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RFID Tags Information API

GET: RFID Tag by MAC Address

Description

This API returns an RFID tag by its MAC address.

HTTP Method

GET

Resource URI

/api/location/v1/tags/:macaddress

Requires OAuth

N

Parameters

Table 1: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	RFID Tag MAC address.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/tags/00:18:8e:28:24:26

```
{
  "macAddress": "00:18:8e:28:24:26",
  "mapInfo": {
    "mapHierarchyString": "Singapore>SINGAPORE UE BIZHUB EAST
(SNG11)>SNG11-5F1>SingZone",
    "floorRefId": "739764660256899136",
    "floorDimension": {
      "length": 118.11024,
      "width": 184.05511,
      "height": 9.84252,
      "offsetX": 0,
      "offsetY": 0,
      "unit": "FEET"
    },
    "image": {
      "imageName": "domain_0_1380690706964.png",

```

```
        "zoomLevel": 4,
        "width": 1440,
        "height": 900,
        "size": 1440,
        "maxResolution": 8,
        "colorDepth": 8
    },
    },
    "mapCoordinate": {
        "x": 108.84515,
        "y": 68.62626,
        "z": 0,
        "unit": "FEET"
    },
    "currentlyTracked": true,
    "confidenceFactor": 72,
    "statistics": {
        "currentServerTime": "2016-06-16T02:20:42.974+0800",
        "firstLocatedTime": "1970-01-01T07:30:00.000+0730",
        "lastLocatedTime": "2016-06-16T02:20:39.336+0800",
        "maxDetectedRssi": {
            "apMacAddress": "64:f6:9d:2a:05:00",
            "band": "IEEE_802_11_B",
            "slot": 0,
            "rssi": -58,
            "antennaIndex": 0,
            "lastHeardInSeconds": 1
        }
    },
    },
    "historyLogReason": null,
    "geoCoordinate": {
        "latitude": 1.3347778969996247,
        "longitude": 103.96366325767761,
        "unit": "DEGREES"
    },
    },
    "networkStatus": "ACTIVE",
    "changedOn": 1466014839336,
    "telemetryList": null,
    "batteryInfo": {
        "tolerance": 70,
        "percentRemaining": 100,
        "daysRemaining": 0,
        "batteryAge": 0,
        "lastReceivedTime": "2016-06-09T06:38:29.748+0800",
        "lastReceivedSeqNum": 2221
    },
    },
    "vendorData": {
        "vendorId": 6286,
        "elementId": 0,
        "data": "AAMAAQEABAABAQ==",
        "lastReceivedTime": "2016-06-09T06:38:29.748+0800",
        "lastReceivedSeqNum": 2221
    },
    },
    "sortedEmergencyList": null,
    "sortedChokepointList": null,
    "lastBeaconTime": null,
    "lastBeaconSequenceNumber": 2221,
    "manufacturer": "Ekahau"
}
```

GET: Active RFID Tags Count

Description

This API returns active RFID tags count.

HTTP Method

GET

Resource URI

/api/location/v1/tags/count

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output

```
{
  "deviceType": "Tag",
  "deviceQueryString": null,
  "count": 8
}
```

GET: All Tags

Description

This API returns all tags.

HTTP Method

GET

Resource URI

/api/location/v1/tags

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output (JSON)

```
[
  {
    "macAddress": "98:07:2d:2a:13:f0",
    "mapInfo": {
      "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>Tm",
      "floorRefId": "727035700041482264",
      "floorDimension": {
        "length": 49.9,
        "width": 81,
        "height": 10,
        "offsetX": 0,
        "offsetY": 0,
        "unit": "FEET"
      },
      "image": {
        "imageName": "domain_0_1461628766707.png",
        "zoomLevel": 4,
        "width": 2008,
        "height": 1097,
        "size": 2008,
        "maxResolution": 8,
        "colorDepth": 8
      }
    },
    "mapCoordinate": {
      "x": 46.621124,
      "y": 43.95517,
      "z": 0,
      "unit": "FEET"
    },
    "currentlyTracked": true,
    "confidenceFactor": 88,
    "locComputeType": "RSSI",
    "statistics": {
      "currentServerTime": "2017-12-04T00:05:41.824-0800",
      "firstLocatedTime": "2017-12-04T00:05:30.305-0800",
      "lastLocatedTime": "2017-12-04T00:05:36.315-0800",
      "maxDetectedRssi": {
        "apMacAddress": "cc:16:7e:32:63:60",
        "band": "IEEE_802_11_B",
        "slot": 0,
        "rssi": -59,
        "antennaIndex": 0,
        "lastHeardInSeconds": 6
      }
    },
    "historyLogReason": null,
    "geoCoordinate": {
      "latitude": 37.42250281440575,
      "longitude": -121.95978545449093,
      "unit": "DEGREES"
    },
    "rawLocation": {
```

```

        "rawX": -999,
        "rawY": -999,
        "unit": "FEET"
    },
    "networkStatus": "ACTIVE",
    "changedOn": 1512374736315,
    "telemetryList": null,
    "batteryInfo": null,
    "vendorData": null,
    "sortedEmergencyList": null,
    "sortedChokepointList": null,
    "lastBeaconTime": null,
    "lastBeaconSequenceNumber": 0,
    "deviceSubtype": "BLE",
    "bleAttributesList": [
        {
            "profileType": "IBEACON",
            "deviceName": "",
            "uuid": "20CAE8A0A9CF11E3A5E20800200C9A66",
            "major": 42,
            "minor": 5104,
            "power": -70,
            "frequency": 0,
            "revision": 0,
            "battery": 0,
            "firmware": null,
            "hardware": null,
            "eddyStoneURL": "",
            "eddyStoneNamespace": "",
            "eddyStoneInstanceid": "",
            "batteryObject": [
                {
                    "sourceIndex": 1,
                    "percentage": 0,
                    "milliVolts": 0
                },
                {
                    "sourceIndex": 2,
                    "percentage": 0,
                    "milliVolts": 0
                },
                {
                    "sourceIndex": 3,
                    "percentage": 0,
                    "milliVolts": 0
                }
            ]
        }
    ],
    "manufacturer": "Texas Instruments"
},
{
    "macAddress": "98:07:2d:2a:11:c0",
    "mapInfo": {
        "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Bar",
        "floorRefId": "727035700041482264",
        "floorDimension": {
            "length": 49.9,
            "width": 81,
            "height": 10,
            "offsetX": 0,
            "offsetY": 0,
            "unit": "FEET"
        }
    },

