



## Analytics

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# POST: Breakdown of Dwell Times Spent by Devices for a Given Period and Areas

## Description

The only parameter (body) is a JSON array containing the parameters. The parameters are described below:

**Table 1: Parameter Details**

| JSON Array Parameter | Description   | Allowable Values/Formats  |
|----------------------|---|---|
| granularity          | The desired granularity.  | <ul style="list-style-type: none"> <li>hourly</li> <li>daily</li> <li>weekly</li> <li>monthly</li> <li>yearly</li> <li>tag</li> <li>tag-name</li> <li>heterarchy level. One can limit to top "n" results (that is, the "n" values with highest count) by adding "[n]", or the "n" bottom results by adding "[n]"</li> </ul> |
| period               | The period of interest, specified as either a date range, or one of the predefined names.   | <ul style="list-style-type: none"> <li>yyyy-mm-dd</li> <li>yyyy-mm-dd;yyyy-mm-dd</li> <li>today</li> <li>yesterday</li> <li>this week</li> <li>last week</li> <li>last 2 weeks</li> <li>this month</li> <li>last month</li> <li>last 3 months</li> <li>this year</li> <li>last year</li> <li>forever</li> </ul>             |
| timeRange            | The time window of interest on each day.  | <ul style="list-style-type: none"> <li>HH:mm-HH:mm</li> </ul>   |
| aggregate            | Aggregate the dwell time by granularity, for example, showing the total dwell time for each day of the week, instead of individual dates. | <ul style="list-style-type: none"> <li>none</li> <li>sum</li> <li>avg</li> </ul>  |

| JSON Array Parameter | Description  | Allowable Values/Formats  |
|----------------------|--|---|
| areas                | The list of areas of interest. If none are provided, all are considered.   | A comma-separated list of area IDs, or hierarchy levels.  |
| durationCategories   | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values: <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |
| includeStationary    | Whether to include stationary devices (default=false).   | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>   |

| JSON Array Parameter | Description   | Allowable Values/Formats   |
|----------------------|---|--|
| connectionState      | Whether to restrict connection to either connected or detected devices (default=all).   | <ul style="list-style-type: none"> <li>connected</li> <li>detected</li> <li>all</li> </ul>                                 |
| percentageOf         | If set this parameter, does not report absolute numbers, only relative percentage.  | Heterarchy level   |
| dwellLimits          | The dwell time limit that specifies how dwellers should be grouped together. Pass -1 to catch all. Example: Light: 100, Medium: 200, Heavy:-1.  | <ul style="list-style-type: none"> <li>default</li> <li>minute</li> <li>comma separated limit label:limit value</li> </ul> |
| areaFilter           | <p>If set this parameter, restricts the results to areas matching the filter. Use descendantOf to restrict the area selection. This option is used for drill-down reports. Use 'subsetOf' to restrict the granularity. This option is used with tag granularity.</p> <p>For example: descendantOf: Campus C1 has Building B1 which zone Z1 and Z2 Campus C2 has Building B2 which zone Z3 query area=Z1,Z2,Z3 and granularity=Building and areaFilter=descendantOf:C1 will return only Building B1</p> <p>For example: subsetOf: Tag T1,T2 assigned to F1, T2,T3 to F2, T3,T4 to F3 query area=F1,F2,F3 and granularity=tag and areaFilter=subsetOf:T1,T2 will return only T1,T2.</p> | <ul style="list-style-type: none"> <li>descendantOf</li> <li>subsetOf:comma separated ids</li> </ul>                       |
| expandAll            | Include all the elements descendants in the result.   | <ul style="list-style-type: none"> <li>true</li> <li>false</li> </ul>  |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/dwellBreakdown

**Requires Basic Auth**

N

**Parameters***Table 2: Parameter Details*

| Name | Required | Default | Type       | Location | Description                       |
|------|----------|---------|------------|----------|-----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters. |

**Content Type**

application/json

**Sample Input (JSON)**

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "granularity": "hourly",
  "areas": "52,75"
}
```

**Sample Output (JSON)**

```
{
  "startTime": "00:00",
  "startDate": "2017-03-16",
  "results": [
    {
      "id": 53,
      "ancestry": [
        {
          "level": "Building",
          "name": "REQ"
        },
        {
          "level": "Campus",
          "name": "Richfield"
        }
      ],
      "series": [
        "datetime",
        "dwell"
      ],
      "hasChildren": false,
      "area": "2nd Floor",
      "data": []
    },
    {
      "id": 75,
      "ancestry": [
        {
          "level": "Floor",
          "name": "Site 4"
        }
      ],

```

```
{
  "level": "Building",
  "name": "Site 4"
},
{
  "level": "Campus",
  "name": "San Jose Outdoor"
}
],
"series": [
  "datetime",
  "dwell"
],
"hasChildren": false,
"area": "f4:0f:1b:1a:82:90",
"data": []
}
],
"interval": "hourly",
"executionTime": 0,
"insights": {
  "summary": {}
},
"endDate": "2017-03-16",
"maxValues": {},
"endTime": "23:59",
"dataFreshness": "2017-03-16T02:53:58.054-07:00",
"minValues": {}
}
```

# POST: Breakdown of Connected and Detected Devices for a Given Period and Areas

## Description

This API gives a breakdown of connected and detected devices for a given period and areas. The only parameter (body) is a JSON array containing the parameters. The parameters are described below

**Table 3: Parameter Details**

| JSON array parameter | Description   | Allowable values/formats  |
|----------------------|---|---|
| granularity          | The desired granularity. One can limit to top n results (i.e. the n values with highest count) by adding "[n]", or the n bottom results by adding "[-n]". If granularity null is specified, all heterarchy types covered by the areas are returned. | <ul style="list-style-type: none"> <li>• hourly</li> <li>• daily</li> <li>• weekly</li> <li>• monthly</li> <li>• yearly</li> <li>• tag</li> <li>• tag-name</li> <li>• heterarchy level</li> <li>• null</li> </ul>   |
| period               | The period of interest, either specified as a date range, or one of the predefined names  | <ul style="list-style-type: none"> <li>• yyyy-mm-dd</li> <li>• yyyy-mm-dd;yyyy-mm-dd</li> <li>• today</li> <li>• yesterday</li> <li>• this week</li> <li>• last week</li> <li>• last 2 weeks</li> <li>• this month</li> <li>• last month</li> <li>• last 3 months</li> <li>• this year</li> <li>• last year</li> <li>• forever</li> </ul> |
| timeRange            | The time window of interest on each day.  | <ul style="list-style-type: none"> <li>• HH:mm-HH:mm</li> </ul>   |
| aggregate            | Whether to aggregate the dwell time by granularity; e.g. showing a total for each day of the week, instead of individual dates  | <ul style="list-style-type: none"> <li>• none</li> <li>• sum</li> <li>• avg</li> </ul>  |
| areas                | The list of areas of interest. If none are given, all are considered  | <p>A comma-separated list of area ids, or heterarchy levels</p> <pre>&lt;areaId&gt; &lt;areaId-1&gt;,&lt;areaId-2&gt;,&lt;areaId-3&gt;</pre>  |

| JSON array parameter | Description  | Allowable values/formats  |
|----------------------|--|---|
| durationCategories   | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values: <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |
| includeStationary    | Whether to include stationary devices (default=false)  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>   |
| percentageOf         | If set, does not report absolute numbers, but relative percentage  | Heterarchy level  |



| JSON array parameter | Description  | Allowable values/formats   |
|----------------------|--|--|
| areaFilter           | <p>If set, restricts the results to areas matching the filter. Use 'descendantOf' to restrict the area selection. This option is used for drill down reports. Use 'subsetOf' to restrict the granularity. This option is used with tag granularity.</p> <p>For example: descendantOf: Campus C1 has Building B1 which zone Z1 and Z2 Campus C2 has Building B2 which zone Z3 query area=Z1,Z2,Z3 and granularity=Building and areaFilter=descendantOf:C1 will return only Building B1</p> <p>For example: subsetOf: Tag T1,T2 assigned to F1, T2,T3 to F2, T3,T4 to F3 query area=F1,F2,F3 and granularity=tag and areaFilter=subsetOf:T1,T2 will return only T1,T2.</p> | <ul style="list-style-type: none"> <li>• descendantOf</li> <li>• subsetOf:comma separated ids</li> </ul> |
| expandAll            | Include all of the elements descendants in the result  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>                                |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/connectedDetected

**Requires Basic Auth**

N

**Parameters***Table 4: Parameter Details*

| Name | Required | Default | Type       | Location | Description                       |
|------|----------|---------|------------|----------|-----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters. |

**Content Type**

application/json

**Sample Input (JSON)**

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "granularity": "hourly",
  "areas": "5786"
}
```

