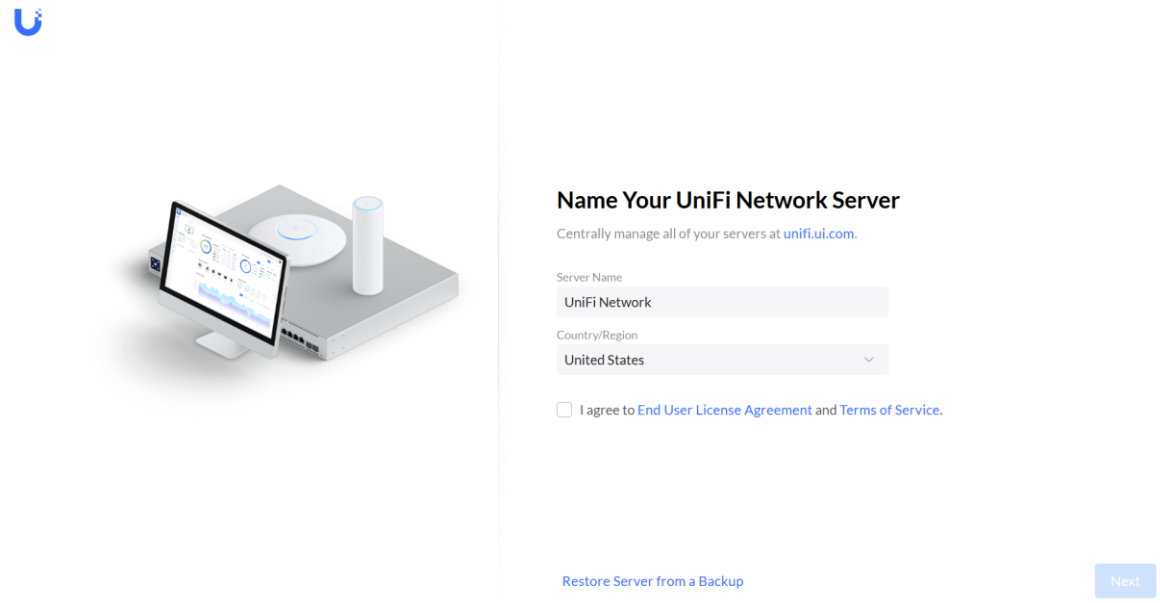

Figure 3: Initial setup page for the controller

Choose a suitable name for the controller. Choose an appropriate region.

Accept the end-user license agreement and terms of service and proceed to the next stage by clicking the "Next" button.

