

Self-Help Guide

WiFi: Register a Departmental Device for Internet of Things (IoT) Wi-Fi Service

University of Minnesota departmental and unit-owned Internet of Things (IoT) devices such as door locks, sensors, cameras, Apple TV, and more can be registered for Wi-Fi access even if they don't support standard authentication with a username and password.

This registration should be performed using the University Internet ID and password of the IoT Admin that owns the device.

- **Important Notes:** Regardless of whether they can connect to eduroam, it is recommended these devices be registered through the ClearPass Guest Registration portal under a departmental account. The same registration database is used for both the existing legacy unencrypted and the new encrypted IoT services. Adding a group password to an existing device will enable it to use either service.

Students, staff, and faculty with personal devices: Follow the [Register a Personal Device for IoT](#) guide.

Register IoT Admin Devices for the Internet of Things (IoT) Wi-Fi Service

Understand the Internet of Things (IoT) Services

Understand Internet of Things (IoT) Services

Body

At the University of Minnesota, personal and departmental Internet of Things (IoT) devices can be registered for the Wi-Fi service. The current IoT service option is the Encrypted Service.

Encrypted Service

- Uses UofM-IoT SSID
- Better security with encrypted Wi-Fi traffic
- Easier setup process
- Supports more device types
- Requires device registration and a password (also known as a pre-shared key or PSK)

Best Practices for IoT Devices

The IoT service is designed for devices that are unable to log in to Wi-Fi with your Internet ID and password. These are some best practices when registering and using IoT devices on the University Wi-Fi network:

- Any device that is capable of using eduroam should use eduroam. Eduroam is more secure because it has a higher level of encryption.
- Personal device registration expires after one year and **registration must be renewed to continue service**. Devices are automatically removed from the registration database unless they are renewed.
- Regular software updates on IoT devices are recommended.
- If the IoT device asks you to choose a channel when connecting to Wi-Fi, select 5GHz if able.
- If a device uses MAC address randomization that feature should be disabled otherwise the device may not be able to connect to Wi-Fi.

Which devices can be registered for Internet of Things (IoT) Service?

Body

Registering personal and departmental Wi-Fi devices allows users affiliated with the UMN to connect devices such as Xbox, Roku, Apple TV, Google Chromecast, door locks, freezer monitors, and more to the University Wi-Fi network. Unregistered devices can disrupt or slow down the University Wi-Fi network, making it difficult for neighboring devices to connect.

The types of devices that should be registered using the [Register a Personal Device for IoT](#) guide or [Register a Departmental Device for IoT](#) guide are listed below.

Xbox, Roku, Apple TV, and other streaming devices

Xbox, Roku, Apple TV, and similar devices can be registered for Internet of Things (IoT) service. Follow the directions on this guide to connect these devices.

Google Chromecast and Google Home

Do not register Google Chromecast, Google Home, and similar device configurations using this process. These devices are limited to residence halls and require a Student Internet ID and password. They have additional steps for setup on the UofM-IoT Network. Please follow [Register your Chromecast Device](#) for these devices.

Laptops, Smart Phones, Printers

Do not register laptops, smart phones, or printers using this process unless otherwise specified.

Phones and laptops should connect to eduroam using your full University email address (InternetID@umn.edu) and password authentication. For more information on eduroam, follow [Connect to eduroam](#).

Smart Light Bulb and Similar Home Devices

Please note that some Internet of Things (IoT) devices designed to work on home networks may not be supported by the UMN network. The scale, design, and security controls of the UMN network makes it challenging for some devices to function

properly on the network.

Some examples include:

- Devices that require a direct connection or special addressing from a Wi-Fi router (e.g. a Phillips Hue light bulb).
- Some devices that connect to a local hub that is then connected to the University network.

Departmental Devices (i.e., Door Locks, Cameras, Sensors)

Departmental-owned on-campus door locks, cameras, sensors, and similar devices can be registered for Internet of Things (IoT) service. Follow the directions on this guide to connect these devices.

Register and Connect an Individual Device to the Encrypted Service

Step 1: Request IoT Admin Permissions

Body

University of Minnesota departments and units can register to connect departmentally-owned Internet of Things (IoT) devices such as door locks, cameras, sensors, and Apple TVs to the Wi-Fi service. An IoT Admin for the department or unit needs to register the IoT device for their department or unit.