**Sample Output (JSON)**

```
{
  "startTime": "00:00",
  "startDate": "2017-03-16",
  "results": [
    {
      "id": 5786,
      "ancestry": [
        {
          "level": "Campus",
          "name": "Noritech Campus"
        }
      ],
      "startDate": "2017-03-16",
      "series": [
        "datetime"
      ],
      "hasChildren": true,
      "area": "Noritech-1",
      "data": [
        {
          "dwell": null,
          "values": {
            "connected": 0,
            "detected": 0
          },
          "name": null
        },
        {
          "dwell": null,
          "values": {
            "connected": 0,
            "detected": 0
          },
          "name": null
        },
        {
          "dwell": null,
          "values": {
            "connected": 0,
            "detected": 0
          },
          "name": null
        },
        {
          "dwell": null,
          "values": {
            "connected": 0,
            "detected": 0
          },
          "name": null,
          "incomplete": true
        }
      ]
    }
  ]
}
```

```
    }
  ],
  "interval": "hourly",
  "executionTime": 18,
  "insights": {
    "summary": {},
    "connected": {
      "ancestry": [
        {
          "level": "Campus",
          "name": "Noritech Campus"
        }
      ],
      "id": 5786,
      "index": 0,
      "maxDate": "2017-03-16",
      "name": "Noritech-1",
      "maxTime": "00:00",
      "maxValue": 0
    },
    "detected": {
      "ancestry": [
        {
          "level": "Campus",
          "name": "Noritech Campus"
        }
      ],
      "id": 5786,
      "index": 0,
      "maxDate": "2017-03-16",
      "name": "Noritech-1",
      "maxTime": "00:00",
      "maxValue": 0
    }
  },
  "endDate": "2017-03-16",
  "maxValues": {
    "connected": 0,
    "detected": 0
  },
  "endTime": "23:59",
  "dataFreshness": "2017-03-16T02:53:55.919-07:00",
  "minValues": {
    "connected": 0,
    "detected": 0
  }
}
```

## POST: Paths for a Given Period and Areas

### Description

The only parameter (body) is a JSON array containing the parameters. The parameters are described below:

**Table 5: Parameter Details**

| JSON parameter | Description   | Allowable values/formats  |
|----------------|---|---|
| period         | The period of interest, either specified as a date range, or one of the predefined names  | <ul style="list-style-type: none"> <li>• yyyy-mm-dd</li> <li>• yyyy-mm-dd;yyyy-mm-dd</li> <li>• today</li> <li>• yesterday</li> <li>• this week</li> <li>• last week</li> <li>• last 2 weeks</li> <li>• this month</li> <li>• last month</li> <li>• last 3 months</li> <li>• this year</li> <li>• last year</li> <li>• forever</li> </ul> |
| timeRange      | The time window of interest on each day.  | • HH:mm-HH:mm   |
| targetArea     | The ID of the target area for the paths.  | The ID of the target area for the paths.  |
| allAreas       | The list of areas of interest.  | A comma-separated list of area IDs<br><areaId-1>,<areaId-2>,<areaId-3>  |
| granularity    | The desired geographical granularity. This will replace the areas listed in 'allAreas' with their progeny on the appropriate level. | Heterarchy level  |

| JSON parameter     | Description  | Allowable values/formats   |
|--------------------|--|--|
| durationCategories | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | <p>Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values:</p> <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/path

**Requires Basic Auth**

N

**Parameters***Table 6: Parameter Details*

| Name | Required | Default | Type       | Location | Description                       |
|------|----------|---------|------------|----------|-----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters. |

**Content Type**

application/json

**Sample Input (JSON)**

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "granularity": "Building",
  "allAreas": "52,75,80"
}
```

**Sample Output (JSON)**

```
/* Path Output */
{
  "startTime": "00:00",
  "startDate": "2017-03-07",
  "results": [
    {
      "id": 75,
      "total": 0,
      "medianTransitionTime": 0,
      "ancestry": [
        {
          "level": "Campus",
          "name": "TagTest_Campus_1"
        }
      ],
      "area": "TagTest_Building_1",
      "direction": -1,
      "value": 0,
      "averageTransitionTime": 0
    },
    {
      "id": 80,
      "total": 0,
      "medianTransitionTime": 0,
      "ancestry": [
        {
          "level": "Campus",
          "name": "TagTest_Campus_1"
        }
      ],
    }
  ],
}
```

```

        "area": "TagTest_Building_2",
        "direction": -1,
        "value": 0,
        "averageTransitionTime": 0
    },
    {
        "id": 75,
        "total": 0,
        "medianTransitionTime": 0,
        "ancestry": [
            {
                "level": "Campus",
                "name": "TagTest_Campus_1"
            }
        ],
        "area": "TagTest_Building_1",
        "direction": 1,
        "value": 0,
        "averageTransitionTime": 0
    },
    {
        "id": 80,
        "total": 0,
        "medianTransitionTime": 0,
        "ancestry": [
            {
                "level": "Campus",
                "name": "TagTest_Campus_1"
            }
        ],
        "area": "TagTest_Building_2",
        "direction": 1,
        "value": 0,
        "averageTransitionTime": 0
    }
],
"executionTime": 88,
"requestTruncated": false,
"target": {
    "ancestry": [
        {
            "level": "Campus",
            "name": "campus"
        }
    ]
},
"total": 0,
"id": 52,
"area": "Building_0",
"pathsEnded": 0,
"totalVisits": 0,
"pathsStarted": 0,
"avgDwellPerDevice": 0,
"avgDwellPerVisit": 0,
"totalDevices": 0
},
"insights": {},
"endDate": "2017-03-07",
"endTime": "23:59",
"dataFreshness": {
    "dayOfYear": 66,
    "dayOfMonth": 7,
    "dayOfWeek": 2,
    "era": 1,
    "year": 2017,

```