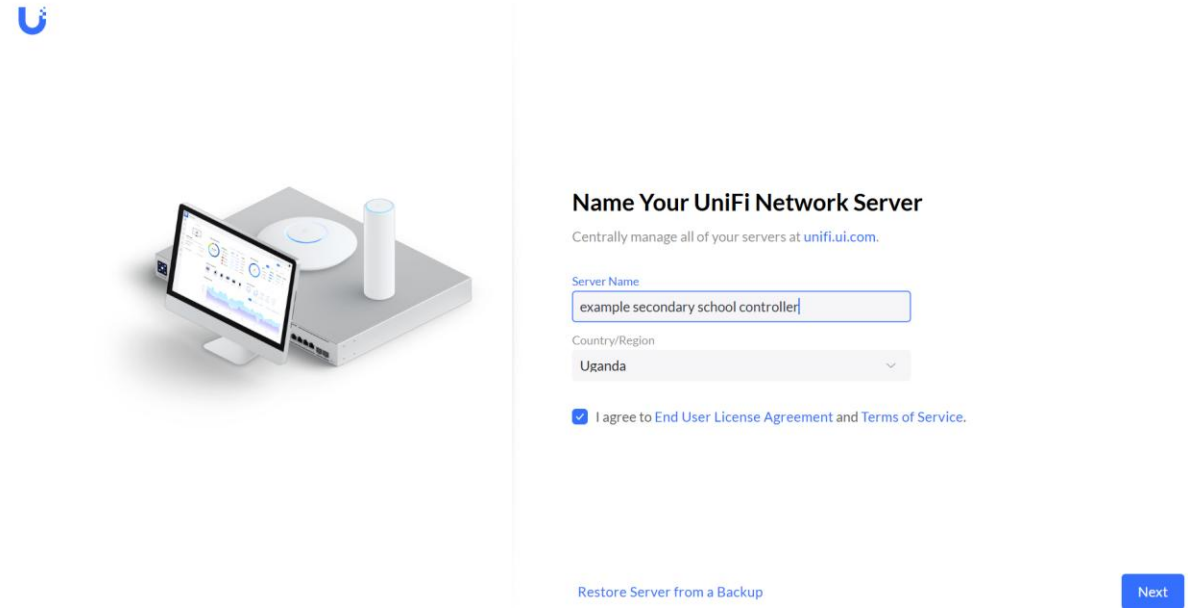

Figure 4: Set up the controller name and select the Region

To proceed further, you will need to log in to your Ubiquiti account

If you don't have an account, you must register for one by going to the official Ubiquiti website and registering for a [Ubiquiti Account]

With your login details entered, click the "Next" button

Enter the security verification code that was sent to your email.

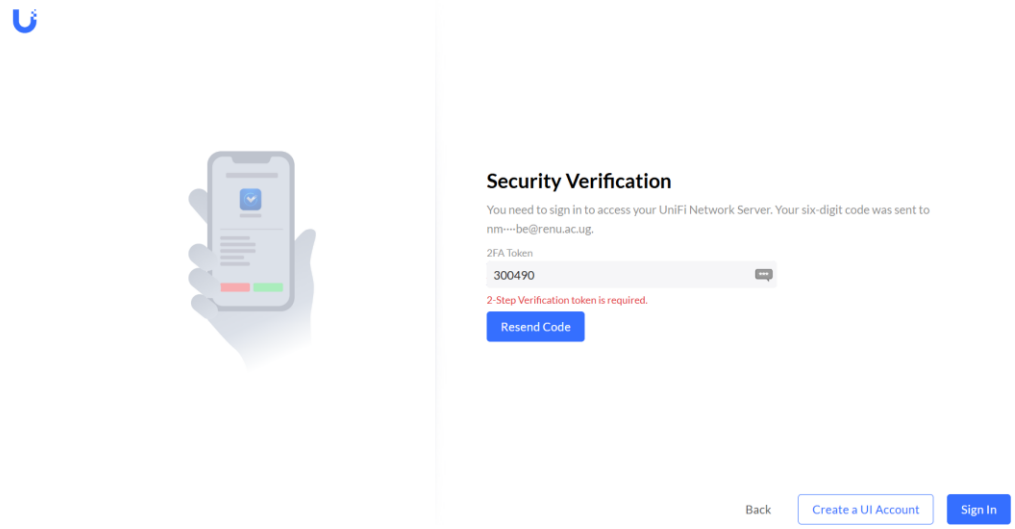

Figure 5: Entering the security code sent to the email

After signing in, the controller is ready for use.