```

```
"image": {
  "imageName": "domain_0_1461628766707.png",
  "zoomLevel": 4,
  "width": 2008,
  "height": 1097,
  "size": 2008,
  "maxResolution": 8,
  "colorDepth": 8
},
"tagList": [
  "Lobby"
]
},
"mapCoordinate": {
  "x": 52.03835,
  "y": 23.021484,
  "z": 0,
  "unit": "FEET"
},
"currentlyTracked": true,
"confidenceFactor": 120,
"locComputeType": "RSSI",
"statistics": {
  "currentServerTime": "2017-12-04T00:05:41.825-0800",
  "firstLocatedTime": "2017-12-04T00:05:36.306-0800",
  "lastLocatedTime": "2017-12-04T00:05:36.306-0800",
  "maxDetectedRssi": {
    "apMacAddress": "f8:0b:cb:3c:01:80",
    "band": "IEEE_802_11_B",
    "slot": 0,
    "rssi": -68,
    "antennaIndex": 0,
    "lastHeardInSeconds": 1
  }
},
"historyLogReason": null,
"geoCoordinate": {
  "latitude": 37.4224445499256,
  "longitude": -121.9598048699379,
  "unit": "DEGREES"
},
"rawLocation": {
  "rawX": -999,
  "rawY": -999,
  "unit": "FEET"
},
"networkStatus": "ACTIVE",
"changedOn": 1512374736306,
"telemetryList": null,
"batteryInfo": null,
"vendorData": null,
"sortedEmergencyList": null,
"sortedChokepointList": null,
"lastBeaconTime": null,
"lastBeaconSequenceNumber": 0,
"deviceSubtype": "BLE",
"bleAttributesList": [
  {
    "profileType": "IBEACON",
    "deviceName": "",
    "uuid": "20CAE8A0A9CF11E3A5E20800200C9A66",
    "major": 42,
    "minor": 4544,
    "power": -70,
  }
]
```

```
    "frequency": 0,
    "revision": 0,
    "battery": 0,
    "firmware": null,
    "hardware": null,
    "eddyStoneURL": "",
    "eddyStoneNamespace": "",
    "eddyStoneInstanceid": "",
    "batteryObject": [
      {
        "sourceIndex": 1,
        "percentage": 0,
        "milliVolts": 0
      },
      {
        "sourceIndex": 2,
        "percentage": 0,
        "milliVolts": 0
      },
      {
        "sourceIndex": 3,
        "percentage": 0,
        "milliVolts": 0
      }
    ]
  },
  "manufacturer": "Texas Instruments"
}
```


GET: Supported Northbound Notifications

Description

This API returns all supported notification types and applicable attributes for the notification rules.

HTTP Method

GET

Resource URI

/api/location/v1/attributes

Requires Basic Auth

N

Content Type

application/json

Sample Output

```
{
  "notifications": [
    {
      "notificationType": "locationupdate",
      "subscriptionName": "asdasdasd",
      "eventId": 1259951,
      "locationMapHierarchy": "Simulator-1212-Campus0>Building1>Floor8>Zone4",
      "locationCoordinate": {
        "x": 65.32642,
        "y": 302.04172,
        "z": 0.0,
        "unit": "FEET"
      },
      "geoCoordinate": {
        "latitude": -999.0,
        "longitude": -999.0,
        "unit": "DEGREES"
      },
      "confidenceFactor": 64.0,
      "apMacAddress": "NOT APPLICABLE",
      "associated": false,
      "username": "NOT APPLICABLE",
      "ipAddress": [
        "NOT APPLICABLE"
      ],
      "ssid": "NOT APPLICABLE",
      "band": "NOT APPLICABLE",
      "floorId": 1721918422,
      "entity": "WIRELESS_CLIENTS",
      "deviceId": "10:00:00:00:0f:5e",
      "lastSeen": "2017-06-06T13:42:51.798-0700",
      "rawLocation": {
        "rawX": -999.0,
```

```

        "rawY":-999.0,
        "unit":"FEET"
    },
    "areaGlobalidList":[
        6343,
        2759,
        2758,
        2757,
        6399,
        6400,
        6289,
        6342
    ],
    "tagVendorData":null,
    "manufacturer":"Private",
    "timestamp":1496781771798
}
]
}

```

Output Field Descriptions

Table 2: Output Field Descriptions

Field	Description
Notification Type	What type of notification this output describes (For example, locationupdate)
Subscription Name	The name of the notification created in CMX (user provided)
Event ID	Unique for notification identification per event
Location Map Hierarchy	The Hierarchy string that shows campus, building, floor, and zone (if applicable)
Location Coordinate	XY location for the device
Geo Coordinate	GPS location for device, if GPS markers are set
Confidence Factor	Represents a square box of where the client should be, lower means better location accuracy
AP Mac Address	The AP that the client is connected to
Associated	is this device Associated or not
Username	The username of this Associated client if using 802.11x
IP address	If this client is associated, what IP address(es) are assigned to it, can include IPv4 and IPv6 addresses
SSID	The SSID of the client is Associated
Band	802.11 band the device is it connected to

Field	Description
Floor Id	Long value representing hieracrchy, would not use
Floor Ref Id	Represents a long for what hierarchy it is on (Floor Id might be rounded if the number is large enough due to a conversion from long to double), only is filled in for location update, recommended for use
Entity	What type of device is it, Client (normal devices), RFID Tag (these are devices that send a chirp on an interval), Interferers (Devices that are connected to APs or are APs that aren't on the network controlled by a controller on this CMX)
Device Id	MAC address of device
Last Seen	Timestamp of packet last received from controller for this device
Raw Location	-
Area Global Id List	-
Tag Vendor Data	For RFID tags, information that was encoded in packets we received like battery life or something like that.
Manufacturer	Based on the first half of the MAC address of this device
Timestamp	When the notification generated
status	Refers to what the status of the device is - IDLE(0), AAA_PENDING(1), AUTHENTICATED(2), ASSOCIATED(3), POWERSAVE(4), DISASSOCIATED(5), TO_BE_DELETED(6), PROBING(7), WAIT_ASSOCIATED(257);

Table 3: API History

Release	Modification
Cisco CMX Release 10.3	Output field descriptor Floor Ref Id was introduced.

GET: Count of all the Beacons

Description

This API returns count of all beacons.

HTTP Method

GET

Resource URI

/api/location/v1/beacon/count

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/beacon/count

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PUT: Place a Beacon at Detected Location on Map

Description

This API places a beacon at detected location on the map.

HTTP Method

PUT

Resource URI

/api/location/v1/beacon/replace/:macaddress

Requires OAuth

N

Parameters

Table 4: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	Mac address of beacon.

Content Type

application/json

PUT: Updates Name of a Given Beacon

Description

This API updates the name of a given Beacon.

HTTP Method

PUT

Resource URI

/api/location/v1/beacon/name/:macaddress/:name

Requires OAuth

N

Parameters

Table 5: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	Mac address of beacon.
name	Y	—	String	pathReplace	New values to be used as name.

Content Type

application/json

GET: List of Beacons Matching Filter Criteria

Description

This API returns list of Beacons matching to filter criteria present on the given floor. filterString format :mac={mac} name={name} uuid={uuid} major={major} minor={minor} example :
api/location/v1/veacon/search/{floorrefid}/mac=11:22:33:44:55:66 name=abc

HTTP Method

GET

Resource URI

/api/location/v1/beacon/search/:floorrefid/:filterString

Requires OAuth

N

Parameters

Table 6: Parameter Details

Name	Required	Default	Type	Location	Description
floorrefid	Y	—	Number	pathReplace	Reference id of the floor.
filterString	Y	—	String	pathReplace	Value of the filterString.

Content Type

application/json

POST: Add Beacon with Minimum Fields

Description

This API adds a beacon with minimum fields to the store. Example query string `/info/mac={mac}` and `name={name}` and `uuid={uuid}` and `major={major}` and `minor={minor}`.

HTTP Method

POST

Resource URI

`/api/location/v1/beacon/info/:queryString`

Requires OAuth

N

Parameters

Table 7: Parameter Details

Name	Required	Default	Type	Location	Description
queryString	Y	—	String	pathReplace	Value of the queryString.

Content Type

application/json

GET: Beacons with Minimum Information for a Floor ID

Description

This API returns beacons with minimum information for a floor ID.