```
    "minuteOfDay": 1277,
    "hourOfDay": 21,
    "weekyear": 2017,
    "monthOfYear": 3,
    "yearOfEra": 2017,
    "yearOfCentury": 17,
    "centuryOfEra": 20,
    "millisOfSecond": 782,
    "millisOfDay": 76673782,
    "secondOfMinute": 53,
    "secondOfDay": 76673,
    "minuteOfHour": 17,
    "weekOfWeekyear": 10,
    "millis": 1488921473782,
    "zone": {
      "fixed": true,
      "id": "Etc/UTC"
    },
    "chronology": {
      "zone": {
        "fixed": true,
        "id": "Etc/UTC"
      }
    },
    "afterNow": false,
    "beforeNow": false,
    "equalNow": true
  }
}
```



# GET: All summary KPI

## Description

This API retrieves summary of all KPI.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/summary

## Requires Basic Auth

N

## Parameters

None.

## Sample Output (JSON)

```
{
  "Top Building dwell": {
    "title": "Top Building dwell",
    "value": {
      "primary": "Nortech-1 (5572.52 min)",
      "secondary": [
        "SJC23 (0.00 min)",
        "SJC24 (0.00 min)",
        "Shell- CBuilding (0.00 min)"
      ],
      "supplementary": "SJC23 (0.00 min)<br/>SJC24 (0.00 min)<br/>Shell- CBuilding (0.00 min)<br/>"
    }
  },
  "Notifications Received": {
    "title": "Notifications Received Rate (5 min avg)",
    "value": {
      "primary": "2.04 notifications/s",
      "secondary": [
        "1 min avg: 2.07",
        "15 min avg: 1.84",
        "Avg since boot: 4.23",
        "Total number of events: 3774166"
      ],
      "supplementary": "1 min avg: 2.07<br/>15 min avg: 1.84<br/>Avg since boot: 4.23<br/>Total number of events: 3774166"
    }
  },
  "RSSI experience": {
    "title": "RSSI experience",
    "value": {
      "primary": "No devices detected",
      "secondary": [

```

```

        "No devices detected"
    ],
    "supplementary": "No devices detected"
  }
},
"Uptime": {
  "title": "Uptime",
  "value": {
    "primary": "10 days, 07:35",
    "secondary": [
      "Processors: 20",
      "Max mem: 4528 MiB",
      "Memory: 2849/4528 MiB",
      "Threads: 169"
    ]
  },
  "supplementary": "Processors: 20<br/>Max mem: 4528 MiB<br/>Memory: 2849/4528
MiB<br/>Threads: 169"
}
},
"Connected": {
  "title": "Connected",
  "value": {
    "primary": "1916.33%",
    "secondary": [
      "Total: 392",
      "Detected: -7120 (-1816.33%)",
      "Connected: 7512 (1916.33%)"
    ]
  },
  "supplementary": "Total: 392<br/>Detected: -7120 (-1816.33%)<br/>Connected:
7512 (1916.33%)<br/>"
}
},
"Aggregation performance": {
  "title": "Aggregation performance",
  "value": {
    "primary": "534930964.29 / 0",
    "secondary": [
      "API misses (rate): 166(0) / 0(0) <br/>",
      "API misses as % of total API calls: 9.22/□<br/>",
      "Background updates (rate): 0(0) / 0(0) <br/>"
    ]
  },
  "supplementary": "API misses (rate): 166(0) / 0(0) <br/><br/>API misses as %
of total API calls: 9.22/□<br/><br/>Background updates (rate): 0(0) / 0(0) <br/>"
},
"recordRefreshCounts": {
  "pathRecordsRefreshed": 0,
  "repeatRecordsRefreshed": 0,
  "derivedRecordsRefreshed": 0,
  "hourVisitsUpdated": 121942,
  "areaVisitsUpdated": 119586,
  "crossoverRecordsRefreshed": 0
}
},
"Top Campus count": {
  "title": "Top Campus count",
  "value": {
    "primary": "Nortech Campus (356)",
    "secondary": [
      "Shell (0)",
      "System Campus (0)"
    ]
  },
  "supplementary": "Shell (0)<br/>System Campus (0)<br/>"
}
},

```

```

"Database I/O": {
  "title": "Database I/O Rate (5 min avg)",
  "value": {
    "primary": "0.57 operations/s",
    "secondary": [
      "1 min avg: 0.07",
      "15 min avg: 0.53",
      "Avg since boot: 0.46",
      "Total number of events: 409932"
    ],
    "supplementary": "1 min avg: 0.07<br>15 min avg: 0.53<br>Avg since boot:
0.46<br>Total number of events: 409932"
  }
},
"Top Floor dwell": {
  "title": "Top Floor dwell",
  "value": {
    "primary": "1st Floor (5572.53 min)",
    "secondary": [
      "1st floor (CCW remodel) (0.00 min)",
      "2nd floor (Area Addition) (0.00 min)",
      "2nd floor (CCW remodel) (0.00 min)"
    ],
    "supplementary": "1st floor (CCW remodel) (0.00 min)<br>2nd floor (Area Addition)
(0.00 min)<br>2nd floor (CCW remodel) (0.00 min)<br>"
  }
},
"Active devices": {
  "title": "Active devices",
  "value": {
    "primary": 356,
    "secondary": [
      "Most recent detection: 17s ago"
    ],
    "supplementary": "Most recent detection: 17s ago"
  }
},
"Top Campus dwell": {
  "title": "Top Campus dwell",
  "value": {
    "primary": "Nortech Campus (5572.53 min)",
    "secondary": [
      "Shell (0.00 min)",
      "System Campus (0.00 min)"
    ],
    "supplementary": "Shell (0.00 min)<br>System Campus (0.00 min)<br>"
  }
},
"Analysis API calls": {
  "title": "Analysis API calls",
  "value": {
    "primary": "Meter not active yet",
    "secondary": [
      "Please wait while data is being collected."
    ],
    "supplementary": "Please wait while data is being collected."
  }
},
"Zone API Calls": {
  "title": "Zone API Calls",
  "value": {
    "primary": "Meter not active yet",
    "secondary": [
      "Please wait while data is being collected."
    ]
  }
}

```

```

    ],
    "supplementary": "Please wait while data is being collected."
  }
},
"Top Zone dwell": {
  "title": "Top Zone dwell",
  "value": {
    "primary": "CMX Bar (5959.07 min)",
    "secondary": [
      "School (5763.90 min)",
      "Tm (4175.67 min)",
      "CMX Clinic (1783.57 min)"
    ],
    "supplementary": "School (5763.90 min)<br/>Tm (4175.67 min)<br/>CMX Clinic
(1783.57 min)<br/>"
  }
},
"Top Manufacturer": {
  "title": "Top Manufacturer",
  "value": {
    "primary": "Cisco Systems, Inc (310)",
    "secondary": [
      "Aeroscout Ltd. (78)",
      "G2 Microsystems (44)",
      "Hon Hai Precision Ind. Co.,Ltd. (21)"
    ],
    "supplementary": "Aeroscout Ltd. (78)<br/>G2 Microsystems (44)<br/>Hon Hai
Precision Ind. Co.,Ltd. (21)<br/>"
  }
},
"Top Zone count": {
  "title": "Top Zone count",
  "value": {
    "primary": "CMX Clinic (106)",
    "secondary": [
      "Tm (86)",
      "CMX Bar (44)",
      "School (20)"
    ],
    "supplementary": "Tm (86)<br/>CMX Bar (44)<br/>School (20)<br/>"
  }
},
"Top Building count": {
  "title": "Top Building count",
  "value": {
    "primary": "Nortech-1 (356)",
    "secondary": [
      "SJC23 (0)",
      "SJC24 (0)",
      "Shell- CBuilding (0)"
    ],
    "supplementary": "SJC23 (0)<br/>SJC24 (0)<br/>Shell- CBuilding (0)<br/>"
  }
},
"Overall Analytics API Calls": {
  "title": "Overall Analytics API Calls Rate (5 min avg)",
  "value": {
    "primary": "0.00 calls/s",
    "secondary": [
      "1 min avg: 0.00",
      "15 min avg: 0.00",
      "Avg since boot: 0.00",
      "Total number of events: 0"
    ],
  },

```

