**XIQ Ekahau Importer Guide**

by Tim Smith, SA – 04/13/2022 – v1.0

Overview**:**

This guide covers how to run the XIQ\_Ekahau\_Import.py script. This script can be used to import a Ekahau floorplan and place APs into ExtremeCloud IQ (XIQ). This will save time by creating the building and floor(s) (as well as optional location), 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 |

# Table of Contents

[Overview 1](#_Toc100924578)

[Target Audience 1](#_Toc100924579)

[Definitions: 1](#_Toc100924580)

[Table of Contents 2](#_Toc100924581)

[Prerequisites: 3](#_Toc100924582)

[Scripting Environment Preparation: 3](#_Toc100924583)

[Information: 3](#_Toc100924584)

[Device Choice: 3](#_Toc100924585)

[Python Installation: 3](#_Toc100924586)

[Mac OSX Big Sur 4](#_Toc100924587)

[Required Modules: 4](#_Toc100924588)

[Checking for existing Modules 4](#_Toc100924589)

[Installing required modules 4](#_Toc100924590)

[4](#_Toc100924591)

[Ekahau File Preparation: 5](#_Toc100924592)

[Information: 5](#_Toc100924593)

[Floors not assigned to Buildings in Ekahau: 5](#_Toc100924594)

[Floors assigned to Buildings in Ekahau: 6](#_Toc100924595)

[Assign AP locations from Ekahau File: 7](#_Toc100924596)

[Running The Script: 7](#_Toc100924597)

[Locations, buildings, floors & floorplans 7](#_Toc100924598)

[Access Points 8](#_Toc100924599)

[Arguments 9](#_Toc100924600)

[CSV File 9](#_Toc100924601)

[Log File 10](#_Toc100924602)

# Prerequisites:

* ExtremeCloud IQ Public Cloud or Private Cloud instance (IQVA on-prem is not supported.)
* Knowledge of XIQ by onboarding access points; creating locations, 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/timjsmith24/XIQ_Ekahau_Importer>
  + XIQ\_Ekahau\_Import.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 3.6 and tested up to Python 3.9. This script has only been tested with MacOS but may be able to be executed from any device with python and the needed modules installed. This device will need to be able to access the Ekahau files and be able to reach out to ExtremeCloud IQ. Ekahau does not need to be installed on the device.

The script, when ran, will create a *map\_importer.log* file. This log file will show information about locations, building, and floors being created and information about the APs throughout the process. Any API errors experienced will also show up in the log file.

## Device Choice:

Currently this script has only been tested in MacOS. Both Big Sur and Monterey. This script may be able to be executed from any device that can run python 3.6 or higher but that is currently not supported until testing is completed. The device will need to be able to reach ExtremeCloud IQ. This can be done through a proxy. Proxy config is beyond the scope of this guide.

## Python Installation:

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

python3 --version

Below is an example of installing python3 for Mac OSX.

### 

### Mac OSX Big Sur

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

  Description automatically generatedClick Install
* Click Agree
* pip3 is needed to install python modules
* With Big Sur the Developer tools does not install pip3
* Mac terminal will be used to install pip3
* Running this command will check if pip is installed

pip3 --version

* Run the following command to install

curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py && python3 get-pip.py

## Required Modules:

The **requests, pandas** and **cv2** modules are the modules required for the XIQ\_Ekahau\_Import.py script.

### Checking for existing Modules

You can check to see 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 cv2”

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 cv2

# Ekahau File Preparation:

## Information:

In order 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 the file before you are able to use it with this script.

The script will try and 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 than that the script will prompt to change the 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. You will also have the option of adding the new building to a location. If you choose to add the building to a location, you will be presented with a choice of existing locations, or you can create a new location to add the building to. When creating a new location the name of location must be unique to your VIQ.

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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 Address” in the address field.

You will need to give the building a name that is unique to your VIQ. It cannot be a name of another building or location. If you use a name that already exists, you will be presented with a message and asked to pick a new name.



After a valid building name and address has 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 created 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 that has the correct name you want.

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## Floors assigned to Buildings in Ekahau:

Graphical user interface

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Before the building is created you will be presented with the option to add the new building to location as above.

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). If the location field is left empty the address will be set to ‘Unknown Address.’

## Assign AP locations from Ekahau File:

Graphical user interface, text, application

Description automatically generatedIn order for the script to place APs to the correct location in XIQ the script needs to know the serial number of the APs. There are 2 ways to do this. The first is to add the serial numbers to the APs 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 will need to format the AP name by adding the serial numbers to the AP name, separating them by two colons as shown.

<AP Name> :: <Serial Number>

Spaces are omitted by the script.

# Running The Script:

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

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 name of the file including the full path to the file or in MacOS you can simply drag the file into the terminal and hit enter. 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 to have administrator role in order to create the location, buildings, and floors.

### Locations, buildings, floors & floorplans

Once logged in, the script will take you through the options of creating the locations, 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.

In general, this section of the script will present a few (y/n) questions or selection type questions. You can type ‘quit’ or ‘q’ for any of the (y/n) questions to quit the script. 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 floorplans, and create the floors. The script will print on screen each of these steps as it goes through them.

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### Access Points

After all the buildings and floors have been created, the script will print out the name of all/any APs that do not have a serial number assigned to them. 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))

The script will proceed to check the serial numbers to see if any exist in the current VIQ. Serial numbers that are found will be listed and you will be given the option of moving those APs to the new location or leaving them where they currently are.

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After making the selection, the script will attempt to onboard the remaining serial numbers. If a serial number is attached to a different VIQ, the script will let you know that it could not onboard the AP.

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Once the APs are onboarded the script will name them and place them according to the Ekahau file.

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## Arguments

There are 2 optional arguments that can be added when running the script.

--csv

This flag is used when a CSV is to be used to map 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:

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

On MacOS an easy way to get the path & name of a file in the terminal is to drag and drop the file in the terminal window.

--external

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

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 normal and ask for an Ekahau file, then proceed with asking for your XIQ login. After you log in you will be presented with a choice of which VIQ you would like to import into.

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* **NOTE:** External users need to be granted API access. By default, API access is disabled. This can only be done by a local user or an external user that has already been granted API access. For more information see the API access for External Users section in [A Guide to Getting Started with v2 APIs in XIQ](https://extremeportal.force.com/ExtrArticleDetail?an=000102173) on Extreme’s Portal page.

## CSV File

A CSV file can be used to 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 of the AP names. This CSV file will need 2 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 switchport worksheet or something that will be used for other purposes as well.

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 a good place to check if any issues arise as there sometimes is more information in the log file.Text

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