What does it mean to be an IoT Admin?

IoT Admins are typically technical departmental staff who have a need to register Internet of Things devices like freezer monitors or door locks.

A person with IoT Admin access will have a unique view of the device registration portal that allows them to specify the role of the device, uofm-IoT-campus or uofm-IoT-internet, as well as choose an expiration date, which is not available to users

who are registering personal devices.

Your responsibility as an IoT Admin

Only University-owned devices should be registered through this portal. You will need to register personal IoT devices using the instructions for [Register a Departmental Device for Internet of Things \(IoT\) Wi-Fi Service](#).

Should the device be used for malicious purposes, the IoT Admin who registered the device will be held responsible for the activity. University Information Security will contact the admin who registered the device to discuss next steps upon discovery of malicious activity.

In the event a departmental account is not used, customers are responsible for transferring responsibility for the devices that are registered under your name upon leaving the University.

Requesting IoT Admin Permissions

We strongly recommend using a departmental account to ensure control of the device is maintained by the department instead of a specific person. If you do not have one and would like to use one, please [request a departmental/organizational account](#) first.

To request IoT admin permissions, [contact Technology Help](#) and provide the following information:

- Specify that you are looking to get IoT Admin permissions for an account
- Provide the account (internet ID) you want to use to register devices

Step 2: Find the wireless MAC address

Body

A device's wireless (Wi-Fi) MAC address, also known as hardware or physical address, is used for connecting to the network.

- For any IoT device that needs a companion device (smart phone, computer) to be on the same network for the setup, please follow the steps to [Register your Chromecast Device](#).
- Attempting to use an [Ethernet Adapter](#)? Ensure that you have [registered your device on the wired network](#).
- **Note:** This is not an exhaustive list. If your device is not listed, refer to the device manufacturer for instructions on finding the device's MAC.

In this article:

- [Finding Your Device's MAC Address](#)
 - [Gaming Consoles](#)
 - [Streaming Devices](#)
 - [Smart TVs](#)
- [Additional Resources](#)

Finding Your Device's MAC Address

For help finding the MAC address of your device, select the link for your device below:

Note: If a device uses MAC address randomization that feature should be disabled otherwise it may not be able to connect to Wi-Fi.

Gaming Consoles

- Xbox One
 - Go to the Xbox dashboard, then **My Xbox**, then **Settings**
 - Select **Network**
 - Select **Advanced Settings**
 - Your MAC address will be listed next to **MAC** on the right side of the screen.
- Xbox 360
 - Go to **Settings**
 - Select **System**
 - Select **Network Settings** then **Configure Network** or **Edit Settings**.
 - Select the **Additional Settings** tab, then choose **Advanced Settings**.
 - Your MAC address will be listed next to MAC on the bottom of the screen.

- You may need to select, **Edit Settings** to see your MAC
- [PlayStation 4 \(PS4\)](#), [PlayStation 5 \(PS5\)](#)
 - Note: Wii and Playstation 3 may not be able to connect to Wi-Fi. Several students have reported difficulty connecting these devices, and thus far we have found no resolution. If there are any changes, this article will be updated with how to connect these devices.
- [Nintendo Wii U](#), [Nintendo Switch](#)

Streaming Devices

- [Alexa](#)
- [Roku](#)
- [Amazon Fire Stick](#), [Amazon Echo](#)
- [Chromecast](#), [Google Home](#)
 - Chromecast configuration is limited to the residence halls, requires a Student Internet ID, and extra steps to work on our network. Please follow the steps to [Register your Chromecast Device](#).

Smart TVs

- Apple TV
 - Go to **Settings**, then **About** (or **Network**), your MAC address is next to **Wi-Fi Address** if you're on wi-fi or next to **Ethernet Address** if you're on wired ethernet
- [Sony TV](#) (Android TV or Google TV)
- [Panasonic](#)

Additional Resources

- [Wi-Fi: Find a MAC Address on Your Computer](#) - Mac, Windows, Chromebook, Linux
- [Wi-Fi: Find a MAC Address on Mobile Devices](#) - iOS (iPhone, iPad) and Android (Google, Samsung)

If you need assistance, please contact [Technology Help](#).