```

    "supplementary": "1 min avg: 0.00</br>15 min avg: 0.00</br>Avg since boot:
0.00</br>Total number of events: 0"
  }
},
"Notification processing time": {
  "title": "Notification processing time (avg duration)",
  "value": {
    "primary": "2.13 ms",
    "secondary": [
      "Min: 0 ms",
      "Max: 9 ms",
      "StDev: 0.94"
    ],
    "supplementary": "Min: 0 ms</br>Max: 9 ms</br>StDev: 0.94"
  }
},
"Location API Calls": {
  "title": "Location API Calls",
  "value": {
    "primary": "Meter not active yet",
    "secondary": [
      "Please wait while data is being collected."
    ],
    "supplementary": "Please wait while data is being collected."
  }
},
"Paths API Calls": {
  "title": "Paths API Calls",
  "value": {
    "primary": "Meter not active yet",
    "secondary": [
      "Please wait while data is being collected."
    ],
    "supplementary": "Please wait while data is being collected."
  }
},
"Age of updated aggregation records": {
  "title": "Age of updated aggregation records",
  "value": {
    "primary": "Meter not active yet",
    "secondary": [
      "Please wait while data is being collected."
    ],
    "supplementary": "Please wait while data is being collected."
  }
},
"Top Floor count": {
  "title": "Top Floor count",
  "value": {
    "primary": "1st Floor (356)",
    "secondary": [
      "1st floor (CCW remodel) (0)",
      "2nd floor (Area Addition) (0)",
      "2nd floor (CCW remodel) (0)"
    ],
    "supplementary": "1st floor (CCW remodel) (0)<br/>2nd floor (Area Addition)
(0)<br/>2nd floor (CCW remodel) (0)<br/>"
  }
},
"Heterarchy": {
  "title": "Heterarchy",
  "value": {
    "primary": "199 active elements",
    "secondary": [

```

```
        "Elements: 199/54 [act/inact]",
        "APs: 158/39",
        "POIs: 0/0",
        "PATHs: 0/0",
        "Floors: 8/1",
        "Tags: 19/0",
        "Userlevels: 4/0",
        "Zones: 5/12"
    ],
    "supplementary": "Elements: 199/54 [act/inact]<br/>APs: 158/39<br/>POIs:
0/0<br/>PATHs: 0/0<br/>Floors: 8/1<br/>Tags: 19/0<br/>Userlevels: 4/0<br/>Zones: 5/12"
}
}
}
```

# GET: Specific set of Summary KPIs or a list of available ones

## Description

This API retrieves a specific set of summary KPIs or a list of available ones.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/summary/:summaryItem

## Requires Basic Auth

N

## Parameters

*Table 7: Parameter Details*

| Name        | Required | Default | Type   | Location    | Description   |
|-------------|----------|---------|--------|-------------|---|
| summaryItem | Y        | —       | String | pathReplace | A comma-separated list of summary KPI to return, or 'availableMetrics' to see the list of metrics available. Use the title parameter. |

## Content Type

application/json

## Sample Output (JSON)

```
{
  "Top Building dwell": {
    "title": "Top Building dwell",
    "value": {
      "secondary": [],
      "supplementary": "",
      "primary": "Nortech Building (0.00 min)"
    }
  }
}
```

# POST: Overview Data for Target Areas for Brochure View

## Description

This task retrieves overview Data for Target Areas for Brochure View

**Table 8: Parameter Details**

| JSON body parameter | Description  | Allowable values/formats  |
|---------------------|--|---|
| type                | The type of data requested   | <ul style="list-style-type: none"> <li>• deviceCount</li> <li>• deviceDwell</li> <li>• grossShopping</li> <li>• deviceCrossover</li> <li>• connectedDetected</li> <li>• dwellBreakdown</li> </ul>   |
| period              | The period of interest, either specified as a date range, or one of the predefined names | <ul style="list-style-type: none"> <li>• yyyy-mm-dd</li> <li>• yyyy-mm-dd;yyyy-mm-dd</li> <li>• today</li> <li>• yesterday</li> <li>• this week</li> <li>• last week</li> <li>• last 2 weeks</li> <li>• this month</li> <li>• last month</li> <li>• last 3 months</li> <li>• this year</li> <li>• last year</li> <li>• forever</li> </ul> |
| timeRange           | The time window of interest on each day  | <ul style="list-style-type: none"> <li>• HH:mm-HH:mm</li> </ul>   |
| areas               | The list of areas of interest. If none are given, all are considered                     | A comma-separated list of area ids, or heterarchy levels  |



| JSON body parameter | Description  | Allowable values/formats   |
|---------------------|--|--|
| durationCategories  | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | <p>Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values:</p> <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |
| includeStationary   | Whether to include stationary devices (default=false)  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>  |

| JSON body parameter | Description  | Allowable values/formats   |
|---------------------|--|--|
| entirePeriod        | Whether to include device visits that occur any time during the entire period or only within a single day (default=false).<br><br>Applicable only to crossover; ignored for the other metrics.   | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>  |
| connectionState     | Whether to restrict to either connected or detected devices (default=all).<br><br>For Connected/Detected metric, this setting is ignored, and "all" is presumed  | <ul style="list-style-type: none"> <li>• connected</li> <li>• detected</li> <li>• all</li> </ul>   |
| percentageOf        | If set, does not report absolute numbers, but relative percentage. Ignored for Crossover report  | Heterarchy level   |
| dwelLimits          | The dwell time limits that specifies how dwellers should be grouped together.<br>Values are comma seperated as key:value pairs. Key is the series name and value is the upper dwell time limit of the series.<br><br>For example,<br>Light:5,Medium:20,Heavy:100 would mean that you consider devices that dwell for less than 5 minutes to be Light; from 5 minutes to 20 minutes to be Medium; and from 20 minutes to 100 to be Heavy.<br>If you want to consider all dwells, pass in -1 as the value. | <ul style="list-style-type: none"> <li>• default</li> <li>• minute</li> <li>• Light:&lt;limit&gt;,Medium:&lt;limit&gt;,Heavy:&lt;limit&gt;</li> <li>• comma separated limit label:limit value</li> </ul> |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/overview

**Requires Basic Auth**

N

## Parameters

**Table 9: Parameter Details**

| Name | Required | Default | Type       | Location | Description                      |
|------|----------|---------|------------|----------|----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters |

## Content Type

application/json

## Sample Input (JSON)

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "areas": "52",
  "type": "deviceCount"
}
```

