**XIQ Ekahau Importer Guide**

by Tim Smith, SA – 2/1/2024 – v2.3

Overview**:**

This guide covers how to run the XIQ\_Ekahau\_Import.py script. This script can import an Ekahau floorplan and place APs into ExtremeCloud IQ (XIQ). This will save time by creating the site, building, and floor(s) (as well as optional site groups), uploading the image file, scaling the floorplan, and setting the location of the Access Points, all from data within an Ekahau file.

Target Audience**:** Semi-Technical

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# Definitions:

|  |  |
| --- | --- |
| XIQ | ExtremeCloud IQ |
| VIQ | Virtual ExtremeCloud IQ |

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# Prerequisites:

* ExtremeCloud IQ Public Cloud or Private Cloud instance (IQVA on-prem is not supported.)
* Knowledge of XIQ by onboarding access points; creating site groups, sites, buildings, and floors; naming and setting locations of access points; Uploading and assigning floorplans to floors
* RadSec Proxy requires TCP Port 2083 to be open on your internet firewall
* One or more XIQ native access points or campus-based Wi-Fi systems (WiNG or IdentiFi)
* Download Ekahau script files from GitHub
* <https://github.com/ExtremeNetworksSA/XIQ_Ekahau_Importer>
  + XIQ\_Ekahau\_Import.py
  + mapImportLogger.py
  + app folder
    - Ekahau\_importer.py
    - ap\_csv\_importer.py
    - xiq\_exporter.py
* Ekahau 10.0 or later file

# Scripting Environment Preparation:

### Information:

The XIQ\_Ekahau\_Import.py script requires, at minimum, Python 3.7 and is tested up to Python 3.12. This script has been tested with macOS and Windows but may also be able to be executed from any device with Python and the needed modules installed. This device must be able to access the Ekahau files and reach out to ExtremeCloud IQ, and Ekahau does not need to be installed on the device.

The script, when run, will create a *map\_importer.log* file. This log file will show information about site groups, sites, buildings, and floors created and the APs throughout the process. Any API errors experienced will also show up in the log file.

## Device Choice:

This script has only been tested in MacOS (Big Sur, Monterey, and Ventura) and Windows (10 and 11). This script may be executed from any device running Python 3.7 or higher. The device will need to reach ExtremeCloud IQ, which can be done through a proxy, and proxy config is beyond the scope of this guide.

## Python Installation:

Depending on the device used, you may need to install Python or a different version. The easiest way to check the Python version is to open the terminal and type this command.

python3 --version

Below is an example of installing python3 for Mac OSX and Windows.

### 

### Mac OSX Ventura

* Open the terminal and enter python3 --version
  + This triggers the installation of Developer Tools
* Graphical user interface, text

  Description automatically generatedClick Install
* Click Agree
* The Developer tools that installed python3 will also install pip3 in Ventura
* The Mac terminal will be used to install Python modules

### 

### Windows 11

* A screenshot of a phone

  Description automatically generated with medium confidenceSearch Microsoft Store for Python 3.11 and click install
* Log in with Microsoft credentials
* The Windows store installs pip3 with python3. Pip3 will be used to install the needed modules.

## Required Modules:

The **requests, pandas,** and **opencv-python** modules are required for the XIQ\_Ekahau\_Import.py script.

### Checking for existing Modules

You can check if the required modules are installed using the terminal. For each module, run the following command.

python3 -c “import requests”

python3 -c “import pandas”

python3 -c “import opencv-python”

”

The module is not installed if a ‘*ModuleNotFoundError: No module named '<module name>*' error is returned.

### Installing required modules

The required modules can be installed using pip3 using the downloaded requirements.txt file with the following command.

## 

pip3 install -r requirements.txt

Or the modules can be installed individually using

pip3 install requests

pip3 install pandas

pip3 install opencv-python

# Ekahau File Preparation:

## Information:

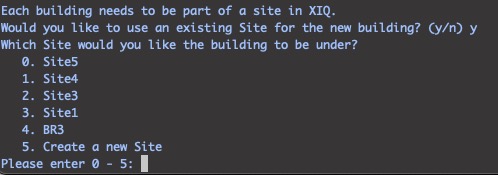
For the XIQ\_Ekahau\_Importer.py script to work, an Ekahau 10.x file will need to be used. If you have a file with a previous version of Ekahau, you will need to open it with Ekahau version 10 and save it before you can use it with this script.

The script will try to use the building(s) and floor(s) names from the Ekahau file. **Please note that XIQ limits the length of the name to 32 characters.** If a name is longer, the script will prompt you to change the name.

