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SEMA REST API

This documents the REST services offered by the "SEMA" endpoints.

Note that the terms "site" and "kiosk" are interchangeable.

Summary

General

Endpoint	Description
sema/health-check	Service availability
sema/login	Logs in via user name/password
sema/kiosks (sites)	List all sites (a.k.a. kiosks)
sema/products	Retrieve product data, skus, etc.
sema/sales-channels	Retrieve sales channels
sema/customer-types	Retrieve customer types

Point of Sale (POS) specific functionality, Note. A POS tablet manages one site

Endpoint	Description
sema/site/customers	CRUD for managing customer accounts from the POS application
sema/site/receipts	Send receipts from POS to the sema service
sema/site/product-mrps	Gets pricing for products base on site and sales-channel

Dashboard/Reports specific

Endpoint	Description
sema/dashboard/site/customer-summary	Returns demographics information on customers
sema/dashboard/site/receipt-summary	Returns water volume and sales information organized by sales channel and filtered by customer information
sema/dashboard/site/sales-summary	Summarizes sales data
sema/dashboard/site/water-summary	Sales data by vendor
sema/dashboard/site/water-chart	Historical sales by sales distribution channel

sema/health-check

Determines the status of the SEMA service

Endpoints

GET sema/health-check/

Headers

None

Path Parameters

None

Query Parameters

None

Sample request

```
curl "http://localhost:3001/sema/health-check"
```

Sample Response

```
{ "server": "Ok", "database": "Ok", "version": "0.0.1.4", "schema": "sema_sample_core" }
```

sema/login

Log into service. Login will return a Json Web Token. This token is required to authorize all other web services except health-check

For use in subsequent web services, clients must add the Authorization header as:

"Authorization: Bearer <token>" where token is as described below in the body of a successful authorization

The token returned will expire after 24 hours. (Clients should keep track of the token expiration time and acquire a new token before the token expiration time)

Endpoints

POST sema/login

Headers

None

Path Parameters

None

Query Parameters

None

POST Body (JSON formatted)

Field Name	Required	Type	Description
usernameOrEmail	YES	string	User name or email address. (Email address should be used to enable password recovery)
password	YES	string	

Sample request

```
curl --header "Content-Type: application/json" --request POST --data
'{"usernameOrEmail": "<username>", "password": "<password>"}'
http://localhost:3001/sema/login
```

Sample Response

```
{
    "version": "0.0.1.0",
    "token":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6MSwidXNlcm5hbWUiOiJhZGlpbm  
lzdHJhdG9yIiwiaWZwLhaWwiOiJhZGlpbkBlbnRhcnRlcjE2IiwiaWF0IjoiYmDE4LTA2LTE0VD  
EO0uJGU0YUljAWMFOiLCJmaXJzdF9uYWllIjoieGVzZCIsImxhc3RfbmFtZSI6IlVzZXIIiLC  
JhY3RpdmlUOnRydWUsInVjbGVzIjpibeyJjbmRlIjoieWRtaW4iLCJlc2VyX3JvbGUiOnsicm  
9sZV9pZCI6MywidXNlcl9pZCI6MSwiaWQiOiJvY9fSx7ImNvZGUiOiJocSIsInVzZXJfcml9sZS  
I6eyJyb2xlX2lkIjo0LCJlc2VyX2lkIjojoxLCJpZCI6OH19XSwiaWF0IjojoxNTMzNzU0MDc0LC  
JleHAiOiJElMzM4NDAA0NzR9.9fiQWdBUeBh73RpIbIg_UHW9BLqSWfgkR9BzPzfJLEY"
```

sema/kiosks (sites)

Returns an array of kiosks. Note that many of the subsequent SEMA web services will required a kiosk identifier

Endpoints

GET sema/kiosks

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

None

Sample request

Note that the token length is reduced in size

```
curl --header "authorization: Bearer <token>"  
http://localhost:3001/sema/kiosks
```

Sample Response



```
{  
  "kiosks": [  
    {  
      "id": 2,  
      "name": "Kiswa",  
      "region_id": 2  
    }  
  ]  
}
```

sema/products

Product services. Returns an array of products that can be purchased by customers

Endpoints

GET

sema/products

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
updated-date	NO	string ISO 8601 format	Returns all products whose updated date is LATER than updated-date.