Step 3: Registering an IoT Admin Device for the Encrypted Service

Body

University of Minnesota departmental Internet of Things (IoT) devices such as door locks, sensors, and cameras can be registered for Wi-Fi service.

Follow these steps to register your device for the Encrypted IoT Service. This step is a part of the [Register a Departmental Device for IoT Wi-Fi Service](#) guide.

Registering an IoT Admin Device for Encrypted IoT Service

Do not register laptops or smart phones using this process unless otherwise specified for temporary IoT device AirGroup setup. Phones and laptops should connect to eduroam using your full University email address (InternetID@umn.edu) and password. Full access to your University account and systems (i.e., MyU, Canvas, PeopleSoft) may not be fully functional on the IoT network. For more information on eduroam, follow [Connect to eduroam](#).

1. Go to the [Wi-Fi Registration webpage](#).
 - This link will only work if you are accessing this article on campus through a device connected to eduroam or you are connected to [VPN](#).
 - If you are registering this device for yourself, sign in with your Internet ID and password.
 - If you're working on behalf of a department or another individual, please contact [Technology Help](#).
2. From the side menu under **Devices**, select **Create Device**.
3. In the **MAC address** field, enter the wireless or [Wi-Fi MAC address](#) of the device.
 - The device name can be whatever you choose. For example, if you are registering a Roku, you might name it Goldy's Roku.
4. Enter a name for the device in the **Device Name** field. This name is to help you identify the device to yourself in the future.
5. Check the **Wi-Fi Password** box to generate a password (also referred to as a pre-share key or PSK).

- Once registered, the device can connect to UofM-IoT with the generated password.

* MAC Address:	
	MAC address of the device.
* Device Name:	
	Name of the device.
Wi-Fi Password:	☒ Use a unique Wi-Fi password for this device

- If you are registering a device that you are casting or communicating to or from another device (such as your smartphone), as part of the registration process:
 - Check the **AirGroup** box.
 - Leave the default **Personal** selected in the **Ownership** section.
 - If you will be sharing the device with another person in your department, put their Internet ID in the **Shared With** field, separating multiple IDs by commas.
 - This will allow you to cast from another device to the registered device even if they are connected to different SSIDs (e.g. eduroam, UofM-IoT, etc.).

AirGroup:	☒ Enable AirGroup AirGroup uses device ownership and location information to limit the printers and Apple TVs available to network users.
Ownership:	☒ Personal ☐ Shared A personal device is automatically shared with other devices owned by the same user. A shared device has no owner, but more sharing options are available.
Shared With:	 Enter the Internet ID that will be able to use this device. Use a comma-separated list, e.g. user1,user2,user3.

- Select the expiration time that makes sense for this device in the **Account Expiration** dropdown.
 - For devices like door locks, you can set the device to never expire so you need not register it every year.
- Select the **Account Role** for the device:
 - uofm-iot-internet** allows the device to access the whole internet both internal and external to campus. Best for devices like University owned game consoles or other casting devices (Apple TV, Chromecast, etc.).
 - uofm-iot-campus** only allows devices to reach internal campus resources. Best for devices like door locks.
- Add a short description of the device and details about how it will be used in the **Notes** section.
 - Example: This AppleTV will be used in Coffman Memorial Union room ###. Contact 612-555-5555 or the registered email for more information

Internet of Things (IoT) Admin Device Registration	
* MAC Address:	 MAC address of the device.
* Device Name:	 Name of the device.
Wi-Fi Password:	☐ Use a unique Wi-Fi password for this device
AirGroup:	☐ Enable AirGroup AirGroup uses device ownership and location information to limit the printers and Apple TVs available to network users.
Account Expiration:	1 year from now Select an option for changing the expiration time of this account.
* Account Role:	uofm-iot-campus Role to assign to this account.
Notes:	
* Terms of Use:	☐ I am the owner of this device and accept the terms of use
Create	

* required field

10. Check the **Terms of Use** checkbox to accept the terms of use.
 - The message reads **I am the sponsor of this account and accept the terms of use.**
11. Select **Create**.
12. Your device is now registered. You can [connect to the IoT Encrypted Service](#).

Step 4: Connect to the Encrypted IoT Wi-Fi Service

Body

At the University of Minnesota, personal and departmental Wi-Fi devices can be connected to the Internet of Things (IoT) service. Follow these steps to connect your device for the Encrypted IoT Service.