With XIQ, each building will need to be part of a Site. The script will walk you through choosing an existing site or creating a new Site. **Please note that XIQ requires all Sites, Site Groups, and buildings to have a unique name.**

Floors not assigned to Buildings in Ekahau:

If the floor(s) in the Ekahau file are not assigned to a building in Ekahau, the script will walk through creating a new building. Each building requires to be assigned a site, so you will have to create a site as well. The script will walk you through selecting an existing site or creating a new one.



### Creating Site Groups

When creating a new site, you will also have the option of adding the new site to a site group. You will then be presented with a choice of existing site groups or create a new site group to add the site to.

When creating a new site group, the site group’s name must be unique to your VIQ.



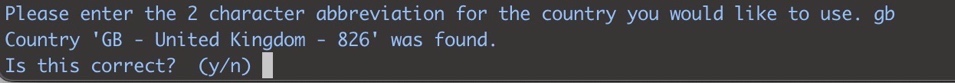
### Creating Sites

If you choose to create a site, the script will prompt you to enter a name for the site. This name needs to be unique to your VIQ.

The script will then ask if your site is in the US. If you select ‘no,’ you will be asked to enter the 2-character abbreviation for the country you want to use.

A computer screen with white text

Description automatically generated If you enter characters that are not found, you will be asked if you want to see a list of valid responses. Selecting ‘y’ will list all available countries with their 2-character abbreviations.

Once you enter a valid response, the script will let you confirm that the country is correct.

The script will then prompt you to confirm creating the site.

### Creating Buildings

To create a new building, you will need to give the script a building name and the address of the building. The name of the building is required, but the address is optional. If no address is entered, the script will put “Unknown” in the address fields.

You must give site groups, sites, and buildings unique names to your VIQ, which cannot be the name of another building, site, or site group. If you use an existing name, you will be given a message and asked to pick a new name.



After a valid building name and address have been entered, a prompt will ask you to confirm before creating the building in XIQ.



Once you confirm, the building will be created in XIQ. The floorplan(s) will be uploaded to XIQ, and the floor(s) will be made in XIQ. The name of the floor(s) created in XIQ is the name of the floor(s) configured in the Ekahau file, so make sure it has the correct name you want.

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Description automatically generatedGraphical user interface, text, application

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## Floors assigned to Buildings in Ekahau:

Graphical user interface

Description automatically generatedIf the Ekahau file contains the building(s) with floors assigned to them, the script will use the name of the building(s) and create the floor(s) underneath. So, make sure the building(s) is named correctly. The default building name is ‘Building 1’ – if the script detects this name, it will ask if you want to use or change it. The script doesn’t detect other default names like ‘Building 2’. If the building name already exists in your VIQ, the script will ask if you would like to add the floors to the existing building. Or you can choose to change the name of the building through the script.

Graphical user interface, text, application, email

Description automatically generatedThe address of the building can be set in the Ekahau file. You can add the address to the project notes under location. This can be found in Ekahau by selecting **Project >> Project Notes**. The script will pull the address from the location field and apply it to the building(s). Please note that all elements should be separated by commas (including between state and postal code). If the location field is empty, each address element will be set to ‘Unknown Address.’

## Assign AP locations from the Ekahau File:

Graphical user interface, text, application

Description automatically generatedFor the script to place APs in the correct location in XIQ, the script needs to know the serial number of the APs. There are two ways to do this. The first is to add the serial numbers to the AP's names in the Ekahau file. (Covered in this section) The second option is to use a CSV to map the AP names to the serial numbers. (See [CSV section](#_CSV_File))

To add the serial numbers to the APs names in the Ekahau file, you must format the AP name by adding the serial numbers to the AP name, separating them by two colons as shown.

<AP Name> :: <Serial Number>

The script omits spaces.

# Running The Script:

To run the script, open the terminal to the location of the script and run the following:

Python3 XIQ\_Ekahau\_Importer.py

chmod +x XIQ\_Ekahau\_Importer.py

You can also make the script executable by running

Then, you can run the script by typing

./XIQ\_Ekahau\_Importer.py

The script will ask you to enter an Ekahau file. You can either enter the file's name, including the full path to the file, or in macOS, you can drag the file into the terminal and hit enter. You can enter the file's name if you add the Ekahau file to the same folder as the script. The script will collect the needed information from the Ekahau file. Once that is complete, the script will ask for your XIQ username and password.

* **Note:** The User account will need an administrator or operator role to create the Site groups, sites, buildings, and floors.

### Site groups, sites, buildings, floors, and floorplans

Once logged in, the script will take you through the options of creating the site groups, sites, buildings, and floors. These options will differ based on how the Ekahau file is prepped. See [Ekahau File Preparation](#_Ekahau_File_Preparation:) for details and screenshots on this.

Generally, the script section will present a few (y/n) questions or selection-type questions. To quit the script, type ‘quit’ or ‘q’ for any of the (y/n) questions. If a name is longer than 32 characters, the script will print the name with a message that it is longer than 32 characters and allow you to enter a new name.



