Scentroid
SIMS ReST API

IDES CANADA INC
Developer Guide

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Contents

1 SIMS API

SIMS API has been developed and we are adding some new features for better performance. Secure socket functionally is implemented as well. Server is capable to answer both HTTP and HTTPS requests simultaneously but the samples are defined for HTTPS access.

1.2 API Format

1.2.1 A functional API for all sensors, with time window:

https://sims.scentroid.com/do/api/v1.data?sn=sl041601&secret=hash125&from=1470800000&to=1470886095&p=1

Actual reply:

[{"sensor":"Sulfur Dioxide - LC","time":"1470886040","value":"0.270"},{"sensor":"Carbon Monoxide - LC","time":"1470886040","value":"0.405"},{"sensor":"Hydrogen Sulfide - LC","time":"1470886040","value":"0.075"},{"sensor":"Nitrogen Dioxide - LC","time":"1470886040","value":"0.221"},{"sensor":"Benzene, Alcohol, smoke","time":"1470886040","value":"64.572"},{"sensor":"Hydrogen","time":"1470886040","value":"131.425"},{"sensor":"Alcohol, Ethanol, smoke","time":"1470886040","value":"7.436"},{"sensor":"Methane, Butane, LPG","time":"1470886040","value":"0.195"},{"sensor":"PID Sensor","time":"1470886040","value":"0.755"},{"sensor":"External Humidity","time":"1470886040","value":"42.80"},{"sensor":"External Temperature","time":"1470886040","value":"26.60"},{"sensor":"Internal Humidity","time":"1470886040","value":"35.30"},{"sensor":"Internal Temperature","time":"1470886040","value":"28.80"},{"sensor":"Sulfur Dioxide - LC","time":"1470885735","value":"0.255"},{"sensor":"Carbon Monoxide - LC","time":"1470885735","value":"0.390"},{"sensor":"Hydrogen Sulfide - LC","time":"1470885735","value":"0.075"},{"sensor":"Nitrogen Dioxide - LC","time":"1470885735","value":"0.196"},{"sensor":"Benzene, Alcohol, smoke","time":"1470885735","value":"63.431"},{"sensor":"Hydrogen","time":"1470885735","value":"132.566"},{"sensor":"Alcohol, Ethanol, smoke","time":"1470885735","value":"7.436"},{"sensor":"Methane, Butane, LPG","time":"1470885735","value":"0.195"},{"sensor":"PID Sensor","time":"1470885735","value":"0.755"},{"sensor":"External

Humidity","time":"1470885735","value":"42.60"},{"sensor":"External Temperature","time":"1470885735","value":"26.70"},{"sensor":"Internal Humidity","time":"1470885735","value":"35.30"},{"sensor":"Internal Temperature","time":"1470885735","value":"28.80"},{"sensor":"Sulfur Dioxide - LC","time":"1470885429","value":"0.255"},{"sensor":"Carbon Monoxide - LC","time":"1470885429","value":"0.390"},{"sensor":"Hydrogen Sulfide - LC","time":"1470885429","value":"0.075"},{"sensor":"Nitrogen Dioxide - LC","time":"1470885429","value":"0.221"}]

API Description:

"From" and "to" are time range for data and they are "sampledat" data means saved sample date and time in database. "From" and "to" are in Linux epoch timestamp and in second format to avoid time zone and formatting issues and faster queries in DB.

We only return 30 items each time. This API call has paging. If more than these items are in that date range, caller should go to next page using "p" parameter. "P" starts from 1.

"Secret" is alpha-numeric secret code for each user. When we create an equipment, this "secret" is automatically generated when we create an equipment in "New Equipment" form. It is viewable by managers and editable by admin in equipment settings page. It will be visible in the equipment settings page for managers and it cannot be changed by them. It only can be changed by Scentroid admin.

We will have limitations for five API calls based on each equipment per minute.

We will have one "secret" per equipment.

Note 1:

API arguments and socket type are subjects to change but whole concept would be same to final release.

Note 2:

Our server time is UTC time zone, so without daylight saving etc.

1.2.2 A functional API for the feature with sensor name and latest sample:

https://sims.scentroid.com/do/api/v1.data?sn=sl041601&secret=hash125&sensor=Sulfur%20Dioxide%20-%20LC&latest=true

Actual reply:

[{"sensor":"Sulfur Dioxide - LC","time":"1471288504","value":"0.270"}]

1.2.3 A functional API for all sensors, but the latest samples:

https://sims.scentroid.com/do/api/v1.data?sn=sl041601&secret=hash125&latest=true

Actual reply:

[{"sensor":"Sulfur Dioxide - LC","time":"1471288504","value":"0.270"},{"sensor":"Carbon Monoxide - LC","time":"1471288504","value":"0.410"},{"sensor":"Hydrogen Sulfide - LC","time":"1471288504","value":"0.085"},{"sensor":"Nitrogen Dioxide - LC","time":"1471288504","value":"0.222"},{"sensor":"Benzene, Alcohol, smoke","time":"1471288504","value":"64.672"},{"sensor":"Hydrogen","time":"1470886040","value":"131.425"},{"sensor":"Alcohol, Ethanol, smoke","time":"1471288504","value":"7.436"},{"sensor":"Methane, Butane, LPG","time":"1471288504","value":"0.195"},{"sensor":"PID Sensor","time":"1471288504","value":"0.755"},{"sensor":"External Humidity","time":"1471288504","value":"44.80"},{"sensor":"External Temperature","time":"1471288504","value":"27.60"},{"sensor":"Internal Humidity","time":"1471288504","value":"35.30"},{"sensor":"Internal Temperature","time":"1471288504","value":"29.80"}]

1.2.4 A functional API for filtering only with sensor name:

https://sims.scentroid.com/do/api/v1.data?sn=sl041601&secret=hash125&sensor=Sulfur%20Dioxide%20-%20LC

Reply:

[{"sensor":"Sulfur Dioxide - LC","time":"1471288504","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471288199","value":"0.275"},{"sensor":"Sulfur Dioxide - LC","time":"1471287891","value":"0.272"},{"sensor":"Sulfur Dioxide - LC","time":"1471287584","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471287280","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471286974","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471286669","value":"0.275"},{"sensor":"Sulfur Dioxide - LC","time":"1471286364","value":"0.276"},{"sensor":"Sulfur Dioxide - LC","time":"1471286060","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471285753","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471285447","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471285141","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471284833","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471284528","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471284222","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471283917","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471283613","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471283304","value":"0.272"},{"sensor":"Sulfur Dioxide - LC","time":"1471282997","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471282691","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471282385","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471282079","value":"0.274"},{"sensor":"Sulfur Dioxide - LC","time":"1471281773","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471281468","value":"0.270"},{"sensor":"Sulfur Dioxide - LC","time":"1471281163","value":"0.270"},{"sensor":"Sulfur Dioxide -

LC","time":"1471280856","value":"0.270"},{"sensor":"Sulfur Dioxide -

LC","time":"1471280550","value":"0.275"},{"sensor":"Sulfur Dioxide -

LC","time":"1471280244","value":"0.270"},{"sensor":"Sulfur Dioxide -

LC","time":"1471279940","value":"0.276"},{"sensor":"Sulfur Dioxide -

LC","time":"1471279635","value":"0.274"}]

Additional Notes:

For simplicity of API and logical reasons, we don't accept paging (p) along with latest. Also, latest won't work with from/to for simplicity of API usage.

Also for this API, limit of 5 request per 60 seconds is implemented per SN#/secret. After 5 request, a throttling message would show up.