## Sample Output (JSON)

```
{
  "startTime": "00:00",
  "previousEndDate": null,
  "startDate": "2017-03-16",
  "title": "Visitors",
  "executionTime": 32,
  "value": {
    "primary": {
      "title": "Total Visitors",
      "value": 0,
      "peakValue": 0,
      "breakdown": [
        {
          "title": "Repeat Visitors",
          "value": 0
        },
        {
          "title": "New Visitors",
          "value": 0
        }
      ]
    }
  },
  "average": {
    "title": "Total Visitors",
    "value": 0,
    "peakValue": 0,
    "breakdown": [
      {
        "title": "Repeat Visitors",
        "value": 0
      },
      {
        "title": "New Visitors",
        "value": 0
      }
    ]
  }
}
```

```
    ]
  },
  "previousTimeRange": {
    "title": "Total Visitors",
    "value": 0,
    "peakValue": 0,
    "breakdown": [
      {
        "title": "Repeat Visitors",
        "value": 0
      },
      {
        "title": "New Visitors",
        "value": 0
      }
    ]
  }
},
"areas": [
  {
    "id": 52,
    "name": "f0:25:72:3c:f8:10"
  }
],
"previousStartDate": "2017-03-15",
"endDate": null,
"endTime": "23:59"
}
```

# POST: Dwell Time for a Given Period and Areas

## Description

This API retrieves dwell Time for a given period and areas. The only parameter is a JSON array containing the parameters. The parameters are described below

**Table 10: Parameter Details**

| JSON array parameter | Description   | Allowable values/formats  |
|----------------------|---|---|
| granularity          | The desired granularity. One can limit to top n results (i.e. the n values with highest count) by adding "[n]", or the n bottom results by adding "[-n]". If granularity null is specified, all heterarchy types covered by the areas are returned. | <ul style="list-style-type: none"> <li>hourly</li> <li>daily</li> <li>weekly</li> <li>monthly</li> <li>yearly</li> <li>tag</li> <li>tag-name</li> <li>heterarchy level</li> <li>null</li> </ul>   |
| period               | The period of interest, either specified as a date range, or one of the predefined names  | <ul style="list-style-type: none"> <li>yyyy-mm-dd</li> <li>yyyy-mm-dd;yyyy-mm-dd</li> <li>today</li> <li>yesterday</li> <li>this week</li> <li>last week</li> <li>last 2 weeks</li> <li>this month</li> <li>last month</li> <li>last 3 months</li> <li>this year</li> <li>last year</li> <li>forever</li> </ul> |
| timeRange            | The time window of interest on each day   | <ul style="list-style-type: none"> <li>HH:mm-HH:mm</li> </ul>   |
| aggregate            | Whether to aggregate the dwell time by granularity; e.g. showing a total for each day of the week, instead of individual dates  | <ul style="list-style-type: none"> <li>none</li> <li>sum</li> <li>avg</li> </ul>  |
| areas                | The list of areas of interest. If none are given, all are considered  | A comma-separated list of area ids, or heterarchy levels<br><pre>&lt;areaId&gt;<br/>&lt;areaId-1&gt;,&lt;areaId-2&gt;,&lt;areaId-3&gt;</pre>  |

| JSON array parameter | Description  | Allowable values/formats  |
|----------------------|--|---|
| durationCategories   | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values: <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |
| includeStationary    | Whether to include stationary devices  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>   |
| connectionState      | Whether to restrict to either connected or detected devices (default=all)  | <ul style="list-style-type: none"> <li>• connected</li> <li>• detected</li> <li>• all</li> </ul>  |

| JSON array parameter | Description  | Allowable values/formats   |
|----------------------|--|--|
| percentageOf         | If set, does not report absolute numbers, but relative percentage  | Heterarchy level   |
| areaFilter           | <p>If set, restricts the results to areas matching the filter. Use 'descendantOf' to restrict the area selection. This option is used for drill down reports. Use 'subsetOf' to restrict the granularity. This option is used with tag granularity.</p> <p>For example: descendantOf: Campus C1 has Building B1 which zone Z1 and Z2 Campus C2 has Building B2 which zone Z3 query area=Z1,Z2,Z3 and granularity=Building and areaFilter=descendantOf:C1 will return only Building B1</p> <p>For example: subsetOf: Tag T1,T2 assigned to F1, T2,T3 to F2, T3,T4 to F3 query area=F1,F2,F3 and granularity=tag and areaFilter=subsetOf:T1,T2 will return only T1,T2.</p> | <ul style="list-style-type: none"> <li>• descendantOf</li> <li>• subsetOf:comma separated ids</li> </ul> |
| expandAll            | Include all of the elements descendants in the result  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>                                |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/deviceDwell

**Requires Basic Auth**

N

**Parameters***Table 11: Parameter Details*

| Name | Required | Default | Type       | Location | Description                       |
|------|----------|---------|------------|----------|-----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters. |

**Content Type**

application/json

**Sample Input (JSON)**

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "granularity": "hourly",
  "areas": "52,75"
}
```

**Sample Output (JSON)**

```
{
  "startTime": "00:00",
  "startDate": "2017-03-16",
  "connectionState": "all",
  "results": [
    {
      "id": 53,
      "ancestry": [
        {
          "level": "Building",
          "name": "REQ"
        },
        {
          "level": "Campus",
          "name": "Richfield"
        }
      ],
      "series": [
        "datetime"
      ],
      "hasChildren": false,
      "level": "FLOOR",
      "area": "2nd Floor",
      "data": []
    },
    {
      "id": 75,
      "ancestry": [
        {
          "level": "Floor",
          "name": "Site 4"
        },
        {
          "level": "Building",
          "name": "Site 4"
        },
        {
          "level": "Campus",
          "name": "San Jose Outdoor"
        }
      ],
      "series": [
        "datetime"
      ],
      "hasChildren": false,
      "level": "AP",
      "area": "f4:0f:1b:1a:82:90",
      "data": []
    }
  ],
  "interval": "hourly",
  "executionTime": 0,
  "minValue": 2147483647,
}
```