Sample request

```
curl --header "authorization: Bearer <token>"  
http://localhost:3001/sema/products
```

Sample Response

```
{  
  "products": [  
    {  
      "productId": 17,  
      "active": true,  
      "base64encodedImage": "<Image Data>",  
      "categoryId": 3,  
      "description": "1.5 Liter water bottle",  
      "maximumQuantity": null,  
      "minimumQuantity": null,  
      "priceAmount": 2600,  
      "priceCurrency": "UGX",  
      "sku": "skul",  
      "updatedAt": "2018-01-01T08:00:00.000Z",  
      "unitPerProduct": 1.5,  
      "unitMeasure": "liters",  
      "cogsAmount": 1300  
    },  
    {  
      "productId": 18,  
      "active": true,  
      "base64encodedImage": "<Image Data>",  
      "categoryId": 3,  
      "description": "5 Liter water bottle",  
      "maximumQuantity": null,  
      "minimumQuantity": null,  
      "priceAmount": 4000,  
      "priceCurrency": "UGX",  
      "sku": "sku2",  
      "updatedAt": "2018-01-01T08:00:00.000Z",  
      "unitPerProduct": 5,  
      "unitMeasure": "liters",  
      "cogsAmount": 2000  
    },  
  ],  
}
```

```
{
  "productId": 19,
  "active": true,
  "base64encodedImage": "<Image Data>",
  "categoryId": 3,
  "description": "18.9 Liter water jug",
  "maximumQuantity": null,
  "minimumQuantity": null,
  "priceAmount": 20000,
  "priceCurrency": "UGX",
  "sku": "sku3",
  "updatedAt": "2018-08-07T03:18:14.000Z",
  "unitPerProduct": 18.9,
  "unitMeasure": "liters",
  "cogsAmount": 10000
},
{
  "productId": 20,
  "active": true,
  "base64encodedImage": "<Image Data>",
  "categoryId": 3,
  "description": "20 Liter water jug",
  "maximumQuantity": null,
  "minimumQuantity": null,
  "priceAmount": 25000,
  "priceCurrency": "UGX",
  "sku": "sku4",
  "updatedAt": "2018-01-01T08:00:00.000Z",
  "unitPerProduct": 20,
  "unitMeasure": "liters",
  "cogsAmount": 13000
}
```

```
]
}
```

sema/sales-channels

The Sema service supports different sales channels. Sales channels allow product pricing and availability to be customized. For example, a product could be priced differently through the **retail** and **wholesale** sales channels.

Endpoints

GET sema/sales-channels

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

None

Sample request

```
curl --header "authorization: Bearer <token>"
http://localhost:3001/sema/sales-channels
```

Sample Response


```
{
  "salesChannels": [
    {
      "id": 2,
      "name": "walkup",
      "description": null
    },
    {
      "id": 3,
      "name": "reseller",
      "description": null
    }
  ]
}
```

sema/customer-types

The Sema service supports different types of customers. Examples of customer types are **school**, **church**, **walk-up** etc

Endpoints

GET sema/customer-types

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

None

Sample request

```
curl --header "authorization: Bearer <token>"
http://localhost:3001/sema/customer-types
```

Sample Response

```
{
  "customerTypes": [
    {
      "id": 2,
      "name": "generic",
      "description": null
    },
    {
      "id": 3,
      "name": "anonymous",
      "description": null
    }
  ]
}
```

sema/measure-units

Returns the units of measurements used by the service, (currency, water volume)

Endpoints

GET

sema/sales-channels

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

None

Sample request

```
curl --header "authorization: Bearer <token>"
http://sema.untapped-inc.com/sema/measure-units
```

Sample Response

```
{
  "waterUnits": "gallons",
  "currencyUnits": "HTG"
}
```

sema/site/customers

Customer services for a site/(kiosk)

Endpoints

GET sema/site/customers

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	String	The site(kiosk) for which the customers are being queried

begin-date	NO	String ISO 8601 format	Beginning date for the customer info. If not specified all customers up until end-date are returned.
end-date	NO	String ISO 8601 format	Ending date. If not specified all customers from the begin-date are returned.
updated-date	NO	String ISO 8601 format	Returns all customers whose updated date is LATER than updated-date. Note that updated-date and begin-date/end-date are mutually exclusive If no dates are specified, all customers for the site are returned