Connecting Your Device to Encrypted IoT Service

1. Open the **Network Settings** on your device and view the list of available Wi-Fi networks.
 - This should be near to where your wireless MAC address was listed.
2. From the list of available networks, select **UofM-IoT** and enter the generated password.
3. Your device is now connected.

Please contact [UMN Technology Help](#) if you have problems following the above steps.

Step 5: Check any Known Device Issues

Body

These are some of the known issues and their workarounds for connecting departmental and personal Internet of Things (IoT) devices for University of Minnesota IoT Wi-Fi service.

Wireless Printers

Wireless printers broadcast a signal that conflicts with University of Minnesota networks, and can lead to poor service for everyone in the area near the printer. Instead, please connect to printers using a USB cable.

Apple TV

Attempt the connection with UofM-IoT following the instructions in the [Register a Personal Device for the Internet of Things \(IoT\) Wi-Fi Service](#) Self-Help guide. In case that does not work, you can attempt to connect using our enterprise eduroam connection by using [Apple Configurator](#) (link is an archived Apple article).

- Apple Configurator can set up a profile to add to the Apple TV that will connect to our enterprise connection. Some support may be offered from **appletv@umn.edu** and user discussions are taking place on **appletv-users@umn.edu**.

For University Departments hoping to use an Apple TV in a meeting or conference room, send a message to **appletv-users@lists.umn.edu** for assistance.

Bulk Register and Connect Multiple Devices to the Encrypted Service

Step 1: Request IoT Admin Permissions

Body

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-

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Step 3: Bulk Import and register your IoT Devices for the Encrypted Service

Body

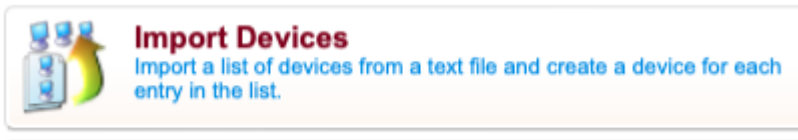
To import a list of new departmental or unit-owned Internet of Things (IoT) devices, use the bulk import facility. This requires using a spreadsheet template with some default values. This step is a part of the [Register a Departmental Device for IoT Wi-Fi Service](#) guide.

Bulk Importing IoT Devices

Bulk importing IoT devices is only for IoT Admin departmental/unit-owned devices.

1. Download the [IoT Bulk Import Template](#).
 - Select **File** then **Download** then **Comma Separated Values (.csv)**.
2. Enter data in your spreadsheet. There are 10 required columns.
 - Columns A, D, E, F and I contain required default values and should not be changed.
 - Column A Is Device default value: **Yes**
 - Column D Activation default value: **Now**
 - Column E Expiratin default value: **N/A**
 - Column F Lifetime default value: **0**
 - Column I MPSK Enabled default value: **1**
 - Columns B, C, G, H and J require you to enter your device data.
 - Column B MAC Address: device MAC in the format FF-FF-FF-FF-FF-FF

- Column C Role: **uofm-iot-campus** or **uofm-iot-internet**
 - Column G Sponsor: your IoT Admin internet ID
 - Column H Wi-Fi Password: password for your device
 - Column J IoT Device Name: name of your device
3. When you have your spreadsheet ready, log in to [ClearPass Guest Registration portal](#).
- If inaccessible, please try the alternate [WiFi Registration webpage](#).
4. Select **Import Devices**.



5. Select **Choose File** to import your updated spreadsheet and select **Next Step**.

Import: Step 1 of 3

To import accounts, first provide the data. You can supply data in XML, comma-separated values (CSV), tab-separated values (TSV), or plain text format. You can upload a file containing the list of accounts, or you can copy and paste the list of accounts into the form below.

Upload User List

Size Limit:

Maximum file upload size: 15.0 MB.
A maximum of 1000 records can be imported at one time.

Accounts File:

Upload a file containing a list of accounts. This field may be left blank if you provide the list in the field below.

Accounts Text:

Type in or paste the list of accounts. This field may be left blank if you upload a file.