```
"endDate": "2017-03-16",  
"endTime": "23:59",  
"dataFreshness": "2017-03-16T02:58:04.319-07:00",  
"maxValue": 0  
}
```

## POST: Device Count for a Given Period and Areas

### Description

This API retrieves the device count for a given period and areas.

The only parameter (body) is a JSON array containing the parameters. The parameters are described below

**Table 12: Parameter Details**

| JSON array parameter | Description   | Allowable values/formats  |
|----------------------|---|---|
| granularity          | The desired granularity. One can limit to top n results (i.e. the n values with highest count) by adding "[n]", or the n bottom results by adding "[-n]". If granularity null is specified, all heterarchy types covered by the areas are returned. | <ul style="list-style-type: none"> <li>• hourly</li> <li>• daily</li> <li>• weekly</li> <li>• monthly</li> <li>• yearly</li> <li>• tag</li> <li>• tag-name</li> <li>• heterarchy level</li> <li>• null</li> </ul>   |
| period               | The period of interest, either specified as a date range, or one of the predefined names  | <ul style="list-style-type: none"> <li>• yyyy-mm-dd</li> <li>• yyyy-mm-dd;yyyy-mm-dd</li> <li>• today</li> <li>• yesterday</li> <li>• this week</li> <li>• last week</li> <li>• last 2 weeks</li> <li>• this month</li> <li>• last month</li> <li>• last 3 months</li> <li>• this year</li> <li>• last year</li> <li>• forever</li> </ul> |
| timeRange            | The time window of interest on each day.  | <ul style="list-style-type: none"> <li>• HH:mm-HH:mm</li> </ul>   |

| JSON array parameter | Description  | Allowable values/formats   |
|----------------------|--|--|
| aggregate            | Whether to aggregate the dwell time by granularity; e.g. showing a total for each day of the week, instead of individual dates   | <ul style="list-style-type: none"> <li>• none</li> <li>• sum</li> <li>• avg</li> </ul>   |
| areas                | The list of areas of interest. If none are given, all are considered   | A comma-separated list of area ids, or heterarchy levels   |
| durationCategories   | Filter devices by dwell times for which device visits specified areas. If a device's dwell time falls outside of the range, it is filtered out and not considered a visit. | <p>Time (in minutes) in the form nn-mm where nn is the lower limit and mm the upper limit. The maximum upper limit is 1440 minutes; which is 24 hours, or a full day. Accepted Values:</p> <ul style="list-style-type: none"> <li>• 0-240</li> <li>• 0-480</li> <li>• 0-1440</li> <li>• 5-240</li> <li>• 5-480</li> <li>• 5-1440</li> <li>• 10-240</li> <li>• 10-480</li> <li>• 10-1440</li> <li>• 15-240</li> <li>• 15-480</li> <li>• 15-1440</li> <li>• 30-240</li> <li>• 30-480</li> <li>• 30-1440</li> <li>• 45-240</li> <li>• 45-480</li> <li>• 45-1440</li> <li>• 60-240</li> <li>• 60-480</li> <li>• 60-1440</li> </ul> |

| JSON array parameter | Description  | Allowable values/formats   |
|----------------------|--|--|
| includeStationary    | Whether to include stationary devices (default=false)  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>                                |
| connectionState      | Whether to restrict to either connected or detected devices (default=all)  | <ul style="list-style-type: none"> <li>• connected</li> <li>• detected</li> <li>• all</li> </ul>         |
| percentageOf         | If set, does not report absolute numbers, but relative percentage  | Heterarchy level   |
| areaFilter           | <p>If set, restricts the results to areas matching the filter. Use 'descendantOf' to restrict the area selection. This option is used for drill down reports. Use 'subsetOf' to restrict the granularity. This option is used with tag granularity.</p> <p>For example: descendantOf: Campus C1 has Building B1 which zone Z1 and Z2 Campus C2 has Building B2 which zone Z3 query area=Z1,Z2,Z3 and granularity=Building and areaFilter=descendantOf:C1 will return only Building B1</p> <p>For example: subsetOf: Tag T1,T2 assigned to F1, T2,T3 to F2, T3,T4 to F3 query area=F1,F2,F3 and granularity=tag and areaFilter=subsetOf:T1,T2 will return only T1,T2.</p> | <ul style="list-style-type: none"> <li>• descendantOf</li> <li>• subsetOf:comma separated ids</li> </ul> |
| expandAll            | Include all of the elements descendants in the result  | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>                                |

**HTTP Method**

POST

**Resource URI**

/api/analytics/v1/deviceCount

**Requires Basic Auth**

N

## Parameters

**Table 13: Parameter Details**

| Name | Required | Default | Type       | Location | Description                      |
|------|----------|---------|------------|----------|----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters |

## Content Type

application/json

## Sample Input (JSON)

```
{
  "period": "today",
  "timeRange": "00:00-23:59",
  "granularity": "Building",
  "areas": "52,75,80"
}
```

## Sample Output (JSON)

```
{
  "startTime": "00:00",
  "startDate": "2017-03-16",
  "connectionState": "all",
  "results": [
    {
      "id": -1,
      "ancestry": [],
      "series": [],
      "hasChildren": false,
      "level": "SUPERZONE",
      "area": "Unknown area",
      "data": []
    }
  ],
  "interval": null,
  "executionTime": 23,
  "minValue": 2147483647,
  "endDate": "2017-03-16",
  "endTime": "23:59",
  "dataFreshness": "2017-03-16T03:00:28.833-07:00",
  "maxValue": 0
}
```

# GET: Repeat Device Status for One Area

## Description

Returns whether a device was seen as a repeat device in a particular area within the last 6 months.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/isRepeatDevice/{deviceMac}/{areaId}

## Requires OAuth

N

## Parameters

*Table 14: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |
| areaId    | Y        | —       | String | query    | Global ID of heterarchy element. For example, 2654    |

## Content Type

application or json

## Sample Response

```
{ isRepeat : true }
{ isRepeat : false }
```

# GET: Repeat Device Status for All Areas

## Description

Returns whether a device was seen as a repeat device in any area within your heirarchy within the last 6 months. .

## HTTP Method

GET

## Resource URI

/api/analytics/v1/isRepeatDevice/{deviceMac}

## Requires Basic Auth

N

## Parameters

*Table 15: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |

## Content Type

application or json

## Sample Response

```
{ isRepeat : true }
```

```
{ isRepeat : false }
```

# GET: Repeat Device Status for One Area

## Description

Returns detailed information of a repeat device within the last 6 months in a given area using the MAC address of the device.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/repeatDeviceStats/{deviceMac}/{areaId}

## Requires Basic Auth

N

## Parameters

*Table 16: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |
| areaId    | Y        | —       | String | query    | Global ID of heterarchy element. For example, 5540    |

## Content Type

application or json

## Sample Response

```
{
  "results": [
    {
      "id": 5540,
      "lastMonthSeen": "October",
      "name": "SJC-23",
      "userLevel": "Building",
      "children": [
        {
          "id": 5498,
          "lastMonthSeen": "October",
          "name": "2nd floor",
          "userLevel": "Floor",
          "daysSeenInLast30": [
            ]
        }
      ]
    }
  ],
}
```



```

    {
      "id": 5539,
      "lastMonthSeen": "July",
      "name": "3rd Floor",
      "userLevel": "Floor",
      "daysSeenInLast30": [

    ]
  }
],
"daysSeenInLast30": [

]
}
]
}

```

**Table 17: Response Description**

|                  |  |
|------------------|--|
| lastMonthSeen    | The name of the latest month the device was seen in a particular area, with the search going as far back as six months   |
| name             | The name of the area as seen in the heterarchy.  |
| userLevel        | The name of the heterarchy 'level' (i.e. Campus/Building/Floor/Zone)   |
| daysSeenInLast30 | List of dates when the device was seen within the past 30 days. If a device has been seen in the past 30 days, a more granular dataset showing all visits for that device within those 30 days is stored in the location tables  |
| children         | <p>(if relevant) This is a recursive list of all child area elements. Each item in this list contains the same information as listed in the rows above and will contain their own children arrays if the areas have child elements.</p> <p>A sample heterarchy looks like this: 1 Campus -&gt; 2 Buildings -&gt; 2 Floors each -&gt; 2 Zones each will have children arrays of length 2 -&gt; 2 -&gt; 2 -&gt; no children key/value pair at the respective levels.</p> |

# GET: Repeat Device Status In Any Area (Detailed)

## Description

Returns detailed information of a repeat device within the last 6 months in any area using the MAC address of the device

## HTTP Method

GET

## Resource URI

/api/analytics/v1/repeatDeviceStats/{deviceMac}/{areaId}

## Requires OAuth

N

## Parameters

*Table 18: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |

## Content Type

application or json

## Sample Response

