

ADSP Client Types How-To Guide

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1 Introduction

What are Client Types?

Client Types are used to divide Wireless Clients into logical groups based on defined similarities. These groupings could be as generic as devices that you own and devices seen in the environment or as specific as devices of a certain model. This document explains the different methods of assigning client types to wireless clients.

Once a device that is Unsanctioned, but has a Client Type assigned ages out of the system, it will be moved to the Station_Lite table. This table will contain the device MAC address, Client Type, and Last Seen Time. Devices in the Station_Lite table will not need to go through the normal checks and will be made valid as soon as they are seen by ADSP and be moved back into the Station table.

2 Assignment with Auto-Classification

Auto-Classification uses rules that are defined and run against the station table either on demand or on a schedule. If a device in the table matches a rule, it will then assign the defined values (in this case Client Type) to that device. The rules are applied in the order they are listed, so once a device matches a rule no further rules are checked.

2.1 Example Scenario

We want to classify devices in a store that have their Wi-Fi enabled, but are not associated to the provided guest network. We will set up an auto classification rule to assign the “Potential Customer” type to devices that are outside the store based on a RSSI level between -100dBm and -80dBm. We will consider a device that is detected with an RSSI between -1 and -75dBm to be an “In Store Customer”.

2.2 Configuration

1. Open Auto Classification (Menu > Auto Classification).
2. Go to the **Action Rules** tab and press the **Create** button to create a new rule.

Then, supply the following information:

- Name—give your rule a name
- Device Type—in this case, we are classifying wireless clients
- Client Type—from our requirements, this will be set to **Potential Customer**
- Action—no Action

-
- Conditions—AND
 - Filter
 - Signal Strength—100dBm to -80dBm
 - Client Type—Uncategorized Device only (Only apply to devices with no type)
 - Classification—Unsanctioned (Only apply to unsanctioned devices)
3. Press the **Apply** button to save.
 4. Press the **Create** button to create another rule and supply the following information:
 - Name—give your rule a name
 - Device Type—in this case, we are classifying wireless clients
 - Client Type—from our requirements, this will be set to “In Store Customer”
 - Action—no Action
 - Conditions—AND
 - Filter
 - Signal Strength—75dBm to -1dBm
 - Client Type—Uncategorized Device and Potential Customer
 - Classification—Unsanctioned
 5. Press the **Apply** button to save.
 6. Go to the **Rule Sets** tab and press the **Create** button to create a new rule set. Then, follow these steps:
 - a. Give your rule set a name (**Name** field).
 - b. Add the action rules you created previously.
 - c. Press the **Apply** button to save.
 7. Go to the **On Demand** tab and follow these steps:
 - a. Select the rule set that you previously created.
 - b. Press the Classify Devices button. A list of devices matching the rule set will appear.
 - c. Press the Apply Results button to apply the settings displayed.

8. Go to the **Scheduled** tab and follow these steps:
 - a. Press the **Create** button to create a new schedule.
 - b. Give your schedule a name (**Name** field).
 - c. Enable your schedule.
 - d. Select the rule set you created previously.
 - e. Schedule this rule to run every hour.

3 Assignment with Device Import Rules

Device Import Rules are run against devices that are found by polling a wireless switch or AP. In the case of this document, when ADSP polls the infrastructure and acquires the associated device list, it will then apply the Device Import Rules to that list.

3.1 Example Scenario

We want to classify devices that are connected to the store wireless networks. We will setup a couple of import rules to classify devices as either **Laptop** or **Guest Wi-Fi Users**. This will be done using import rules to find the associated devices. A client associated to M-Wireless will be a **Laptop** and a client associated to M-Guest will be a **Guest Wi-Fi User**.

3.2 Configuration

1. Open Device Import Rules (Configuration >Appliance Platform >Device Import Rules).
2. Click the **Add** button and supply the following information:
 - Laptop
 - Device Type—Wireless Client
 - SSID—M-Wireless
 - Classification—sanctioned/inherit
 - Client Type—Laptop
 - Guest Wi-Fi User
 - Device Type—Wireless Client
 - SSID—M-Guest
 - Classification—unsanctioned
 - Client Type—Guest Wi-Fi User

4 Assignment with Manual File Import

You can use the **Manual File Import** feature to import a list of device MACs along with the desired configuration values. You can also import Wi-Fi device inventory lists and assign a client type to them.

4.1 Example Scenario

You want to classify devices that belong to important customers so that you know when they enter the store. These will be a list of MAC addresses that was submitted when the customers installed our mobile app. They will be assigned the Client Type **Loyalty Customer**.

4.2 Configuration

1. Open **Import and Discovery (Menu > Import and Discovery)**.
2. Select **Import Local File** as the Job Type.
3. Select **test_stationlite** from the samples and click **Open in New Window**.
Follow these steps:
 - a. Open the file in Excel or a text editor and make the following changes:
 - b. Use the example MAC addresses or change them.
 - c. Change all the Client Types to Loyalty Customer.
 - d. Make them all Add.
 - e. Save changes.
4. Go back to **Import and Discovery**.
 - a. Browse for your import file.
 - b. Place the file in the root of the scope.
 - c. Click Start Import & View Status.

5 Assignment with EQL Search and Import

Advanced searches using EQL can be used to pull information that may not be available through the normal means. You can take the information that is returned by an EQL search and use it to create a list of devices to import into ADSP.

5.1 Example Scenario

The employees are bringing in their personal smartphones and using the guest Wi-Fi. The problem is that we want to be able to filter out their devices from our reporting. What we will do is periodically search for devices that have been seen for periods of 5 hours or longer and use an import to assign the **Employee Personal Device** client type to them.

5.2 Configuration

1. First you must login to the ADSP command line.
2. We will use an EQL search to find all the devices seen in the environment for periods of 5 hours or more and exporting to a CSV file, as shown in the following image:

```
eql -fc "forensic; select mac(MAC) as STATION,
sum(a_visit_duration_seconds)/3600 as
TOTAL_VISIT_DURATION_HOURS, last(a_visit_duration_seconds)/3600 as
LAST_VISIT_DURATION_HOURS from (select last(last_seen_time) as
a_visit_end_time, visit_start_time(60) as a_visit_start_time,
last(last_seen_time - visit_start_time(60)) as a_visit_duration_seconds, MAC
from station WHERE type <> 2 GROUP BY MAC, a_visit_start_time)
GROUP BY STATION HAVING TOTAL_VISIT_DURATION_HOURS >= 5" |
sed -e 's/, [0-9]*, [0-9]*/, Employee Personal Device/g' -e 's/^stationlite,/g' >
employeepersonal.csv
```

3. You can adjust the time period by changing the TOTAL_VISIT_DURATION_HOURS that is being searched for.
4. If the created file was imported immediately the changes would not take effect until the device aged out and came back in the environment, so we will delete the devices first. We will do this by creating an import file for deleting the devices and then import it.

```
sed -e 's/stationlite/station,/,/g' -e 's/Employee Personal Device/,,,,delete/g'
<employeepersonal.csv > stationdelete.csv
import -filename stationdelete.csv
```

5. Now you can import the list of devices with the new client type assignment.
`import -filename employeepersonal.csv`
6. These commands can all be put into a script file and run on a schedule.



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MN-002712-01 Rev A, January 2016