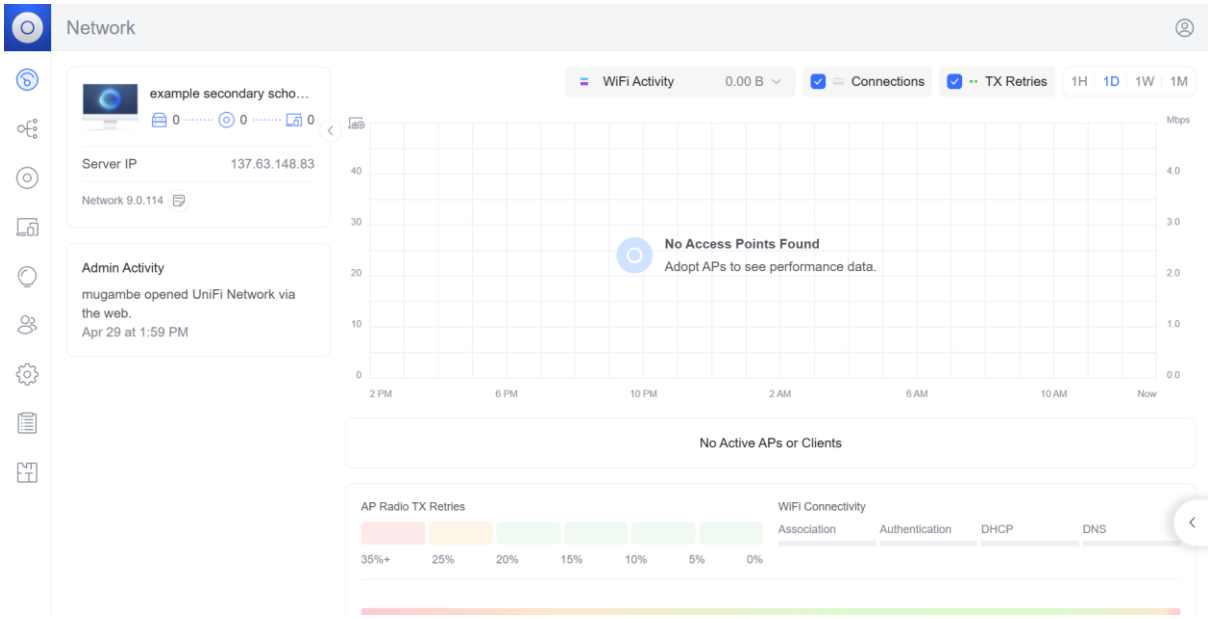

Figure 6: Controller is ready for AP adoption

Step 16

This step involves adopting the access point into the controller. Connect the AP to the local Area Network. Obtain the IP address assigned to the AP using the Mikrotik switch provided in the Lab. You can use the command **ip arp print** in the terminal**.** Locate the AP by looking for its MAC address in the ARP table.

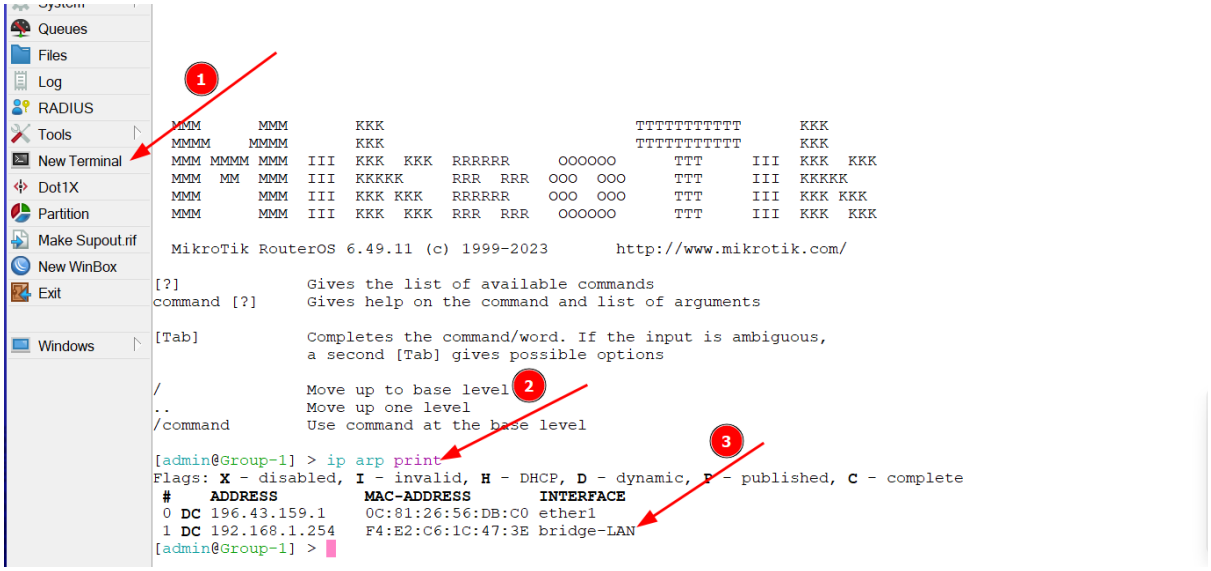

Figure 7: Finding the IP address of the AP in the ARP table

Open the terminal on your PC and log into the switch using the following command.