```
{
  "results": [
    {
      "id": 4519,
      "lastMonthSeen": "October",
      "name": "System Campus",
      "userLevel": "Campus",
      "children": [
        {
          "id": 5206,
          "lastMonthSeen": "July",
          "name": "SJC-18",
          "userLevel": "Building",
          "children": [
            {
              "id": 5588,
              "lastMonthSeen": "July",
              "name": "3rd Floor",
              "userLevel": "Floor",
              "daysSeenInLast30": [
```

```
    ]
  }
],
"daysSeenInLast30": [
]
},
{
  "id": 5540,
  "lastMonthSeen": "October",
  "name": "SJC-23",
  "userLevel": "Building",
  "children": [
    {
      "id": 5498,
      "lastMonthSeen": "October",
      "name": "2nd floor",
      "userLevel": "Floor",
      "daysSeenInLast30": [

    ]
  },
  {
    "id": 5539,
    "lastMonthSeen": "July",
    "name": "3rd Floor",
    "userLevel": "Floor",
    "daysSeenInLast30": [

  ]
}
],
"daysSeenInLast30": [
]
},
{
  "id": 5635,
  "lastMonthSeen": "October",
  "name": "SJC-24",
  "userLevel": "Building",
  "children": [
    {
      "id": 5636,
      "lastMonthSeen": "October",
      "name": "1st Floor",
      "userLevel": "Floor",
      "daysSeenInLast30": [
        "2016-10-04",
        "2016-09-30",
        "2016-09-27",
        "2016-09-22"
      ]
    }
  ],
  {
    "id": 5637,
    "lastMonthSeen": "October",
    "name": "2nd Floor",
    "userLevel": "Floor",
    "daysSeenInLast30": [
      "2016-10-04",
      "2016-10-03",
      "2016-09-22"
    ]
  ]
}
```

```

    },
    {
      "id": 5638,
      "lastMonthSeen": "October",
      "name": "3rd Floor",
      "userLevel": "Floor",
      "daysSeenInLast30": [
        "2016-10-05",
        "2016-10-04",
        "2016-10-03",
        "2016-09-30",
        "2016-09-27",
        "2016-09-26",
        "2016-09-23",
        "2016-09-22"
      ]
    }
  ],
  "daysSeenInLast30": [
    "2016-10-05",
    "2016-10-04",
    "2016-10-03",
    "2016-09-30",
    "2016-09-27",
    "2016-09-26",
    "2016-09-23",
    "2016-09-22"
  ]
}
]
}
}

```

Table 19: Response Description

| Variable         | Description   |
|------------------|---|
| lastMonthSeen    | The name of the latest month the device was seen in a particular area, with the search going as far back as six months  |
| name             | The name of the area as seen in the heterarchy.   |
| userLevel        | The name of the heterarchy 'level' (i.e. Campus/Building/Floor/Zone)  |
| daysSeenInLast30 | List of dates when the device was seen within the past 30 days. If a device has been seen in the past 30 days, a more granular dataset showing all visits for that device within those 30 days is stored in the location tables |

| Variable | Description  |
|----------|--|
| children | <p>(if relevant) This is a recursive list of all child area elements. Each item in this list contains the same information as listed in the rows above and will contain their own children arrays if the areas have child elements.</p> <p>A sample heterarchy looks like this: 1 Campus -&gt; 2 Buildings -&gt; 2 Floors each -&gt; 2 Zones each will have children arrays of length 2 -&gt; 2 -&gt; 2 -&gt; no children key/value pair at the respective levels.</p> |

# GET: Repeat Device Status for One Area (Abridged)

## Description

Returns abridged information of a repeat device within the last 6 months in a given area using the MAC address of the device.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/repeatDeviceStatsLite/{deviceMac}/{areaId}

## Requires OAuth

N

## Parameters

*Table 20: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |
| areaId    | Y        | —       | String | query    | Global ID of heterarchy element. For example, 5540    |

## Content Type

application or json

## Sample Response

```
{
  "results": [
    {
      "id": 2654,
      "lastMonthSeen": "October",
      "name": "System Campus",
      "userLevel": "Campus",
      "daysSeenInLast30": [
        "2016-10-05",
        "2016-10-04",
        "2016-10-03",
        "2016-09-30",
        "2016-09-27",
        "2016-09-26",
        "2016-09-23",
        "2016-09-22"
      ]
    }
  ]
}
```

```
]
}
```

**Table 21: Response Description**

| <b>Variable</b>  | <b>Description</b>  |
|------------------|---|
| lastMonthSeen    | The name of the latest month the device was seen in a particular area, with the search going as far back as six months  |
| name             | The name of the area as seen in the heterarchy.   |
| userLevel        | The name of the heterarchy 'level' (i.e. Campus/Building/Floor/Zone)  |
| daysSeenInLast30 | List of dates when the device was seen within the past 30 days. If a device has been seen in the past 30 days, a more granular dataset showing all visits for that device within those 30 days is stored in the location tables |

# GET: Repeat Device Status In Any Area (Abridged)

## Description

Returns abridged information of a repeat device within the last 6 months in any area using the MAC address of the device

## HTTP Method

GET

## Resource URI

/api/analytics/v1/repeatDeviceStats/{deviceMac}/{areaId}

## Requires OAuth

N

## Parameters

*Table 22: Parameter Details*

| Name      | Required | Default | Type   | Location | Description   |
|-----------|----------|---------|--------|----------|---|
| deviceMac | Y        | —       | String | query    | MAC address of device. For example, 00:00:00:00:00:00 |

## Content Type

application or json

## Sample Response

```
{
  "results": [
    {
      "id": 4519,
      "lastMonthSeen": "October",
      "name": "System Campus",
      "userLevel": "Campus",
      "daysSeenInLast30": [
        "2016-10-05",
        "2016-10-04",
        "2016-10-03",
        "2016-09-30",
        "2016-09-27",
        "2016-09-26",
        "2016-09-23",
        "2016-09-22"
      ]
    }
  ]
}
```



**Table 23: Response Description**

| <b>Variable</b>  | <b>Description</b>  |
|------------------|---|
| lastMonthSeen    | The name of the latest month the device was seen in a particular area, with the search going as far back as six months  |
| name             | The name of the area as seen in the heterarchy.   |
| userLevel        | The name of the heterarchy 'level' (i.e. Campus/Building/Floor/Zone)  |
| daysSeenInLast30 | List of dates when the device was seen within the past 30 days. If a device has been seen in the past 30 days, a more granular dataset showing all visits for that device within those 30 days is stored in the location tables |

# GET: Retrieve the count of active clients on a floor or multiple floors right now.

## Description

The only parameter (body) is a JSON array containing the parameters.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/now/clientCount

## Requires Basic Auth

N

## Parameters

None.

## Content Type

application/json

## Sample Output (JSON)

```
{
  "total": {
    "total": 103,
    "totalNumFloors": 8
  },
  "connectionState": "all",
  "failedFloorIds": [],
  "missingFloorIds": [],
  "executionTime": 147,
  "minValue": 0,
  "data": [
    {
      "floorName": "2nd floor (CCW remodel)",
      "floorId": 207,
      "value": 0
    },
    {
      "floorName": "3rd floor (CCW remodel)",
      "floorId": 157,
      "value": 0
    },
    {
      "floorName": "3rd floor (CCW remodel)",
      "floorId": 232,
      "value": 0
    }
  ]
}
```