Sample Request

```
curl --header "authorization: Bearer <token>"
http://localhost:3001/sema/site/customers?site-id=2
```

Sample Response

```
{
  "customers": [
    {
      "customerId": "225aee42-95f0-11e8-955a-ac87a31a5361",
      "createdDate": "2018-01-01T08:00:00.000Z",
      "updatedAt": "2018-08-08T05:47:26.000Z",
      "active": true,
      "address": "241 Mistletoe Rd Ca 95032",
      "name": "Fred O'Leary",
      "customerTypeId": 2,
      "salesChannelId": 2,
      "gpsCoordinates": "gps",
      "siteId": 2,
      "phoneNumber": "408-656-2041",
      "dueAmount": 0
    },
    {
      "customerId": "22b7a18c-95f0-11e8-9a65-ac87a31a5361",
      "createdDate": "2018-02-01T08:00:00.000Z",
      "updatedAt": "2018-02-01T08:00:00.000Z",
      "active": true,
      "address": "test_address",
      "name": "TestCustomer 2",
      "customerTypeId": 2,
      "salesChannelId": 2,
      "gpsCoordinates": "gps",
      "siteId": 2,
      "phoneNumber": "555-1313",
      "dueAmount": 0
    },
    {
      "customerId": "2312dd90-95f0-11e8-9a72-ac87a31a5361",
      "createdDate": "2018-03-01T08:00:00.000Z",
      "updatedAt": "2018-03-01T08:00:00.000Z",
      "active": true,
      "address": "test_address",
      "name": "TestCustomer 3",
      "customerTypeId": 2,
      "salesChannelId": 2,
      "gpsCoordinates": "gps",
      "siteId": 2,
      "phoneNumber": "555-1414",
      "dueAmount": 0
    }
  ]
}
```

POST sema/site/customers

Used to create a customer

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login
Content-Type	YES	Content-Type: application/json	

Path Parameters

None

Query Parameters

None

POST Body (JSON formatted)

Field Name	Required	Type	Description
customerId	NO	string	Unique id for the customer (uuid) If not specified, the REST service will create this field
siteId	YES	number	Kiosk/Site identifier
address	YES	string	address
name	YES	string	User name
customerTypeId	YES	number	Customer type identifier (sema/customer-types)
salesChannelId	YES	number	Sales channel identifier
phoneNumber	YES	string	GPS coordinates
gpsCoordinates	NO	string	Gps coordinates, (',' separated)
createdDate	NO	String	ISO 8601 format. If not specified, the REST service will create this with the current date/time
updatedAt	NO	String	ISO 8601 format. If not specified, the REST service will set this the same as the CreatedDate
gender	NO	string	

Sample request

```
curl --header "Authorization: Bearer <token>" -d '{"name":"post customer","siteId":1,"customerTypeId":1,"salesChannelId":3,"address":"1234 main st","phoneNumber":"555-1212"}' -H "Content-Type: application/json" -X POST localhost:3001/sema/site/customers/
```

Sample Response

```
{
  "customerId": "6794d3c0-d0cd-11e8-8c05-1174232b1a96",
  "createdDate": "2018-10-15T22:55:25.948Z",
  "updatedAt": "2018-10-15T22:55:25.948Z",
  "active": true,
  "address": "1234 main st",
  "name": "post customer",
  "customerTypeId": 1,
  "salesChannelId": 3,
  "gpsCoordinates": "",
  "siteId": 1,
  "phoneNumber": "555-1212",
  "dueAmount": 0
}
```

PUT sema/site/customers/{customerId}

Used to update a customer. Note that if a customer is referenced by another entity, it cannot be deleted. Instead it should be deactivated

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login
Content-Type	YES	Content-Type :application/json	

Path Parameters

CustomerId - The id of the customer being updated

Query Parameters

None

PUT Body (JSON formatted)

Field Name	Required	Type	Description
active	NO	boolean	Used to activate/deactivate a customer
address	NO	string	address
name	NO	string	User name
customerTypeId	NO	number	Customer type identifier (sema/customer-types)
salesChannelId	NO	number	Sales channel identifier
phoneNumber	NO	string	GPS coordinates
gpsCoordinates	NO	string	Gps coordinates, (',' separated)
createdDate	NO	String	ISO 8601 format. If not specified, the REST service will create this with the current date/time

updatedAt	NO	String	ISO 8601 format. If not specified, the REST service will set this the same as the CreatedDate
gender	NO	string	