ssh ubnt@y.y.y.y, where **y.y.y.y** is the IP address assigned to the AP. The password is **ubnt**

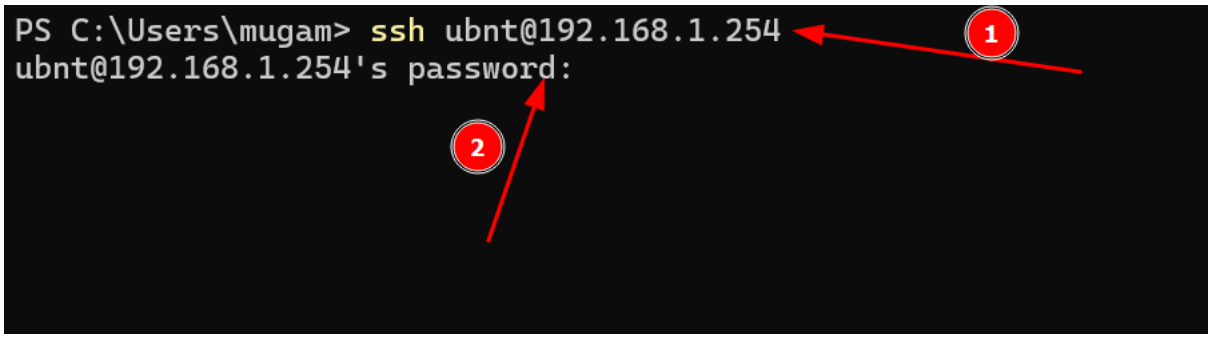

Figure 8: logging into the AP using the assigned IP address

Figure 9: AP terminal after logging in

In the AP terminal, type the command **info** to check the adoption status.