HTTP Method

GET

Resource URI

/api/location/v1/beacon/info/:floorrefid

Requires OAuth

N

Parameters

Table 8: Parameter Details

Name	Required	Default	Type	Location	Description
floorrefid	Y	—	Number	pathReplace	Reference ID of the floor.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/beacon/info/739764660256899136

```
[{"MAC- c8:69:cd:54:2c:3a UUID-null MAJOR-null MINOR-null TYPE-Rogue STATUS-Active
RSSI-null"}, {"MAC- e7:8e:65:42:7b:5e UUID-b9:40:7f:30:f5:f8:46:6e:af:f9:25:55:6b:57:fe:6d MAJOR-31582
MINOR-25922 TYPE-Rogue STATUS-Active RSSI--74"}, {"MAC- f8:25:1d:38:5f:df
UUID-b9:40:7f:30:f5:f8:46:6e:af:f9:25:55:6b:57:fe:6d MAJOR-24543 MINOR-7480 TYPE-Rogue
STATUS-Active RSSI--74"}, {"MAC- c8:69:cd:50:29:de UUID-null MAJOR-null MINOR-null TYPE-Rogue
STATUS-Active RSSI-null"}]
```

GET: List of Beacons

Description

This API returns list of Beacons.

HTTP Method

GET

Resource URI

/api/location/v1/beacon

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/beacon

```
[{"macAddress":"c8:69:cd:54:2c:3a","name":null,"type":"Rogue",
"detectedOn":1465384031100,"status":"Active","lastUpdatedOn":1466015949748,
"currentServerTime":1466016244167,"expectedHierarchyString":null,"actualHierarchyString":
null,"uuid":null,"major":null,"minor":null,"manufacturerId":null,"rssi":null,"mapInfo":
{"mapHierarchyString":"Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5F1>IOT Demo,
SingZone","floorRefId":"739764660256899136"},"mapCoordinate":{"x":79.47438,"y":60.84791,
"z":0.0,"unit":"FEET"},"detectedLocation":null,"configuredLocation":null,"lastUpdatedTime":
1466015949748},"macAddress":"e7:8e:65:42:7b:5e","name":null,"type":"Rogue","detectedOn":
1466007673699,"status":"Active","lastUpdatedOn":0,"currentServerTime":1466016244167,
"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":
"b9:40:7f:30:f5:f8:46:6e:af:f9:25:55:6b:57:fe:6d","major":"31582","minor":"25922",
"manufacturerId":"4c00","rssi":"-74","mapInfo":{"mapHierarchyString":"Singapore>
SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5F1>SingZone","floorRefId":"739764660256899136"},
"mapCoordinate":{"x":110.90741,"y":62.45491,"z":0.0,"unit":"FEET"},"detectedLocation":
null,"configuredLocation":null,"lastUpdatedTime":0},
.....
{"mapHierarchyString":"Bangalore_Cessna>Building 11>Customer Experience Center",
"floorRefId":"739764720386534870"},"mapCoordinate":{"x":91.889755,"y":161.0643,"z":0.0,
"unit":"FEET"},"detectedLocation":null,"configuredLocation":null,"lastUpdatedTime":0},
{"macAddress":"34:c0:59:36:71:1d","name":null,"type":"Rogue","detectedOn":1466015514702,
"status":"Active","lastUpdatedOn":0,"currentServerTime":1466016244167,
"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":null,"major":null,
"minor":null,"manufacturerId":null,"rssi":null,"mapInfo":{"mapHierarchyString":
"Bangalore_Cessna>Building 11>Customer Experience Center","floorRefId":
```

```
"739764720386534870"},"mapCoordinate":{"x":91.889755,"y":161.0643,"z":0.0,"unit":"FEET"},  
"detectedLocation":null,"configuredLocation":null,"lastUpdateTime":0}]
```

GET: Beacon by MAC Address

Description

This API returns Beacon by macaddress.

HTTP Method

GET

Resource URI

/api/location/v1/beacon/:macaddress

Requires OAuth

N

Parameters

Table 9: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	Mac address of beacon.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/beacon/c8:69:cd:54:2c:3a

```
{ "macAddress": "c8:69:cd:54:2c:3a", "name": null, "type": "Rogue",
  "detectedOn": 1465384031100, "status": "Active", "lastUpdatedOn": 1466015949748,
  "currentServerTime": 1466016328698, "expectedHierarchyString": null, "actualHierarchyString":
  null, "uuid": null, "major": null, "minor": null, "manufacturerId": null, "rssi": null, "mapInfo":
  { "mapHierarchyString": "Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5F1>SingZone",
    "floorRefId": "739764660256899136"}, "mapCoordinate": { "x": 76.43114, "y": 58.149662, "z": 0.0,
    "unit": "FEET"}, "detectedLocation": null, "configuredLocation": null, "lastUpdateTime":
  1466015949748 }
```

DELETE: Delete Beacon by MAC Address

Description

This API deletes a Beacon by macaddress.

HTTP Method

DELETE

Resource URI

/api/location/v1/beacon/:macaddress

Requires OAuth

N

Parameters

Table 10: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	Mac address of beacon to be deleted.

Content Type

application/json

PUT: Update Beacon

Description

This API updates a given Beacon.

HTTP Method

PUT

Resource URI

/api/location/v1/beacon

Requires OAuth

N

Parameters

Table 11: Parameter Details

Name	Required	Default	Type	Location	Description
macAddress	Y	—	string	body	MAC Address.
name	Y	—	string	body	Name
type	N	—	enumerated	body	<ul style="list-style-type: none"> • Known • Rogue • Unplaced
detectedOn	N	—	number	body	detectedOn
status	N	—	enumerated	body	<ul style="list-style-type: none"> • Active • Missing • Misplaced • Inactive • NeverDetected
lastUpdatedOn	N	—	number	body	Last updated on.
expectedHierarchyString	N	—	string	body	Expected Hierarchy String.
actualHierarchyString	N	—	string	body	Actual Hierarchy String.

Name	Required	Default	Type	Location	Description
uuid	Y	—	string	body	UUID
major	Y	—	string	body	Major.
minor	Y	—	string	body	Minor
manufacturerId	N	—	string	body	Manufacturer ID
rsssi	N	—	string	body	RSSI value.
mapInfo	N	—	text	body	Map Information.
mapCoordinate	N	—	text	body	Map coordinate.
detectedLocation	N	—	text	body	Detected Location.
configuredLocation	N	—	text	body	Configured Location.

Content Type

application/json

GET: List of Beacons Present on a Floor

Description

This API returns list of Beacons present on the given floor.

HTTP Method

GET

Resource URI

/api/location/v1/beacon/floor/:floorrefid

Requires OAuth

N

Parameters

Table 12: Parameter Details

Name	Required	Default	Type	Location	Description
floorrefid	Y	—	Number	pathReplace	Reference ID of the floor.