Sample request

```
curl --header "Authorization: Bearer <token>" -d '{
  "gpsCoordinates": "41.2865,174.7762"}' -H "Content-Type: application/json" -X
PUT localhost:3001/sema/site/customers/6794d3c0-d0cd-11e8-8c05-1174232b1a96
```

Sample Response

```
{
  "customerId": "6794d3c0-d0cd-11e8-8c05-1174232b1a96",
  "createdDate": "2018-10-16T05:55:25.000Z",
  "updatedAt": "2018-10-15T23:12:42.418Z",
  "active": true,
  "address": "1234 main st",
  "name": "post customer",
  "customerTypeId": 1,
  "salesChannelId": 3,
  "gpsCoordinates": "41.2865,174.7762",
  "siteId": 1,
  "phoneNumber": "555-1212",
  "dueAmount": 0
}
```

DELETE sema/site/customers/{customerId}

Used to delete a customer. Note that if a customer is referenced by another entity, it cannot be deleted. Instead it should be deactivated via "put"

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

CustomerId - The id of the customer being updated

Query Parameters

None

Sample request

```
curl --header "Authorization: Bearer <token>" -X DELETE
localhost:3001/sema/site/customers/6794d3c0-d0cd-11e8-8c05-1174232b1a96
```


sema/site/product-mrps

Product - sales-channel mappings. This service returns information on how products are priced for each kiosk/site and sales channel combination. Pricing information includes both sales price plus the cost of goods sold

Endpoints

GET

sema/site/product-mrps

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	String	The site to return pricing information for
updated-date	NO	string ISO 8601 format	Returns all product mrps whose updated date is LATER than updated-date.

Sample request

```
curl --header "authorization: Bearer <token>"  
http://localhost:3001/sema/site/product-mrps?site-id=2
```

Sample Response

```
{  
  "productMRPs": [  
    {  
      "id": 1,  
      "siteId": 2,  
      "productId": 17,  
      "salesChannelId": 2,  
      "priceAmount": 2600.01,  
      "currencyCode": "UGX",  
      "cogsAmount": 1300  
    },  
    {  

```

```
    "id": 2,
    "siteId": 2,
    "productId": 17,
    "salesChannelId": 3,
    "priceAmount": 2340,
    "currencyCode": "UGX",
    "cogsAmount": 1300
  },
  {
    "id": 3,
    "siteId": 2,
    "productId": 18,
    "salesChannelId": 2,
    "priceAmount": 4000,
    "currencyCode": "UGX",
    "cogsAmount": 2000
  },
  {
    "id": 4,
    "siteId": 2,
    "productId": 18,
    "salesChannelId": 3,
    "priceAmount": 3600,
    "currencyCode": "UGX",
    "cogsAmount": 2000
  },
  {
    "id": 5,
    "siteId": 2,
    "productId": 19,
    "salesChannelId": 2,
    "priceAmount": 20000,
    "currencyCode": "UGX",
    "cogsAmount": 10000
  },
  {
    "id": 6,
    "siteId": 2,
    "productId": 19,
    "salesChannelId": 3,
    "priceAmount": 18000,
    "currencyCode": "UGX",
    "cogsAmount": 10000
  },
  {
    "id": 7,
    "siteId": 2,
    "productId": 20,
    "salesChannelId": 2,
    "priceAmount": 25000,
```

```
        "currencyCode": "UGX",
        "cogsAmount": 13000
    },
    {
        "id": 8,
        "siteId": 2,
        "productId": 20,
        "salesChannelId": 3,
        "priceAmount": 22500,
        "currencyCode": "UGX",
        "cogsAmount": 13000
    },
    {
        "id": 9,
        "siteId": 2,
        "productId": 21,
        "salesChannelId": 2,
        "priceAmount": 25000,
        "currencyCode": "UGX",
        "cogsAmount": 13000
    },
    {
        "id": 10,
        "siteId": 2,
        "productId": 21,
        "salesChannelId": 3,
        "priceAmount": 22500,
        "currencyCode": "UGX",
        "cogsAmount": 13000
    }
}
```

]

```
}
```

sema/site/receipts

Receipt services for a site/(kiosk). There is only one receipt service, the POST service from the tablet application to the service to register product sales