Advanced:

☐ Show additional import options

Next Step

* required field

6. Verify your data and select **Next Step**.

Import: Step 2 of 3

Data was imported from the 'csv' format. The first 6 records in the imported data are shown below. There are a total of 6 records in the imported data.

Record	Field 1	User ID	Is Device	MAC Address	Role	Activation	Expiration	Lifetime	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
1	Number	User ID	Is Device	MAC Address	Role	Activation	Expiration	Lifetime	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
2	1	13544	Yes	0A-0B-0C-0D-0E-0F	uofm-iot-campus	2022-10-19 16:00	N/A	0	wifi-test-user	overpost75bivervb	1	Sensor5
3	2	13539	Yes	11-11-11-11-11-11	uofm-iot-campus	2022-10-19 15:22	2023-10-19 15:22	0	wifi-test-user	overpost75bivervb	1	Sensor1
4	3	13540	Yes	22-22-22-22-22-22	uofm-iot-campus	2022-10-19 15:22	2023-10-19 15:22	0	wifi-test-user	overpost75bivervb	1	Sensor2
5	4	13541	Yes	AA-AA-AA-AA-AA-AA	uofm-iot-campus	2022-10-19 15:24	2023-10-19 15:24	0	wifi-test-user	overpost75bivervb	1	Sensor3
6	5	13543	Yes	EE-EE-EE-EE-EE-EE	uofm-iot-campus	2022-10-19 14:56	2023-10-19 14:56	0	wifi-test-user	overpost75bivervb	1	DUBLIN

You can edit this data by [returning to Step 1](#).

To create accounts from this data, use the form below to match each of the fields in the imported data with each of the parameters needed to create a device.

Match Fields

* MAC:

MAC Address

The MAC address of the device.

* Role:

Role

The role to assign to each of the created guest accounts.

* Activation Time:

Activation

The date and time at which to enable the guest accounts.

* Expiration Time:

Expiration

The date and time at which a guest account will expire and be deleted.

* Account Lifetime:

Lifetime

The amount of time after the first login before the account will expire and be deleted.

Expire Action:

Delete and logout at specified time

Select an option for controlling the expiration of this account. Note that a logout can only occur if the NAS is RFC-3576 compliant.

* Notes:

None

A note stored with each of the guest accounts.

Auto-Detected Fields:

☒ Is Device

☒ MAC Address

☒ Sponsor

☒ Wi-Fi Password

☒ MPSK Enabled

☒ IoT Device Name

The above fields were auto-detected in your file. Check the ones you wish to import.

* Header Rows:

1

The number of rows shown in the imported data that do not correspond to user accounts.

Next Step

* required field

7. Select **Create Account** to import your new passwords.

Import: Step 3 of 3

There are 5 accounts in the imported data. These are shown below.

You can change this data by [returning to Step 2](#).

To create accounts from this data, select the accounts that should be created.

Import Accounts

Select:

This Page (5) • All (5) • None • New (0) • Existing (5)

Total number of records currently selected: 5

Accounts:

	MAC Address	Role	Activation	Expiration	Lifetime	Expire Action	Is Device	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
☒	0A-0B-0C-0D-0E-0F	uofm-iot-campus	1666213200		0		Yes	wifi-test-user	overpost75bivervb	1	Sensor5
☒	11-11-11-11-11-11	uofm-iot-campus	1666210920	1697746920	4		Yes	wifi-test-user	overpost75bivervb	1	Sensor1
☒	22-22-22-22-22-22	uofm-iot-campus	1666210920	1697746920	4		Yes	wifi-test-user	overpost75bivervb	1	Sensor2
☒	AA-AA-AA-AA-AA-AA	uofm-iot-campus	1666211040	1697747040	4		Yes	wifi-test-user	overpost75bivervb	1	Sensor3
☒	EE-EE-EE-EE-EE-EE	uofm-iot-campus	1666209360	1697745360	4		Yes	wifi-test-user	overpost75bivervb	1	DUBLIN

Refresh

1

Showing 1 – 5 of 5

20 rows per page

Select the accounts to import.