Content Type

application/json

Sample Output

```
[{"macAddress":"c8:69:cd:54:2c:3a","name":null,"type":"Rogue","detectedOn":1465384031100,"status":"Active","lastUpdatedOn":1466015949748,"currentServerTime":1466016486617,"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":null,"major":null,"minor":null,"manufacturerId":null,"rssi":null,"mapInfo":{"mapHierarchyString":"Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5Fl>SingZone","floorRefId":"739764660256899136"},"mapCoordinate":{"x":76.43114,"y":58.149662,"z":0.0,"unit":"FEET"},"detectedLocation":null,"configuredLocation":null,"lastUpdatedTime":1466015949748}, {"macAddress":"e7:8e:65:42:7b:5e","name":null,"type":"Rogue","detectedOn":1466007673699,"status":"Active","lastUpdatedOn":0,"currentServerTime":1466016486617,"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":"b9:40:7f:30:f5:f8:46:6e:af:f9:25:55:6b:57:fe:6d","major":"31582","minor":"25922","manufacturerId":"4c00","rssi":"-74","mapInfo":{"mapHierarchyString":"Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5Fl>SingZone","floorRefId":"739764660256899136"},"mapCoordinate":{"x":110.90741,"y":62.45491,"z":0.0,"unit":"FEET"},"detectedLocation":null,"configuredLocation":null,"lastUpdatedTime":0}, {"macAddress":"f8:25:1d:38:5f:df","name":null,"type":"Rogue","detectedOn":1465803834008,"status":"Active","lastUpdatedOn":1466012481898,"currentServerTime":1466016486617,"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":"b9:40:7f:30:f5:f8:46:6e:af:f9:25:55:6b:57:fe:6d","major":"24543","minor":"7480","manufacturerId":"4c00","rssi":"-74","mapInfo":{"mapHierarchyString":"Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5Fl>SingZone","floorRefId":"739764660256899136"},"mapCoordinate":{"x":106.88582,"y":70.93849,"z":0.0,"unit":"FEET"}},
```



```
"detectedLocation":null,"configuredLocation":null,"lastUpdatedTime":1466012481898},
{"macAddress":"c8:69:cd:50:29:de","name":null,"type":"Rogue","detectedOn":1465860354185,
"status":"Active","lastUpdatedOn":1466010229973,"currentServerTime":1466016486617,
"expectedHierarchyString":null,"actualHierarchyString":null,"uuid":null,"major":null,
"minor":null,"manufacturerId":null,"rssi":null,"mapInfo":{"mapHierarchyString":
"Singapore>SINGAPORE UE BIZHUB EAST (SNG11)>SNG11-5Fl>MainDemo Theater,SingZone",
"floorRefId":"739764660256899136"},"mapCoordinate":{"x":83.58248,"y":96.976616,"z":0.0,
"unit":"FEET"},"detectedLocation":null,"configuredLocation":null,
"lastUpdatedTime":1466010229973}]
```

POST: Add Beacon to the Store

Description

This API adds a Beacon to the store.

HTTP Method

POST

Resource URI

/api/location/v1/beacon

Requires OAuth

N

Parameters

Table 13: Parameter Details

Name	Required	Default	Type	Location	Description
macAddress	Y	—	string	body	MAC Address.
name	Y	—	string	body	
type	N	—	enumerated	body	<ul style="list-style-type: none"> • Known • Rogue • Unplaced
detectedOn	N	—	number	body	Detected On.
status	N	—	enumerated	body	<ul style="list-style-type: none"> • Active • Missing • Misplaced • Inactive • NeverDetected
lastUpdatedOn	N	—	number	body	Last Updated on.
expectedHierarchyString	N	—	string	body	Expected Hierarchy String.
actualHierarchyString	N	—	string	body	Actual Hierarchy String.
uuid	Y	—	string	body	UUID

Name	Required	Default	Type	Location	Description
major	Y	—	string	body	Major
minor	Y	—	string	body	Minor
manufacturerId	N	—	string	body	Manufacturer ID
rsssi	N	—	string	body	RSSI value.
mapInfo	N	—	text	body	Map Info.
mapCoordinate	N	—	text	body	Map coordinate.
detectedLocation	N	—	text	body	Detected Location.
configuredLocation	N	—	text	body	Configured Location.

Content Type

application/json

GET: Active Clients Count

Description

This API returns active clients count.



Note This includes sleeping static devices which do not send probes, but are still active.

HTTP Method

GET

Resource URI

/api/location/v2/clients/count

Requires OAuth

N

Parameters

None.

Sample Output

```
{
  macAddress:"b8:e9:37:3c:69:d8",
  mapInfo:{
    mapHierarchyString:"Nortech Campus>Nortech-1>1st Floor",
    floorRefId:"727035700041482264",
    floorDimension:{
      length:49.9,
      width:81,
      height:10,
      offsetX:0,
      offsetY:0,
      unit:"FEET"
    },
    image:{
      imageName:"domain_0_1461628766707.png",
      zoomLevel:4,
      width:2008,
      height:1097,
      size:2008,
      maxResolution:8,
      colorDepth:8
    },
    tagList:[
      "Land side"
    ]
  },
  mapCoordinate:{
    x:50,
```

```

    y:22,
    z:0,
    unit:"FEET"
  },
  currentlyTracked:true,
  confidenceFactor:96,
  statistics:{
    currentServerTime:"2016-06-13T16:52:25.646-0700",
    firstLocatedTime:"1969-12-31T16:00:00.000-0800",
    lastLocatedTime:"2016-06-13T16:52:21.191-0700",
    maxDetectedRssi:{
      apMacAddress:"b8:38:61:a8:bc:60",
      band:"IEEE_802_11_B",
      slot:2,
      rssi:-37,
      antennaIndex:0,
      lastHeardInSeconds:0
    }
  },
  historyLogReason:null,
  geoCoordinate:{
    latitude:37.42245292884372,
    longitude:-121.95980375308643,
    unit:"DEGREES"
  },
  networkStatus:"ACTIVE",
  changedOn:1465861941191,
  ipAddress:[
    "10.22.243.128"
  ],
  userName:"",
  ssid:"cmx",
  sourceTimestamp:null,
  band:"IEEE_802_11_B",
  apMacAddress:"b8:38:61:a8:bc:60",
  dot11Status:"ASSOCIATED",
  manufacturer:"Sonos",
  areaGlobalIdList:[
    118,
    75,
    74,
    73,
    110,
    119,
    120,
    115
  ],
  detectingControllers:"10.22.243.56",
  bytesSent:7094,
  bytesReceived:19919,
  guestUser:false
}
]

```

API History

Table 14: API History

Release	Modification
Cisco CMX Release 10.4	This API is introduced.

GET: All clients

Description

This API supports searching by ipv4/ipv6, mac-address and username. For example: Search by IPv4/IPv6: api/location/v2/clients?ipAddress=x.x.x.x. Search by Mac Address: api/location/v2/clients?macAddress=x:x:x:x. Search by Username: api/location/v2/clients?username=someUsername. This API also supports pagination based on page and page size. Pagination: api/location/v2/clients?include=metadata and page=x and pageSize=x. As long as there is data you can keep paginating by incrementing the page and the pageSize numbers. Sorting: /api/location/v2/clients?sortBy=macAddress:ASC /api/location/v2/clients?sortBy=macAddress:DESC. Supported values for sortBy param are 'lastLocatedTime', 'userName', 'macAddress', 'ssid' and 'dot11Status'.

HTTP Method

GET

Resource URI

/api/location/v2/clients

Requires Basic Auth

N

Parameters

None.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v2/clients

```
[{"macAddress":"fc:e9:98:2a:8e:2a","mapInfo":{"mapHierarchyString":"Beijing>BEIJING - YINTAI TOWER (BJN6)>BJN6-7F1>Jing
```

```
SSID:CMX-D146374-AdmNrc-573c1m1b UNKNOWN Mac Address: UNKNOWN handlog:Call[52]57774-8ing CallID[2]6584 by Ric [4E]
```

```
loc:CMX-D146374-AdmNrc-573c1m1b UNKNOWN Mac Address: UNKNOWN handlog:Call[52]57774-8ing CallID[2]6584 by Ric [4E]
```

API History

Table 15: API History

Release	Modification
Cisco CMX Release 10.4	This API is introduced.

GET: Collection of Active Clients MAC Address

Description

This API returns a collection of active client's MAC Address.