Endpoints

POST sema/site/receipts

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login
Content-Type	YES	Content-Type: application/json	

Path Parameters

None

Query Parameters

None

POST Body (JSON formatted)

Field Name	Required	Type	Description
id	YES	String	Unique Id for the receipt
createdDate	YES	String	ISO 8601 format.
customerId	YES	String	Customer
paymentType	YES	String	Use "", reserved for future use
currencyCode	YES	String	Standard currency code, USD, NZD etc
siteId	YES	Number	site/kiosk identifier
customerTypeId	YES	Number	Customer type identifier
total	YES	Number	total amount
cogs	YES	Number	Cost of goods sold
salesChannelId	YES	Number	Sales channel for the sale
receiptId	YES	String	Additional, (client side), receipt id
products	NO	Array	array of products purchased

Each product has the following information

Field Name	Required	Type	Description
productId	YES	Number	Product identifier

quantity	YES	Number	number sold
priceTotal	YES	Number	Sales/item * quantity
cogsTotal	YES	Number	cost of goods sold
sku	YES	String	Product sku

sema/dashboard/site/customer-summary

Gets demographics information on customers

Endpoints

GET sema/dashboard/site/customer-summary

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	String	The site for which sales info is being returned
begin-date	NO	String ISO 8601 format	Beginning date for customers included
end-date	NO	String ISO 8601 format	Ending date for customers included If either begin-date or end-date is specified, both dates must be included
income-gt income-lt	NO	Number	Used filter customers by income. If Both income-lt and income-gt are specified, all customers whose income is between the ranges will be returned. If income-lt is specified, customers whose income below the value will be included. If income-gt is specified, customers whose income above the value will be included
Gender	NO	String, 'M' or 'F'	Used to filter customers by gender
distance-gt distance-lt		Number	Used filter customers by distance. If Both distance-lt and distance-gt are specified, all customers whose distance is between the ranges will be returned. If distance-l is specified, customers whose distance below the value will be included. If distance-gt is specified, customers whose distance above the value will be included

Sample request

```
curl --header "authorization: Bearer <token>"
http://localhost:3001/sema/dashboard/site/customer-summary?site-id=1&begin-date=2016-02-02&end-date=2019-09-01&income-gt=2&income-lt=8
```

Response

The response includes the count of customers created that meet the filter criteria plus the potential consumer base for the kiosk.

Sample Response

```
{
  "beginDate": "2016-02-02T08:00:00.000Z",
  "endDate": "2019-09-01T07:00:00.000Z",
  "incomeGreaterThan": "2",
  "incomeLessThan": "8",
  "customerCount": 52,
  "consumerBase": 400
}
```

sema/dashboard/site/receipt-summary

Gets water volume and sales information organized by sales channel, and filtered by customer income and/or payment type

Endpoints

GET sema/dashboard/site/receipt-summary

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	String	The site for which information is requested
type	YES	String	Must be "sales-channel"
begin-date	NO	String ISO 8601 format	Starting date
end-date	NO	String ISO 8601 format	Ending date. If either starting date or ending date are specified, both must be included
income-lt income-gt			Used filter sales by customer income. If Both income-lt and income-gt are specified, sales to all customers whose income is between the ranges will be returned. If income-lt is specified, sales to customers whose income below the value will be included. If income-gt is specified, sales to customers whose income above the value will be included
payment-type	NO	String	Used to filter sales by payment type. May be one of: 'cash', 'mobile', 'loan' or 'card'

Sample request

```
curl --header "authorization: Bearer <token>"  
http://localhost:3001/sema/dashboard/site/receipt-summary?site-id=1&begin-date=2017-01-01&end-date=2018-09-01&type=sales-channel&payment-type=cash
```

Sample Response

```
{
  "beginDate": "2017-01-01T08:00:00.000Z",
  "endDate": "2018-09-01T07:00:00.000Z",
  "type": "sales-channel",
  "volume": {
    "data": [
      {
        "salesChannel": "Household",
        "volume": 3075.8
      },
      {
        "salesChannel": "Main Station",
        "volume": 9812.9
      },
      {
        "salesChannel": "Access Points",
        "volume": 6722.5
      },
      {
        "salesChannel": "Prepaid Meter",
        "volume": 0
      }
    ]
  },
  "total": {
    "data": [
      {
        "salesChannel": "Household",
        "total": 197.2
      },
      {
        "salesChannel": "Main Station",
        "total": 795.6
      },
      {
        "salesChannel": "Access Points",
        "total": 428.4
      },
      {
        "salesChannel": "Prepaid Meter",
        "total": 0
      }
    ]
  },
  "paymentType": "cash"
}
```


sema/dashboard/site/sales-summary

Gets sales summary information for this site.