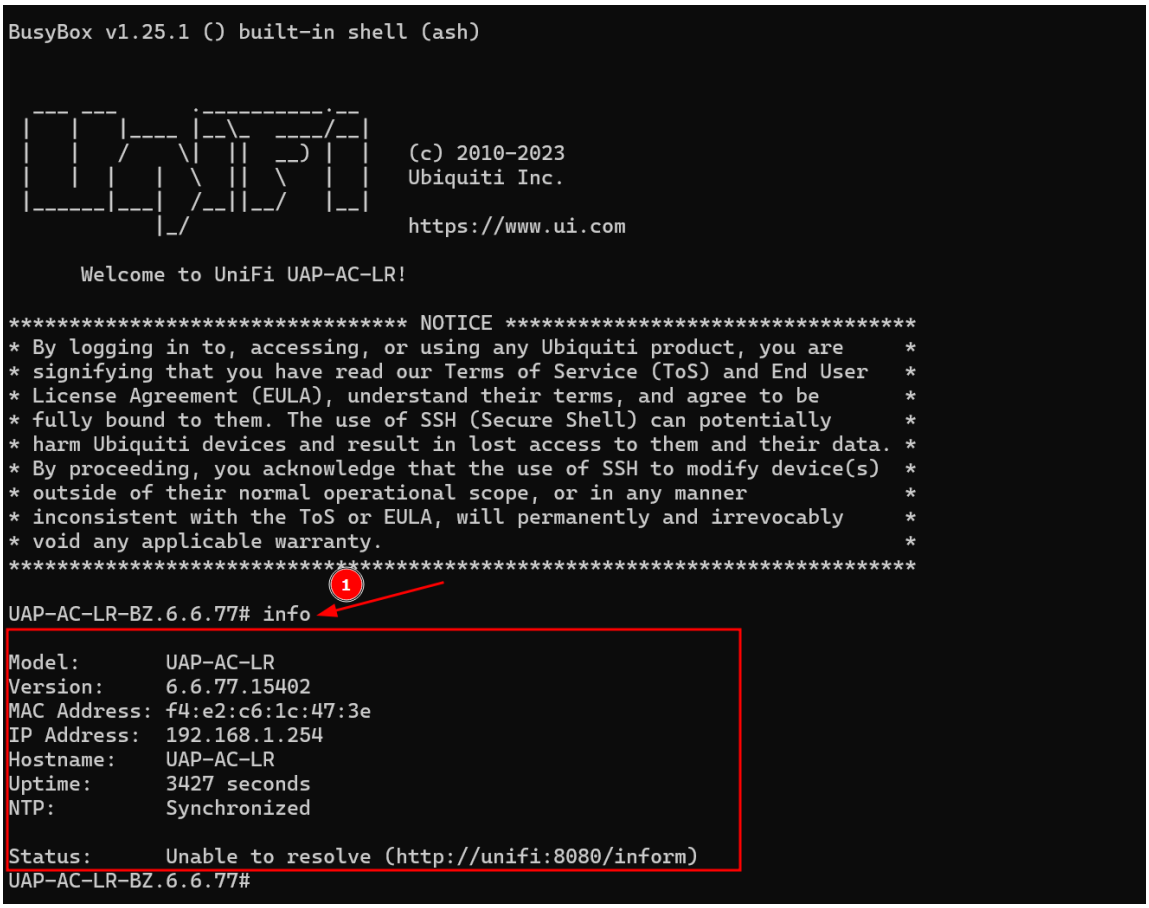

Figure 10: AP adoption status showing that the AP is not yet adopted

The AP is not adopted in the controller. Let us use the following command to send a request to the controller.

set-inform http://x.x.x.x:8080/inform where **x.x.x.x** is the IP address of the controller. After executing this command, check the adoption status by typing the command **info**.

Figure 11: Adoption request sent to the controller

At this point, the adoption request has been sent to the controller. Proceed to the controller to complete the adoption.