HTTP Method

GET

Resource URI

/api/location/v2/clients/active

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output

```
["c0:8a:de:bd:e5:3a", "5c:59:48:59:29:21", "40:88:05:b2:6c:ec",  
"c0:8a:de:3d:e5:30", "98:d6:bb:03:58:d5", "e8:4e:84:8b:9f:90", "48:45:20:0c:73:58",  
"f0:25:b7:36:db:83", "c8:69:cd:50:29:dd", "78:da:6e:f6:3f:ff", "80:ed:2c:44:e5:ca",  
"08:3d:88:a7:67:6f", "d0:4f:7e:34:b1:f2", "3c:15:c2:c7:05:c6", "ec:35:86:ce:15:94",  
"d8:50:e6:2e:ed:39", "fc:e9:98:19:87:6f", "40:a6:d9:77:2a:77", "60:fe:c5:dc:57:5d",  
"cc:44:63:b7:c9:06", "bc:14:85:ac:ba:30", "a8:86:dd:ac:1b:f7", "a4:34:d9:f8:0f:cf",  
"30:10:e4:c2:9f:04", "64:00:f1:79:55:c5", "64  
  
.....  
"00:23:33:41:5f:80", "90:a4:de:29:0d:1d", "b4:ce:f6:09:2b:e3"]
```

GET: Compact History of Client by Date, Username

Description

This API returns compact history of client like number of logins and MAC address of device. The parameters given are date and username.

If the same username was used to login at multiple devices, the MAC address of only one of the devices is returned. To return all MAC addresses, set allMacs parameter to true.

HTTP Method

GET

Resource URI

/api/location/v1/historylite/byusername/:username

Requires Basic Auth

N

Parameters

Table 16: Parameter Details

Name	Required	Default	Type	Location	Description
date	Y	—	String	query	Date in format of yyyy/mm/dd
username	Y	—	String	pathReplace	User name.
allMacs	N	—	String	query	Return all macaddresses associated with this Username for given date Allowed values/formats: true false
allResults	N		String	query	Return all results Allowed values/formats: true false

Content Type

application/json

Sample Output

http://<ip-address>/api/location/v1/historylite/byusername/sharangp?date=2017/06/12

```
{
  Count: 591,
  Date: "2017/06/12",
  Username: "sharangp",
  Macaddress: "3c:a9:f4:6c:ee:44"
}
```

http://<ip-address>/api/location/v1/historylite/byusername/sharangp?date=2017/06/12&allMacs=true

```
{
  Count: 2,
  Date: "2017/06/12",
  Username: "sharangp",
  Macaddress: [
    "3c:a9:f4:6c:4c:7c",
    "3c:a9:f4:6c:ee:44"
  ]
}
```

GET: Unique MAC Address Seen on a Given Day on a Floor or Zone

Description

This API returns the unique MAC address seen on a given date on a floor or zone. It expects parameters, date and hierarchy. Hierarchy can be up to floor level or zone level. For example, floor level would include: campus-name, building-name, and floor-name. Zone level would be campus-name, building-name, floor-name, and zone-name. If you know the floor ID or the zone ID, then hierarchy is optional and you can specify date and floor ID or date and zone ID parameters.

When the date parameter is not specified, the API would use current date as default. Specifying either of the parameters like hierarchy or floor ID or zone ID is mandatory. This API also supports filter by time and filter by distance criteria. For filtering by time, use fromHour and toHour (both in 24 hr format) parameters. For filtering by distance queries, using filtering by time is mandatory and only a difference of one hour is allowed between toHour and fromHour is one hour.

For example:

By hierarchy:

/api/location/v1/history/uniqueclientsbyhierarchy?hierarchy=System%20Campus/Floor-19/1st%20Floor.
Floor ID:/api/location/v1/history/uniqueclientsbyhierarchy?floorid=730297895206534073.

By zoneid and date:/api/location/v1/history/uniqueclientsbyhierarchy?zoneid=23 and date=2016/02/29. By hierarchy and filter by time:

/api/location/v1/history/uniqueclientsbyhierarchy?hierarchy=System%20Campus/BGLD-19/1st%20Floor and fromHour=13 and toHour=14.

By hierarchy, filter by time and filter by distance:

/api/location/v1/history/uniqueclientsbyhierarchy?hierarchy=System%20Campus/BGLD-19/1st%20Floor and fromHour=13 and toHour=14 and x=30 and y=50 and distance=10.

HTTP Method

GET

Resource URI

/api/location/v1/history/uniqueclientsbyhierarchy

Requires Basic Auth

N

Parameters

Table 17: Parameter Details

Name	Required	Default	Type	Location	Description
hierarchy	Y	—	String	query	Hierarchy in format campus-name/building-name/floor-name.

Name	Required	Default	Type	Location	Description
date	N	—	String	query	Date in format of yyyy/mm/dd.
floorid	N	—	String	query	Floor ID.
zoneid	N	—	String	query	Zone ID.
fromHour	N	—	String	query	FromHour, HH in 24 hour format.
toHour	N	—	String	query	ToHour, HH in 24 hour format
x	N	—	String	query	x
y	N	—	String	query	y
distance	N	—	String	query	Distance in feet

Content Type

application/json

GET: Compact History of Client By Date and IPv4 Address

Description

This API returns compact history of client by date and IPv4 address.

HTTP Method

GET

Resource URI

/api/location/v1/historylite/byipaddress/:ipv4address

Requires Basic Auth

N

Parameters

Table 18: Parameter Details

Name	Required	Default	Type	Location	Description
date	Y	—	String	query	Date in format of yyyy/mm/dd.
ipv4address	Y	—	String	pathReplace	IPv4 Address.

Content Type

application/json

Sample Output

http://10.68.40.131/api/location/v1/historylite/byipaddress/10.68.41.186

```
{
  "Macaddress": null,
  "Ipv4address": "10.22.243.125",
  "Data": [],
  "Count": 0,
  "Date": "2018/07/13"
}
```

GET: All Client History

Description

This API returns the history of all active clients. This does not include sleeping static devices that do not send probes. It does not support pagination, but you can extract small chunks of data by specifying parameters **locatedAfterTime** and **locatedBeforeTime** (in milliseconds).

This API would use the current date as date range from midnight to current time: `/api/location/v1/history/clients`. This would use the passed date as date range from passed date + fromHour to passed date + toHour: `/api/location/v1/history/clients?date=2016/03/02` and `fromHour=14` and `toHour=15`. This would use the date range as mentioned by parameters: `locatedAfterTime` (1456894800000) milliseconds equivalent to `YYYY/MM/DD HH:MM:SS 2016/03/01 21:00:00`. `locatedBeforeTime` (1456896600000) milliseconds equivalent to `YYYY/MM/DD HH:MM:SS 2016/03/01 21:30:00`: `/api/location/v1/history/clients?locatedAfterTime=1456894800000` and `locatedBeforeTime=1456896600000`.

With CSCuz69078, when `locatedAfterTime` and `locatedBeforeTime` specified in API is more than a day and less than an hour, the API returns the following error.

ERROR - Cassandra timeout during read query at consistency ONE (1 responses were required but only 0 replica responded)

For example,

`https://<ip-address>/api/location/v1/history/clients?locatedAfterTime=1459468800000&locatedBeforeTime=1459636800000` returns the ERROR.

This API response returns a maximum of 5000 records without pagination and is sorted based by the MAC address. Therefore, without using the parameters such as **locatedAfterTime** and **locatedBeforeTime** to limit the number of records of a specific MAC Address, the API response for client history will return only one MAC Address. The sort order should be by date/time of occurrence.



Note

- This API can only support queries when the number of clients is less than 5000 per minute.
- Do not use this API if there are more than 2000 records. For larger datasets, it is recommended to use Northbound Notifications.

HTTP Method

GET

Resource URI

`/api/location/v1/history/clients`

Requires OAuth

N

Parameters

None.