Once everything is correct, the script will start to create the buildings, upload the floor plans, and create the floors. The script will print these steps on the screen as it goes through them.

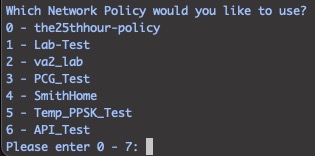
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### Network Policy

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Description automatically generatedThe script will prompt user to enter a network policy to be used for the Access Points. The user will be presented with options to Select the network policy from a list, or search for the Network Policy by name.



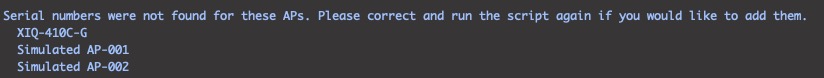
When selecting Network policy from a list, the Network Policies will be listed with a selection number by them. Enter the number to select the Network Policy.

A computer screen with white text

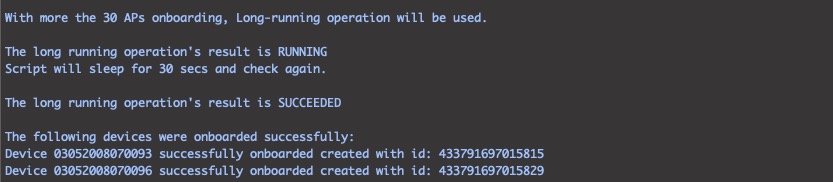
Description automatically generatedIf there are more then 10 Network Policies, the script will require the user to search for the Network Policy by name.

### Access Points

After all the buildings and floors have been created, the script will print out the names of all/any APs that do not have serial numbers. Serial numbers can be added directly to the AP names in the Ekahau file (see [Assign AP locations](#_Assign_AP_locations)) or by using a CSV file (See [CSV section](#_CSV_File))

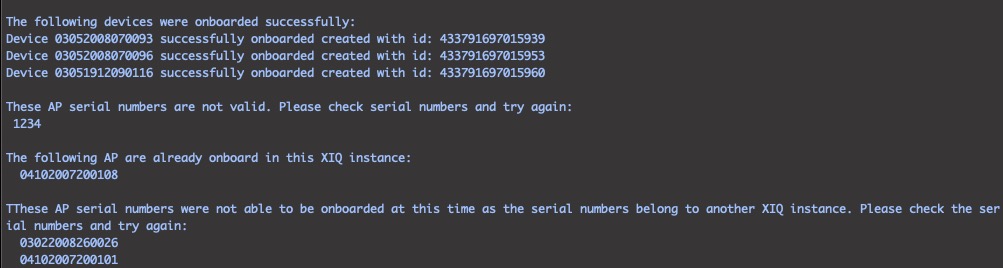


If more than 30 APs are in the Ekahau file. The script will use the long-running operation. The status of the operation will be checked every 30 seconds until it is completed.



Once the long-running operation is completed, or after the onboarding API call is performed, if there are less than 30 APs, the script will list out the devices that were onboarded successfully and provide the newly created device IDs.

The script will list out any serial numbers that are not valid, that already exist in the VIQ, or are found in the redirector belonging to another VIQ.



## Arguments

Two optional arguments can be added when running the script.

--CSV

This flag is used when a CSV maps the AP names to the serial numbers. (See [CSV section](#_CSV_File) below) To run the script using a CSV, in the terminal, you would run the following:

Python3 XIQ\_Ekahau\_Importer.py --csv <path & name of csv file>

On macOS, an easy way to get the path and name of a file in the terminal is to drag and drop the file in the terminal window. If the CSV file is in the same folder as the script, you can enter the CSV file name.

--external

This flag allows you to import the Ekahau floorplans into a VIQ that you are an external user of.

To run the script on an externally managed VIQ in the terminal, you would run.

Python3 XIQ\_Ekahau\_Importer.py --external

The script will start as usual and ask for an Ekahau file and your XIQ login. After logging in, you will be presented with a choice of which VIQ you want to import into.

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## CSV File

A CSV file can map AP serial numbers to AP names. This is most beneficial for large Ekahau files, so you don’t have to go through and add the serial numbers to each AP name. This CSV file will need two columns with “AP Name” and “Serial Number” as the headers. Additional columns can be added but will be ignored by the script. This file could be a switch port worksheet, or something used for other purposes.

AP #,AP Name,Model,Serial Number,Mac Address

1,AP-Bonus,ExtremeWireless AP305C, 03052008070096, 7467F79B3B70

## Log File

Upon running the script, a log file will be created named *map\_importer.log*. This log file contains the same type of information printed on the screen. It is also an excellent place to check if any issues arise as there sometimes is more information in the log file.Text

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