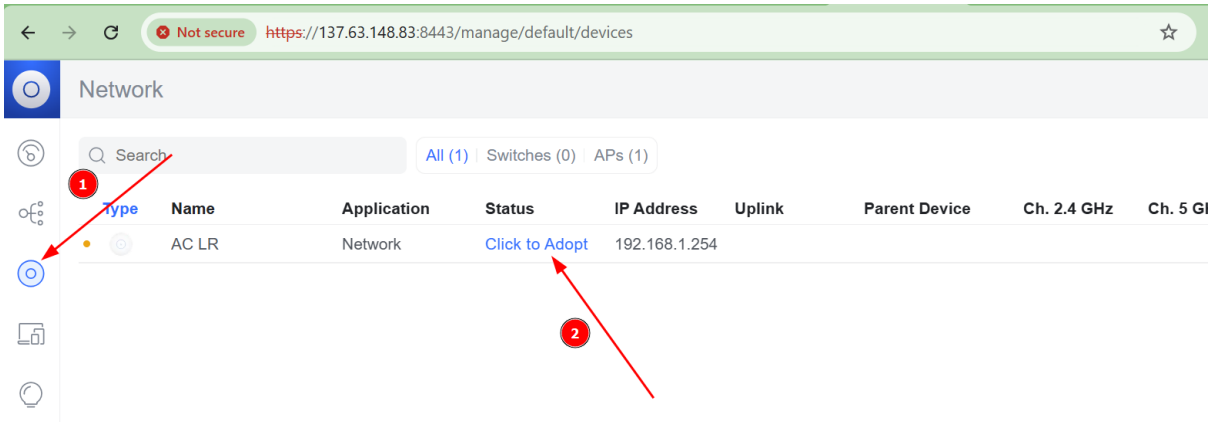

Figure 12: Complete the AP Adoption in the controller

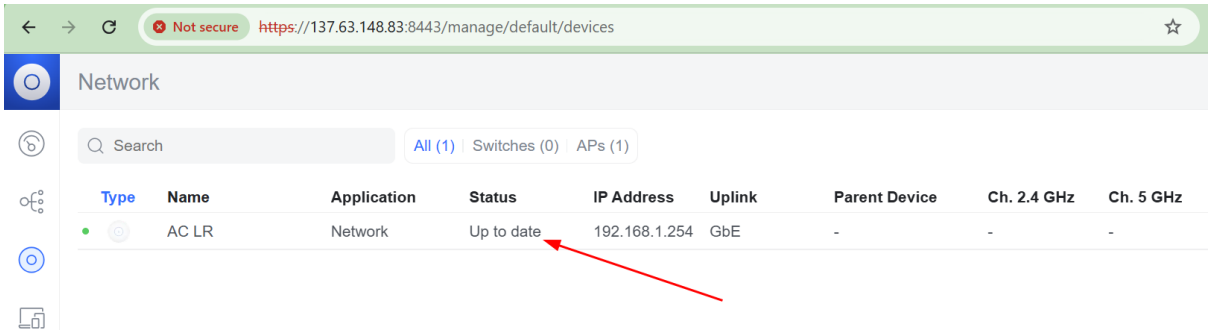

Figure 13: AP status after completing the adoption process

After the AP has been adopted, proceed to create a wireless network. Assign an **SSID** of your choice, e.g, **Group1.** Assign a password of your choice to the wireless network.

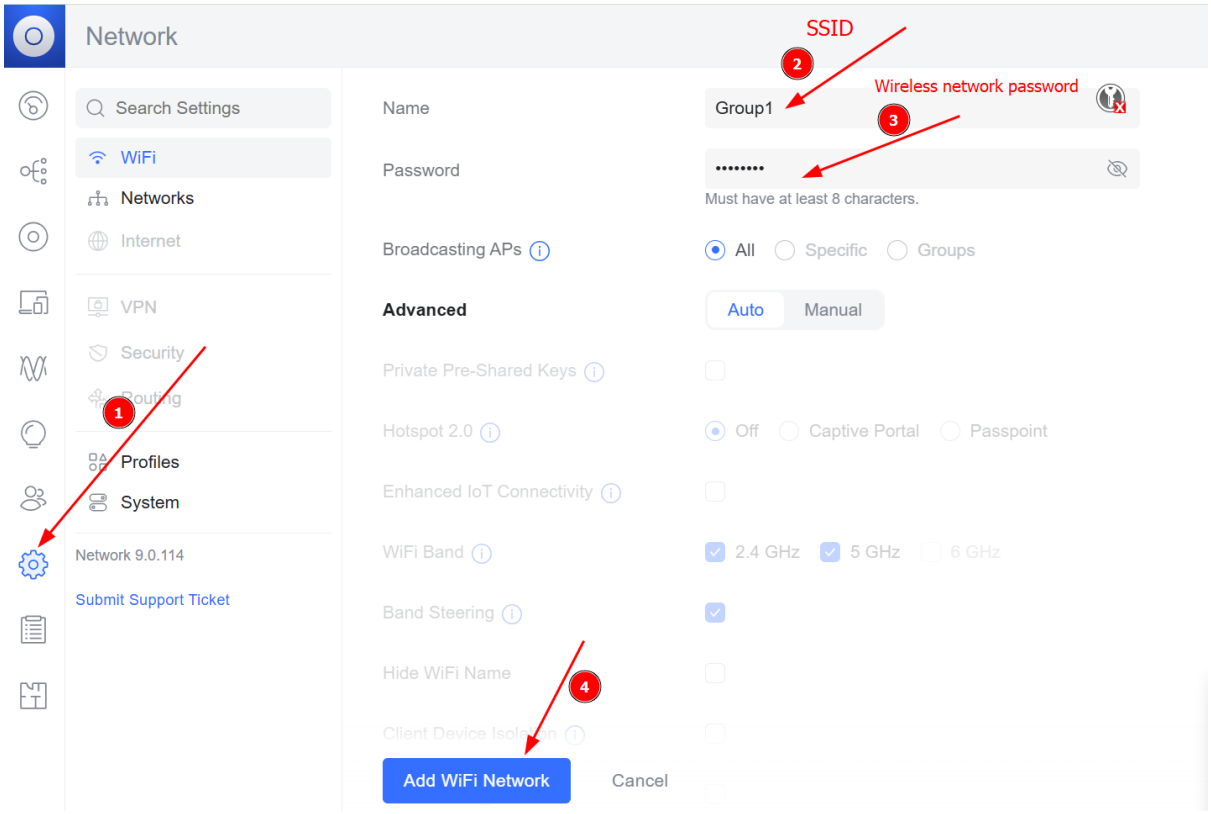

Figure 14: Creating a wireless network