Create Accounts

8. Select **Manage Devices** to verify your import.

Step 4 (Optional): Setting the Same Password for a Group of IoT Devices

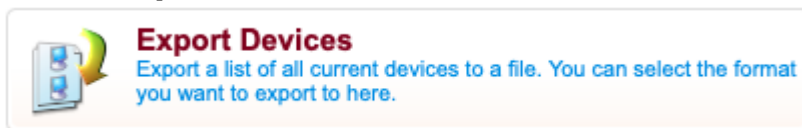
Body

If you want to set the same password for a group of departmental or unit-owned Internet of Things (IoT) devices, you need to export a spreadsheet, edit the passwords and then import your new spreadsheet back into the registration portal. This step is a part of the [Register a Departmental Device for IoT Wi-Fi Service](#) guide.

Setting the Same Password for a Group of IoT Devices

If you want to set the same password for a group of IoT devices, you need to export a spreadsheet, edit the passwords and then import your new spreadsheet back into the registration portal.

1. Log in to [ClearPass Guest Registration portal](#). If inaccessible, please try the alternate [WiFi Registration webpage](#).
 - These links will work only if you are accessing this article from a device on campus connected to eduroam or are connected to [VPN](#). You may need to use a private/incognito window to sign in with a departmental account.
2. Select **Export Devices**.



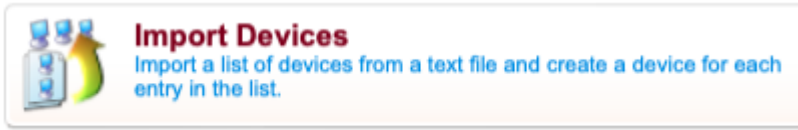
3. Select **Export Comma-Seperated Values**.
 - This will download a file with a name of the form **Guest Devices YYYY-MM-DD.csv** to your computer.
4. Open your "Guest Devices" file in Googlesheets. Note the Wi-Fi Password column.

J
Wi-Fi Password
overrate34betatter
mastless10predry
disniche33locking
overpost75biverb
test

5. Edit the password column to make the passwords the same. Leave all other values in the spreadsheet as is.

J
Wi-Fi Password
overpost75biverb
overpost75biverb
overpost75biverb
overpost75biverb
overpost75biverb

6. Save and export your spreadsheet.
7. Go back to the registration portal and select **Import Devices**.



8. Select **Choose File** to import your updated spreadsheet and select **Next Step**.

Import: Step 1 of 3

To import accounts, first provide the data. You can supply data in XML, comma-separated values (CSV), tab-separated values (TSV), or plain text format. You can upload a file containing the list of accounts, or you can copy and paste the list of accounts into the form below.

Upload User List

Size Limit: Maximum file upload size: 15.0 MB. A maximum of 1000 records can be imported at one time.

Accounts File:
Upload a file containing a list of accounts. This field may be left blank if you provide the list in the field below.

Accounts Text:

Type in or paste the list of accounts. This field may be left blank if you upload a file.

Advanced: ☐ Show additional import options

Next Step

* required field

9. Verify your data and select **Next Step**.

Import: Step 2 of 3

Data was imported from the 'csv' format. The first 6 records in the imported data are shown below. There are a total of 6 records in the imported data.

Record	Field 1	User ID	Is Device	MAC Address	Role	Activation	Expiration	Lifetime	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
1	Number	User ID	Is Device	MAC Address	Role	Activation	Expiration	Lifetime	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
2	1	13544	Yes	0A-0B-0C-0D-0E-0F	uolm-iot-campus	2022-10-19 16:00	N/A	0	wifi-test-user	overpost75b1verb	1	Sensor5
3	2	13539	Yes	11-11-11-11-11-11	uolm-iot-campus	2022-10-19 15:22	2023-10-19 15:22	0	wifi-test-user	overpost75b1verb	1	Sensor1
4	3	13540	Yes	22-22-22-22-22-22	uolm-iot-campus	2022-10-19 15:22	2023-10-19 15:22	0	wifi-test-user	overpost75b1verb	1	Sensor2
5	4	13541	Yes	AA-AA-AA-AA-AA-AA	uolm-iot-campus	2022-10-19 15:24	2023-10-19 15:24	0	wifi-test-user	overpost75b1verb	1	Sensor3
6	5	13543	Yes	EE-EE-EE-EE-EE-EE	uolm-iot-campus	2022-10-19 14:36	2023-10-19 14:36	0	wifi-test-user	overpost75b1verb	1	DUBLIN

You can edit this data by [returning to Step 1](#).