Content Type

application/json

Sample Output (JSON)

```
[
  {
    "macAddress": "ac:cf:85:29:53:5f",
    "mapInfo": {
      "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor",
      "mapHierarchyDetails": {
        "campus": "Nortech Campus",
        "building": "Nortech-1",
        "floor": "1st Floor",
        "floorAesUid": 727035700041482200,
        "zones": ""
      }
    },
    "mapCoordinate": {
      "x": 78.017624,
      "y": 38.217056,
      "z": 0,
      "unit": "FEET"
    },
    "currentlyTracked": true,
    "confidenceFactor": 160,
    "locComputeType": "RSSI",
    "statistics": {
      "currentServerTime": "2017-12-06T22:31:17.730-0800",
      "firstLocatedTime": "2017-12-06T12:57:13.469-0800",
      "lastLocatedTime": "2017-12-06T12:57:13.469-0800"
    },
    "historyLogReason": "FLOOR_CHANGE",
    "geoCoordinate": {
      "latitude": 37.42248685324713,
      "longitude": -121.95989831612766,
      "unit": "DEGREES"
    },
    "rawLocation": null,
    "networkStatus": "ACTIVE",
    "changedOn": 1512593833469,
    "ipAddress": [],
    "userName": "",
    "ssId": "",
    "sourceTimestamp": "1512593833469",
    "band": "UNKNOWN",
    "apMacAddress": "",
    "dot11Status": "UNKNOWN",
    "manufacturer": "HUAWEI TECHNOLOGIES CO.,LTD",
    "areaGlobalIdList": null,
    "detectingControllers": "10.22.243.211",
    "bytesSent": 0,
    "bytesReceived": 0,
    "guestUser": false
  },
  {
    "macAddress": "08:cc:68:b4:1c:1f",
    "mapInfo": {
```

```

    "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Clinic",
    "mapHierarchyDetails": {
      "campus": "Nortech Campus",
      "building": "Nortech-1",
      "floor": "1st Floor",
      "floorAesUid": 727035700041482200,
      "zones": "CMX Clinic"
    }
  },
  "mapCoordinate": {
    "x": 22.515627,
    "y": 15.5579815,
    "z": 0,
    "unit": "FEET"
  },
  "currentlyTracked": true,
  "confidenceFactor": 32,
  "locComputeType": "RSSI",
  "statistics": {
    "currentServerTime": "2017-12-06T22:31:17.731-0800",
    "firstLocatedTime": "2017-12-06T19:09:30.430-0800",
    "lastLocatedTime": "2017-12-06T19:09:30.430-0800"
  },
  "historyLogReason": "NETWORK_STATUS_CHANGE",
  "geoCoordinate": {
    "latitude": 37.42242376668243,
    "longitude": -121.95969870663463,
    "unit": "DEGREES"
  },
  "rawLocation": null,
  "networkStatus": "ACTIVE",
  "changedOn": 1512616170430,
  "ipAddress": [],
  "userName": "",
  "ssId": "",
  "sourceTimestamp": "1512616170430",
  "band": "UNKNOWN",
  "apMacAddress": "",
  "dot11Status": "UNKNOWN",
  "manufacturer": "Cisco Systems, Inc",
  "areaGlobalIdList": null,
  "detectingControllers": "10.22.243.211",
  "bytesSent": 0,
  "bytesReceived": 0,
  "guestUser": false
},
{
  "macAddress": "08:cc:68:b4:1c:1f",
  "mapInfo": {
    "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Clinic",
    "mapHierarchyDetails": {
      "campus": "Nortech Campus",
      "building": "Nortech-1",
      "floor": "1st Floor",
      "floorAesUid": 727035700041482200,
      "zones": "CMX Clinic"
    }
  },
  "mapCoordinate": {
    "x": 21.428608,
    "y": 16.509167,
    "z": 0,
    "unit": "FEET"
  },
},

```

```
"currentlyTracked": false,
"confidenceFactor": 48,
"locComputeType": "RSSI",
"statistics": {
  "currentServerTime": "2017-12-06T22:31:17.731-0800",
  "firstLocatedTime": "2017-12-06T19:09:03.079-0800",
  "lastLocatedTime": "2017-12-06T19:09:05.082-0800"
},
"historyLogReason": "NETWORK_STATUS_CHANGE",
"geoCoordinate": {
  "latitude": 37.422426413833385,
  "longitude": -121.95969480129244,
  "unit": "DEGREES"
},
"rawLocation": null,
"networkStatus": "INACTIVE",
"changedOn": 1512616145082,
"ipAddress": [],
"userName": "",
"ssId": "",
"sourceTimestamp": "1512616145082",
"band": "UNKNOWN",
"apMacAddress": "",
"dot11Status": "UNKNOWN",
"manufacturer": "Cisco Systems, Inc",
"areaGlobalIdList": null,
"detectingControllers": "10.22.243.211",
"bytesSent": 0,
"bytesReceived": 0,
"guestUser": false
}
]
```


GET: Compact History of Client by MAC Address

Description

This API returns the history of an active client by its MAC address.

HTTP Method

GET

Resource URI

/api/location/v1/history/clients/:macaddress

Requires OAuth

N

Parameters

Table 19: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y	—	String	pathReplace	Client Macaddress.
date	Y	—	String	query	Date in format of yyyy/mm/dd.

Content Type

application/json

Sample Output (JSON)

```
[
  {
    "macAddress": "98:01:a7:de:cd:35",
    "mapInfo": {
      "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Clinic",
      "mapHierarchyDetails": {
        "campus": "Nortech Campus",
        "building": "Nortech-1",
        "floor": "1st Floor",
        "floorAesUid": 727035700041482200,
        "zones": "CMX Clinic"
      }
    },
    "mapCoordinate": {
      "x": 26.908728,
      "y": 14.038175,
      "z": 0,
      "unit": "FEET"
    }
  }
]
```

```

    },
    "currentlyTracked": true,
    "confidenceFactor": 16,
    "locComputeType": "RSSI",
    "statistics": {
      "currentServerTime": "2017-12-06T22:41:49.631-0800",
      "firstLocatedTime": "2017-12-06T12:19:31.509-0800",
      "lastLocatedTime": "2017-12-06T22:41:48.696-0800"
    },
    "historyLogReason": "DISTANCE_CHANGE",
    "geoCoordinate": {
      "latitude": 37.422419537914266,
      "longitude": -121.9597144965198,
      "unit": "DEGREES"
    },
    "rawLocation": null,
    "networkStatus": "ACTIVE",
    "changedOn": 1512628908696,
    "ipAddress": [],
    "userName": "",
    "ssId": "",
    "sourceTimestamp": "1512628908696",
    "band": "UNKNOWN",
    "apMacAddress": "",
    "dot11Status": "UNKNOWN",
    "manufacturer": "Apple, Inc.",
    "areaGlobalIDList": null,
    "detectingControllers": "10.22.243.211",
    "bytesSent": 0,
    "bytesReceived": 0,
    "guestUser": false
  },
  {
    "macAddress": "98:01:a7:de:cd:35",
    "mapInfo": {
      "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor",
      "mapHierarchyDetails": {
        "campus": "Nortech Campus",
        "building": "Nortech-1",
        "floor": "1st Floor",
        "floorAesUid": 727035700041482200,
        "zones": ""
      }
    },
    "mapCoordinate": {
      "x": 25.287996,
      "y": 25.027487,
      "z": 0,
      "unit": "FEET"
    },
    "currentlyTracked": true,
    "confidenceFactor": 24,
    "locComputeType": "RSSI",
    "statistics": {
      "currentServerTime": "2017-12-06T22:41:49.632-0800",
      "firstLocatedTime": "2017-12-06T12:19:31.509-0800",
      "lastLocatedTime": "2017-12-06T22:41:46.346-0800"
    },
    "historyLogReason": "DISTANCE_CHANGE",
    "geoCoordinate": {
      "latitude": 37.42245012473281,
      "longitude": -121.9597087015209,
      "unit": "DEGREES"
    },
  },