- Total customers
- Total Revenue
- Cost of goods sold
- Information on sales to each customer

Endpoints

GET sema/dashboard/sales/trends

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	string	The site for which sales info is being returned
group-by	YES	string	Used to categorize how historical sales data is organized, E.g. by month, by year etc. (Currently the supported options are "month", "year", and "none")
begin-date	NO	string ISO 8601 format	Beginning date for the sales info. If not specified the most recent sales data is returned
enddate	NO	string ISO 8601 format	Ending date for the sales info. If not specified the current date is used

Sample request

```
curl --header "authorization: Bearer <token>"  
http://localhost:3001/sema/dashboard/site/sales-summary?site-id=1&begin-  
date=2018-04-01&end-date=2018-04-30&group-by=year
```

Sample Response

Note that each metric return includes at total for the date range specified plus the three most current "group-by" values. These values are used to display metric trends. Also the the array of customer sales data is sorted by current sales period value, (descending)

```
{  
  "beginDate": "2018-04-01T07:00:00.000Z",  
  "endDate": "2018-04-30T07:00:00.000Z",  
  "totalRevenue": {
```

```
"total": 2379310,
"period": "year",
"periods": [
  {
    "beginDate": "2018-01-01T08:00:00.000Z",
    "endDate": "2018-04-30T07:00:00.000Z",
    "value": 774665
  },
  {
    "beginDate": "2017-01-01T08:00:00.000Z",
    "endDate": "2017-12-30T08:00:00.000Z",
    "value": 1544530
  },
  {
    "beginDate": "2016-01-01T08:00:00.000Z",
    "endDate": "2016-12-30T08:00:00.000Z",
    "value": null
  }
]
},
"totalCogs": {
  "total": 1189655,
  "period": "year",
  "periods": [
    {
      "beginDate": "2018-01-01T08:00:00.000Z",
      "endDate": "2018-04-30T07:00:00.000Z",
      "value": 387332.5
    },
    {
      "beginDate": "2017-01-01T08:00:00.000Z",
      "endDate": "2017-12-30T08:00:00.000Z",
      "value": 772265
    },
    {
      "beginDate": "2016-01-01T08:00:00.000Z",
      "endDate": "2016-12-30T08:00:00.000Z",
      "value": null
    }
  ]
},
"totalCustomers": {
  "total": 189,
  "period": "year",
  "periods": [
    {
      "beginDate": "2018-01-01T08:00:00.000Z",
      "endDate": "2018-04-30T07:00:00.000Z",
      "value": 28
    },
  ],
}
```

```

        {
            "beginDate": "2017-01-01T08:00:00.000Z",
            "endDate": "2017-12-30T08:00:00.000Z",
            "value": 96
        },
        {
            "beginDate": "2016-01-01T08:00:00.000Z",
            "endDate": "2016-12-30T08:00:00.000Z",
            "value": null
        }
    ]
},
"customerCount": 1133,
"customerSales": [
    {
        "name": "Felix Dalmás",
        "id": "03d280ba-c59c-11e8-8488-ac87a31a5361",
        "period": "year",
        "gps": "",
        "total": null,
        "periods": [
            {
                "beginDate": "2018-01-01T08:00:00.000Z",
                "endDate": "2018-04-30T07:00:00.000Z",
                "value": 35640
            },
            {
                "beginDate": "2017-01-01T08:00:00.000Z",
                "endDate": "2017-12-30T08:00:00.000Z",
                "value": 62760
            },
            {
                "beginDate": "2016-01-01T08:00:00.000Z",
                "endDate": "2016-12-30T08:00:00.000Z",
                "value": null
            }
        ]
    },
    {
        "name": "Kaliko Beach",
        "id": "c0d3c202-c59c-11e8-aff1-ac87a31a5361",
        "period": "year",
        "gps": "18.86886 -72.61301",
        "total": null,
        "periods": [
            {
                "beginDate": "2018-01-01T08:00:00.000Z",
                "endDate": "2018-04-30T07:00:00.000Z",
                "value": 34195
            },