To create accounts from this data, use the form below to match each of the fields in the imported data with each of the parameters needed to create a device.

Match Fields

* MAC:

MAC Address

The MAC address of the device.

* Role:

Role

The role to assign to each of the created guest accounts.

* Activation Time:

Activation

The date and time at which to enable the guest accounts.

* Expiration Time:

Expiration

The date and time at which a guest account will expire and be deleted.

* Account Lifetime:

Lifetime

The amount of time after the first login before the account will expire and be deleted.

Expire Action:

Delete and logout at specified time

Select an option for controlling the expiration of this account. Note that a logout can only occur if the NAS is RFC-3576 compliant.

* Notes:

None

A note stored with each of the guest accounts.

Auto-Detected Fields:

☒ Is Device

☒ MAC Address

☒ Sponsor

☒ Wi-Fi Password

☒ MPSK Enabled

☒ IoT Device Name

The above fields were auto-detected in your file. Check the ones you wish to import.

* Header Rows:

1

The number of rows shown in the imported data that do not correspond to user accounts.

Next Step

* required field

10. Select **Create Account** to import your new passwords.

Import: Step 3 of 3

There are 5 accounts in the imported data. These are shown below.

You can change this data by [returning to Step 2](#).

To create accounts from this data, select the accounts that should be created.

Import Accounts

Select:

This Page (5) • All (5) • None • New (0) • Existing (5)

Total number of records currently selected: 5

	MAC Address	Role	Activation	Expiration	Lifetime	Expire Action	Is Device	Sponsor	Wi-Fi Password	MPSK Enabled	IoT Device Name
☒	0A-0B-0C-0D-0E-0F	uolm-iot-campus	1666213200		0		Yes	wifi-test-user	overpost75b1verb	1	Sensor5
☒	11-11-11-11-11-11	uolm-iot-campus	1666210920	1697746920	4		Yes	wifi-test-user	overpost75b1verb	1	Sensor1
☒	22-22-22-22-22-22	uolm-iot-campus	1666210920	1697746920	4		Yes	wifi-test-user	overpost75b1verb	1	Sensor2
☒	AA-AA-AA-AA-AA-AA	uolm-iot-campus	1666211040	1697747040	4		Yes	wifi-test-user	overpost75b1verb	1	Sensor3
☒	EE-EE-EE-EE-EE-EE	uolm-iot-campus	1666209360	1697745360	4		Yes	wifi-test-user	overpost75b1verb	1	DUBLIN

Refresh

1

Select the accounts to import.

Showing 1 – 5 of 5

20 rows per page

Create Accounts

11. Select **Manage Devices** to verify your import.

Step 5: Connect to the Encrypted IoT Wi-Fi Service

Body

At the University of Minnesota, personal and departmental Wi-Fi devices can be connected to the Internet of Things (IoT) service. Follow these steps to connect your device for the Encrypted IoT Service.

Connecting Your Device to Encrypted IoT Service

1. Open the **Network Settings** on your device and view the list of available Wi-Fi networks.
 - This should be near to where your wireless MAC address was listed.
2. From the list of available networks, select **UofM-IoT** and enter the generated password.
3. Your device is now connected.

Please contact [UMN Technology Help](#) if you have problems following the above steps.

Step 6: Check any Known Device Issues

Body

These are some of the known issues and their workarounds for connecting departmental and personal Internet of Things (IoT) devices for University of Minnesota IoT Wi-Fi service.

Wireless Printers

Wireless printers broadcast a signal that conflicts with University of Minnesota networks, and can lead to poor service for everyone in the area near the printer. Instead, please connect to printers using a USB cable.

Apple TV

Attempt the connection with UofM-IoT following the instructions in the [Register a Personal Device for the Internet of Things \(IoT\) Wi-Fi Service](#) Self-Help guide. In case that does not work, you can attempt to connect using our enterprise eduroam connection by using [Apple Configurator](#) (link is an archived Apple article).

- Apple Configurator can set up a profile to add to the Apple TV that will connect to our enterprise connection. Some support may be offered from **appletv@umn.edu** and user discussions are taking place on **appletv-users@umn.edu**.

For University Departments hoping to use an Apple TV in a meeting or conference room, send a message to **appletv-users@lists.umn.edu** for assistance.