```

```
"rawLocation": null,
"networkStatus": "ACTIVE",
"changedOn": 1512628906346,
"ipAddress": [],
"userName": "",
"ssId": "",
"sourceTimestamp": "1512628906346",
"band": "UNKNOWN",
"apMacAddress": "",
"dot11Status": "UNKNOWN",
"manufacturer": "Apple, Inc.",
"areaGlobalIdList": null,
"detectingControllers": "10.22.243.211",
"bytesSent": 0,
"bytesReceived": 0,
"guestUser": false
},
{
  "macAddress": "98:01:a7:de:cd:35",
  "mapInfo": {
    "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Clinic",
    "mapHierarchyDetails": {
      "campus": "Nortech Campus",
      "building": "Nortech-1",
      "floor": "1st Floor",
      "floorAesUid": 727035700041482200,
      "zones": "CMX Clinic"
    }
  },
  "mapCoordinate": {
    "x": 26.385386,
    "y": 18.708204,
    "z": 0,
    "unit": "FEET"
  },
  "currentlyTracked": true,
  "confidenceFactor": 16,
  "locComputeType": "RSSI",
  "statistics": {
    "currentServerTime": "2017-12-06T22:41:49.632-0800",
    "firstLocatedTime": "2017-12-06T12:19:31.509-0800",
    "lastLocatedTime": "2017-12-06T22:40:44.342-0800"
  },
  "historyLogReason": "DISTANCE_CHANGE",
  "geoCoordinate": {
    "latitude": 37.42243253617424,
    "longitude": -121.95971262854559,
    "unit": "DEGREES"
  },
  "rawLocation": null,
  "networkStatus": "ACTIVE",
  "changedOn": 1512628844342,
  "ipAddress": [],
  "userName": "",
  "ssId": "",
  "sourceTimestamp": "1512628844342",
  "band": "UNKNOWN",
  "apMacAddress": "",
  "dot11Status": "UNKNOWN",
  "manufacturer": "Apple, Inc.",
  "areaGlobalIdList": null,
  "detectingControllers": "10.22.243.211",
  "bytesSent": 0,
  "bytesReceived": 0,
}
```

```

    "guestUser": false
  },
  {
    "macAddress": "98:01:a7:de:cd:35",
    "mapInfo": {
      "mapHierarchyString": "Nortech Campus>Nortech-1>1st Floor>CMX Bar",
      "mapHierarchyDetails": {
        "campus": "Nortech Campus",
        "building": "Nortech-1",
        "floor": "1st Floor",
        "floorAesUid": 727035700041482200,
        "zones": "CMX Bar"
      }
    },
    "mapCoordinate": {
      "x": 28.39643,
      "y": 35.002888,
      "z": 0,
      "unit": "FEET"
    },
    "currentlyTracked": true,
    "confidenceFactor": 24,
    "locComputeType": "RSSI",
    "statistics": {
      "currentServerTime": "2017-12-06T22:41:49.633-0800",
      "firstLocatedTime": "2017-12-06T12:19:31.509-0800",
      "lastLocatedTime": "2017-12-06T22:40:41.877-0800"
    },
    "historyLogReason": "DISTANCE_CHANGE",
    "geoCoordinate": {
      "latitude": 37.4224778909874,
      "longitude": -121.95971990610984,
      "unit": "DEGREES"
    },
    "rawLocation": null,
    "networkStatus": "ACTIVE",
    "changedOn": 1512628841877,
    "ipAddress": [],
    "userName": "",
    "ssId": "",
    "sourceTimestamp": "1512628841877",
    "band": "UNKNOWN",
    "apMacAddress": "",
    "dot11Status": "UNKNOWN",
    "manufacturer": "Apple, Inc.",
    "areaGlobalIdList": null,
    "detectingControllers": "10.22.243.211",
    "bytesSent": 0,
    "bytesReceived": 0,
    "guestUser": false
  }
]

```

GET: Get Configuration Compliance Rules (By Floor ID)

Description

This API uses the Floor ID to get all configuration compliance rules by floor for client troubleshooting.

HTTP Method

GET

Resource URI

/api/location/v1/compliance/clientcompliance/rules/:floorid

Requires Basic Auth

N

Parameters

Table 20: Parameter Details

Name	Required	Default	Type	Location	Description
floorid	Y		String	pathReplace	Reference id of the floor

Content Type

application/json

API History

Table 21: API History

Release	Modification
Cisco CMX Reelase 10.3	This command is introduced.

GET: Get Configuration Compliance Rules (using MAC Address)

Description

This API uses the MAC address of a client to get all configuration compliance rules for client-side troubleshooting.

HTTP Method

GET

Resource URI

/api/location/v1/compliance/clientcompliance/rules/mac/:macaddr/:floorid

Requires OAuth

N

Parameters

Table 22: Parameter Details

Name	Required	Default	Type	Location	Description
macaddr	Y		Number	pathReplace	Reference id of the floor

Content Type

application/json

API History

Table 23: API History

Release	Modification
Cisco CMX Release 10.3	This command is introduced.

POST: Execute a compliance rule for troubleshooting

Description

Executes a compliance rule for client troubleshooting

HTTP Method

POST

Resource URI

/api/location/v1/compliance/client/run

Requires OAuth

N

Parameters

Table 24: Parameter Details

Name	Required	Default	Type	Location	Description
ruleid	N		string	body	ruleid
uname	N		string	body	uname
passwd	N		string	body	passwd
controllerip	N		string	body	controllerip
connectiontype	N		string	body	connectiontype
apuname	N		string	body	apuname
appasswd	N		string	body	appasswd
floorid	N		string	body	floorid
macaddr	N		string	body	macaddr
testname	N		string	body	testname
starttime	N		number	body	starttime
endtime	N		number	body	endtime
markerx	N		string	body	markerx
markery	N		string	body	markery

Content Type

application/json

Interferers API

GET: Get interferer by macaddress

Description

This API returns an interferer by macaddress

HTTP Method

GET

Resource URI

/api/location/v1/interferers/:macaddress

Requires OAuth

N

Parameters

Table 25: Parameter Details

Name	Required	Default	Type	Location	Description
macaddress	Y		String	pathReplace	Interferer Macaddress

Content Type

application/json

GET: Get total number of interferers

Description

This API returns number of interferers

HTTP Method

GET

Resource URI

/api/location/v1/interferers/count

Requires OAuth

N

Parameters

None.

Content Type

application/json

GET: Get all interferers

Description

This API returns all interferers and also supports searching by floor. .

HTTP Method

GET

Resource URI`/api/location/v1/interferers`**Requires OAuth**

N

Parameters

None.

Content Type

application/json

Content Type

application/json

Usage Guidelines

Search by Floor:

`http://<cmx-ip-address>/api/location/v1/interferers/floorrefid=<floorrefid>`

For Example:

`http://10.0.0.1/api/location/v1/interferers/floorrefid=1`

Search by Page and Page Number: (As long as there is data you can keep paginating by incrementing the page and the pageSize numbers)

`http://<cmx-ip-address>/api/location/v1/interferers?page=<pagenumber>&pageSize=<pagesize>`

For Example:

`http://10.0.0.1/api/location/v1/interferers/page=1&pageSize=2`

GET: This API returns all RFID tags with minimal information

Description

This API returns all RFID tags.

HTTP Method

GET

Resource URI

/api/location/v1/tags/summary

Requires OAuth

N

Parameters

None.

Content Type

application/json

GET: Returns active clients count and mac addresses for each registered zone

Description

This API returns the count of active clients along with their macaddresses for each registered zone. This API expects the debug flag to be turned on in the POST: Add New Zone API (`/api/config/v1/zoneCountParams/<cluster-id>`)

HTTP Method

GET

Resource URI

`/api/location/v1/clients/count/byzone/detail`

Requires OAuth

N

Parameters

Table 26: Parameter Details

Name	Required	Default	Type	Location	Description
zoneId	Y		String	query	zoneId

Content Type

application/json

Usage Guidelines



Note This API expects the debug flag turned on in the Zone Count Register API under configuration service `/api/config/v1/zoneCountParams/1`.