```

```

        {
            "beginDate": "2017-01-01T08:00:00.000Z",
            "endDate": "2017-12-30T08:00:00.000Z",
            "value": 87930
        },
        {
            "beginDate": "2016-01-01T08:00:00.000Z",
            "endDate": "2016-12-30T08:00:00.000Z",
            "value": null
        }
    ]
},
{
    "name": "Unregistered",
    "id": "ad2c18c2-c59b-11e8-8328-ac87a31a5361",
    "period": "year",
    "gps": "",
    "total": null,
    "periods": [
        {
            "beginDate": "2018-01-01T08:00:00.000Z",
            "endDate": "2018-04-30T07:00:00.000Z",
            "value": 33285
        },
        {
            "beginDate": "2017-01-01T08:00:00.000Z",
            "endDate": "2017-12-30T08:00:00.000Z",
            "value": 49405
        },
        {
            "beginDate": "2016-01-01T08:00:00.000Z",
            "endDate": "2016-12-30T08:00:00.000Z",
            "value": null
        }
    ]
},
{
    "name": "ludieu Laguerre",
    "id": "8a9d8aec-c59c-11e8-918c-ac87a31a5361",
    "period": "year",
    "gps": "18.83785, -72.57531",
    "total": null,
    "periods": [
        {
            "beginDate": "2018-01-01T08:00:00.000Z",
            "endDate": "2018-04-30T07:00:00.000Z",
            "value": 30600
        },
        {
            "beginDate": "2017-01-01T08:00:00.000Z",

```

```
        "endDate": "2017-12-30T08:00:00.000Z",
        "value": 72260
    },
    {
        "beginDate": "2016-01-01T08:00:00.000Z",
        "endDate": "2016-12-30T08:00:00.000Z",
        "value": null
    }
]
```

```
}
  ]
}
```

sema/dashboard/site/water-summary

Returns information on water operations such as production, wastage, pressure and flow rate values

Endpoints

GET sema/dashboard/site/water-summary

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	Numver	
begin-date	NO	String ISO 8601 format	Beginning date
end-date	NO	String ISO 8601 format	Ending date

Sample request

```
curl --header "authorization: Bearer <token>"
"http://localhost:3001/sema/dashboard/site/water-summary?site-id=1&begin
-date=2017-01-01&end-date=2018-09-01"
```

Sample Response

```
{
  "beginDate": "2017-01-01T08:00:00.000Z",
  "endDate": "2018-09-01T07:00:00.000Z",
  "totalProduction": 7602154.24,
  "fillStation": 7316744.58,
  "pressurePreMembrane": 86.098039,
  "pressurePostMembrane": 92.492308,
  "distributionFlowRate": null,
  "productFlowRate": 10.002892,
  "sourceFlowRate": 17.993228
}
```

sema/dashboard/site/water-chart

Gets historical data on a water reading, (production, chlorine, total dissolved solids)

Endpoints

GET sema/dashboard/site/water-chart

Headers

Header	Required	Example	Description
Authorization	YES	Authorization : Bearer xxxx.yyyy.zzzz	Contains token as received from login

Path Parameters

None

Query Parameters

Parameter	Required	Format	Description
site-id	YES	Number	The site for which sales info is being returned
type	YES	String	Must be one of "totalchlorine", "production" or "tds"
begin-date	NO	String ISO 8601 format	Beginning date
end-date	NO	String ISO 8601 format	Ending date. If neither ending date nor beginning date are specified, data for the current year is returned

Sample request

```
curl --header "authorization: Bearer <token>"
"http://localhost:3001/sema/dashboard/site/water-chart?site-id=1&type=pr
oduction&begin-date=2018-01-01&end-date=2018-09-01"
```

Sample Response

```
{
  "beginDate": "2018-01-01T08:00:00.000Z",
  "endDate": "2018-09-01T07:00:00.000Z",
  "type": "production",
  "data": {
    "time": [
      "2018-01-01T08:00:00.000Z",
      "2018-01-02T08:00:00.000Z",
      "2018-01-03T08:00:00.000Z",
      ...
    ],
    "values": [
      15915.200000000186,
      15979.810000000056,
      15927.859999999987,
      ...
    ]
  }
}
```