```

    {
      "floorName": "1st floor (CCW remodel)",
      "floorId": 106,
      "value": 0
    },
    {
      "floorName": "1st floor (CCW remodel)",
      "floorId": 184,
      "value": 0
    },
    {
      "floorName": "1st Floor",
      "floorId": 11,
      "value": 103
    },
    {
      "floorName": "2nd floor (CCW remodel)",
      "floorId": 132,
      "value": 0
    },
    {
      "floorName": "2nd floor (Area Addition)",
      "floorId": 185,
      "value": 0
    }
  ],
  "date": "2017-12-17",
  "nonFloorIds": [],
  "maxValue": 103
}

```

## API History

**Table 24: API history**

| Release                | Modification            |
|------------------------|-------------------------|
| Cisco CMX Release 10.3 | This API is introduced. |

# POST: Retrieve the count of active clients on a floor or multiple floors right now

## Description

This API retrieves the count of active clients on a floor or multiple floors right now. The only parameter (body) is a JSON array containing the parameters.

## Parameters

Table 25: Parameter Details

| JSON array parameter | Description   | Allowable values/formats   |
|----------------------|---|--|
| floors               | The list of floors of interest. If none are given, all are considered.      | A comma-separated list of floor ids.<br><floorId1>,<floorId2>,...                                |
| connectionState      | Whether to restrict to either connected or detected devices (default = all) | <ul style="list-style-type: none"> <li>• connected</li> <li>• detected</li> <li>• all</li> </ul> |

## HTTP Method

POST

## Resource URI

/api/analytics/v1/now/clientCount

## Requires Basic Auth

N

## Parameters

**Table 26: Parameter Details**

| Name | Required | Default | Type       | Location | Description                       |
|------|----------|---------|------------|----------|-----------------------------------|
| body | Y        | —       | JSON array | body     | JSON array containing parameters. |

## Content Type

application/json

## Sample Input

```
{
  "floors": "17",
  "connectionState": "all"
}
```

## Sample Output

```
{
  "total": {
    "total": 0,
    "totalNumFloors": 0
  },
  "connectionState": "all",
  "failedFloorIds": [],
  "missingFloorIds": [
    "17"
  ],
  "executionTime": 1,
  "minValue": 2147483647,
  "data": [],
  "date": "2017-03-16",
  "nonFloorIds": [],
  "maxValue": -2147483648
}
```

## API History

**Table 27: API history**

| Release                | Modification            |
|------------------------|-------------------------|
| Cisco CMX Release 10.3 | This API is introduced. |

# POST: Retrieve the breakdown of connected and detected devices for a floor right now.

## Description

This API retrieve the breakdown of connected and detected devices for a floor right now.

## HTTP Method

POST

## Resource URI

/api/analytics/v1/now/connectedDetected

## Requires Basic Auth

N

## Parameters

*Table 28: Parameter Details*

| Name | Required | Default | Type       | Location | Description                      |
|------|----------|---------|------------|----------|----------------------------------|
| body | Y        |         | JSON array | body     | JSON array containing parameters |

## Content Type

application/json

## Sample Input (JSON)

```
{
  "floors": "17"
}
```

## Sample Output (JSON)

```
{
  "total": {
    "totalDetected": 0,
    "totalNumFloors": 0,
    "totalAll": 0,
    "totalConnected": 0
  },
  "startTime": "03:22",
  "startDate": "2017-03-16",
  "failedFloorIds": [],
  "missingFloorIds": [
    "17"
  ]
}
```

```
],  
  "results": [],  
  "interval": null,  
  "executionTime": 2,  
  "endDate": "2017-03-16",  
  "endTime": "03:22",  
  "nonFloorIds": []  
}
```

## API History

*Table 29: API history*

| Release                | Modification            |
|------------------------|-------------------------|
| Cisco CMX Release 10.3 | This API is introduced. |

# GET: Retrieve the breakdown of connected and detected devices for a floor right now

## Description

The API retrieves the breakdown of connected and detected devices for a floor right now.

## HTTP Method

GET

## Resource URI

/api/analytics/v1/now/connectedDetected

## Requires Basic Auth

N

## Parameters

None.

## Content Type

application/json

## Sample Output (JSON)

```
{
  "total": {
    "totalDetected": 98,
    "totalNumAreas": 1,
    "totalAll": 98,
    "totalConnected": 0
  },
  "startDate": "2017-12-17",
  "interval": null,
  "executionTime": 158,
  "endDate": "2017-12-17",
  "endTime": "22:36",
  "startTime": "22:36",
  "invalidLevelIds": [],
  "missingAreaIds": [],
  "results": [
    {
      "ancestry": [],
      "id": 1,
      "series": [
        "dwell"
      ],
      "hasChildren": true,
      "area": "Campus",
      "data": [
        {
```



```
        "dwell": "0-1440",
        "values": {
          "connected": 0,
          "detected": 98,
          "all": 98
        },
        "name": null
      }
    ]
  },
  "failedAreaIds": [],
  "maxValues": {
    "connected": 0,
    "detected": 98
  },
  "minValues": {
    "connected": 0,
    "detected": 98
  }
}
```

## API History

*Table 30: API history*

| Release                | Modification            |
|------------------------|-------------------------|
| Cisco CMX Release 10.3 | This API is introduced. |

# GET: Get Count of Clients in Area

## Description

This API gets list of clients for a given area.

## HTTP Method

GET

## Resource URI

/analytics/v1/now/clientCount/areas

## Requires OAuth

N

## Parameters

None

## Content Type

application/json

## Sample Output

```
{
  "invalidLevelIds": [
  ],
  "total": {
    "total": 0,
    "totalNumAreas": 1
  },
  "missingAreaIds": [
  ],
  "connectionState": "all",
  "failedAreaIds": [
  ],
  "executionTime": 47,
  "minValue": 0,
  "data": [
    {
      "areaName": "Campus",
      "value": 0,
      "areaId": 1
    }
  ],
  "date": "2017-06-09",
  "maxValue": 0
}
```

# GET: Get Associated, Probing Count of Clients in Area

## Description

This API gets list of associated and/or probing client count for a given area.

## HTTP Method

GET

## Resource URI

/analytics/v1/now/connectedDetected/areas

## Requires OAuth

N

## Parameters

None

## Content Type

application/json

## Sample Output

```
{
  "total":{
    "totalDetected":0,
    "totalNumAreas":1,
    "totalAll":0,
    "totalConnected":0
  },
  "startDate":"2017-06-09",
  "interval":null,
  "executionTime":58,
  "endDate":"2017-06-09",
  "endTime":"03:44",
  "startTime":"03:44",
  "invalidLevelIds":[]
},
"missingAreaIds":[]
],
"results":[
  {
    "ancestry":[]
  },
  {
    "id":1,
    "series":[
      "dwell"
    ],
    "hasChildren":true,
  }
]
```

```
    "area": "Campus",
    "data": [
      {
        "dwell": "0-1440",
        "values": {
          "connected": 0,
          "detected": 0,
          "all": 0
        },
        "name": null
      }
    ]
  },
  "failedAreaIds": [
  ],
  "maxValues": {
    "connected": 0,
    "detected": 0
  },
  "minValues": {
    "connected": 0,
    "detected": 0
  }
}
```