`http://<cmx-ip-address>/api/location/v1/clients/count/byzone/detail?zoneid=<zoneid>`

For Example:

`http://10.0.0.1/api/location/v1/clients/count/byzone/detail?zoneid=145`

Sample Output

```
{
  "MacAddress": [
    "6c:40:08:a5:d2:d0",
  ]
}
```

```
"a4:b8:05:9c:a0:d0",
"a0:8d:16:f3:58:ab",
"cc:3d:82:52:4b:8a",
"20:7d:74:1a:c2:ba",
"34:a3:95:8d:43:ac",
"d8:d1:cb:a4:13:7a",
"3c:a9:f4:7f:29:4c",
"38:ca:da:24:15:05",
"a4:b8:05:bf:58:d5",
"5c:e0:c5:c7:1b:54",
"ac:5f:3e:b9:84:b8",
"60:f1:89:12:f7:6d",
"d8:bb:2c:15:27:1a",
"a4:b8:05:d1:4e:0b",
"10:4a:7d:34:da:ff",
"64:bc:0c:49:18:6a",
"60:f4:45:77:a4:47",
"78:fd:94:1b:ad:b7",
"ac:cf:85:01:2c:22",
"88:1f:a1:72:e4:3f",
"70:81:eb:e6:f1:c8",
"e8:50:8b:60:d0:bc",
"e8:91:20:a9:df:c1",
"e8:b1:fc:d3:1f:3f",
"a0:18:28:a7:f5:2d",
"70:48:0f:88:0e:65",
"b8:53:ac:34:5d:1a",
"98:01:a7:ac:8c:c9",
"60:f1:89:35:c7:2a",
"60:f1:89:86:9e:19",
"cc:3a:61:27:75:3d",
"c8:e0:eb:18:74:4d",
"c0:cc:f8:2c:dd:70",
"20:3c:ae:af:36:de",
"88:07:4b:b2:03:7f",
"e8:50:8b:f0:6e:ba",
"64:89:9a:33:f2:e1",
"60:f1:89:47:0d:1f",
"ec:1f:72:af:98:6c",
"a0:99:9b:14:8b:bd",
"f4:5c:89:bc:47:61",
"e8:f2:e2:e3:d4:50",
"fc:db:b3:22:b8:cf",
"70:81:eb:95:d0:5b",
"cc:20:e8:09:50:64",
"64:a3:cb:51:89:fc",
"18:65:90:0b:e5:32",
"78:fd:94:b0:90:af",
"5c:e0:c5:07:a7:56",
"e4:a7:a0:b3:70:6d",
"a4:b8:05:9e:80:70",
"60:f1:89:7e:cd:48",
"34:36:3b:d2:01:42",
"2c:33:61:84:fe:51",
"48:59:29:a6:df:9a",
"b8:44:d9:ae:fd:2e",
"44:85:00:69:1a:4a",
"bc:3b:af:1f:53:0d",
"a0:91:69:df:a6:0d",
"18:65:90:21:a6:17",
"a4:b8:05:dd:5a:19",
"98:01:a7:a0:fa:a7",
"24:df:6a:0d:05:39",
"2c:0e:3d:13:08:87"
```

GET: Returns active clients count and mac addresses for each registered zone

```
    "e8:2a:ea:77:ec:0a",
    "f4:5c:89:8f:0f:a3",
    "ac:bc:32:b4:02:0f",
    "d0:e1:40:9f:1f:88",
    "e8:2a:ea:06:fe:be",
    "24:a0:74:f2:c5:b8",
    "70:3e:ac:19:dd:db",
    "a0:99:9b:14:f3:cb",
    "e4:a4:71:51:fc:2f",
    "e8:b1:fc:c5:0f:80",
    "70:3e:ac:15:b0:0d",
    "b8:53:ac:78:5a:62",
    "90:3c:92:e0:cf:e7",
    "98:5a:eb:8f:00:14",
    "c8:1e:e7:8b:d7:25",
    "34:36:3b:d1:ec:ec",
    "98:01:a7:aa:9a:45",
    "90:72:40:e8:80:83",
    "cc:79:4a:fa:be:47",
    "78:7e:61:52:60:90",
    "b4:8b:19:e8:a8:07",
    "a0:0b:ba:e7:3c:57",
    "a0:99:9b:08:18:bf",
    "60:f1:89:e6:48:66",
    "a0:99:9b:08:7c:f9",
    "c0:64:c6:fb:3a:54",
    "b4:18:d1:32:67:75",
    "c8:e0:eb:17:3b:8b",
    "b8:53:ac:7d:b5:f0",
    "50:1a:c5:ec:b8:11",
    "60:f1:89:0b:6b:d2",
    "5c:c5:d4:11:24:52",
    "d0:a6:37:a8:24:c5",
    "f0:99:bf:e2:1a:ec",
    "24:77:03:25:c6:28"
  ],
  Duration : {
    start: "2016/11/08 15:34:41",
    end: "2016/11/08 15:44:41",
  },
  Count : 100
}
```

GET: Returns active clients count for each registered zone

Description

This API returns the list of active clients for each registered zones. Zones are registered using POST: Add New Zone (/api/config/v1/zoneCountParams/:clusterID)

HTTP Method

GET

Resource URI

/api/location/v1/clients/count/byzone

Requires OAuth

N

Parameters

None.

Content Type

application/json

Usage Guidelines

`http://<cmx-ip-address>/api/location/v1/clients/count/byzone`
For Example:
`http://10.0.0.1/api/location/v1/clients/count/byzone`

Sample Output

```
{
  ZoneCounts: {
    zoneCountList: [
      {
        zoneId: 13,
        hierarchy: "Nortech Campus/Nortech Building/Security Floor/zone1",
        zoneName: "zone1",
        zoneCount: 4
      },
      {
        zoneId: 145,
        hierarchy: "System Campus/SJC-24/3rd Floor/Zone-2",
        zoneName: "Zone-2",
        zoneCount: 83
      },
      {
        zoneId: 12,
        hierarchy: "Nortech Campus/Nortech Building/Security Floor/sharang-zone",
        zoneName: "sharang-zone",
        zoneCount: 5
      },
      {
```

GET: Returns active clients count for each registered zone

```
        zoneId: 144,  
        hierarchy: "System Campus/SJC-24/3rd Floor/Zone-1",  
        zoneName: "Zone-1",  
        zoneCount: 107  
    }  
],  
totalZones: 4,  
duration: {  
    start: "2016/11/08 16:23:51",  
    end: "2016/11/08 16:33:51",  
}  
}  
}
```


GET : Get Active APs

Description

This API gets list of all active access points.

HTTP Method

GET

Resource URI

/location/v1/activeaps

Requires OAuth

N

Parameters

None

Content Type

application/json

Sample Output

GET: Get Count of Active APs

Description

This API gets count of all active access points.

HTTP Method

GET

Resource URI

/location/v1/activeaps/count

Requires OAuth

N

Parameters

None

Content Type

application/json

Sample Output

GET: Get List of Missing APs

Description

This API gets list of all missing APs.

HTTP Method

GET

Resource URI

/location/v1/missingaps

Requires OAuth

N

Parameters

None

Content Type

application/json

Sample Output

GET: Get Count of Missing APs

Description

This API gets the count of all missing APs.

HTTP Method

GET

Resource URI

/location/v1/missingaps/count

Requires OAuth

N

Parameters

None

Content Type

application/json

Sample Output