API Documentation for Dashboard integration

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Version information

Version no	Created date	Created by	Change log
1.1	29 Nov 2023	Dolly Chhabriya	Created to share with FASP team and Dashboard vendor
1.2	12 Jan 2024	Dolly Chhabriya	Merged the Product catalog into Supply plan API so you do not need to call two distinct API's
1.3	31 Jul 2024	Rohit Vishwakarma	Added a variable for start date so that we do not need to send the entire Supply Plan every time
1.31	1 Aug 2024	Rohit Vishwakarma	Updated the Error codes for different scenarios

General information

To call any QAT API you will need a Profile that should be created by a QAT Administrator. If you have not received your credentials with which to call the API please reach out to HSS-FASP-HQ@ghsc-psm.org

You will need to reset the password at least once every 6 months.

To call a QAT API the user will need to first create a Token by calling an Authentication API

1. Authentication API

Method: POST
URL:https://api.quantificationanalytics.org/authenticate

Input :

```
{
    "username":"<%username%>",
    "password":"<%password%>"
}
```

Output :

```
{
    "token":
"absdfksjhtasckjnw;lfajre;lasc;lseth;lkwvajh;ljsae;lkrewglkjnhedsalkjvf
hsd;lgjh"
}
```

Once you have the Token you need to use this token to call all other API's. The Token once created will have a life of 6hrs. During those 6 hrs you can call any API with this Authorization Token to get the required results.

For all other API's you will need to pass the following key value pair in the header of the API
Key: Authorization
Value: Bearer <%Token%>

2. Update expired password

Method: POST
URL: https://api.quantificationanalytics.org/api/updateExpiredPassword

Input:

```json
{
    "username":"<%username%>",
    "oldPassword":"<%old_password%>",
    "newPassword":"<%new_password%>"
}
```

Output:

3. Supply Plan API

Call this API for the Supply plan of a particular Version of a Program. To get the Program Id of the Program please speak to an Administrator. If you know the VersionId that you want to get the data for you can specify the VersionId in the API call. If you do not know the VersionId you can set the VersionId = -1 in the API call. This will get you the data for the latest version of the Program.

Method: GET
URL:
https://api.quantificationanalytics.org/api/export/supplyPlan/programId/{programId}/versionId/{versionId}/startDate/{startDate}

Inputs:
1. programId - Program Id of the Program that you want to pull the Supply plan for. If you do not know the Program Id please get in touch with your Program manager
2. versionId - Every Supply plan is stored as a Version inside of QAT. If you need the latest version, pass "-1" as the versionId. If you want a specific version then pass that value.
3. startDate - The startDate is not a compulsory variable if you do not pass the startDate QAT will send you the entire Supply plan from the date that data is available. If you want data only after a startDate then pass that value. The startDate must be in the format

YYYY-MM only. Due to the way QAT allows older Supply plan data to be changed the minimum cutOffDate allowed is 1year in the past. E.g. if today is July 20th 2024 you must have a cut off date of 2023-06 or earlier.

Output:

```json
{
    "programId": 2227,
    "versionId": 1,
    "program": {
        "label": {
            "label_en": "Kenya PRH/CON",
            "label_sp": null,
            "label_fr": null,
            "label_pr": null
        },
        "healthAreaList": [
            {
                "label": {
                    "label_en": "Population Reproductive Health",
                    "label_sp": "Planificación familiar",
                    "label_fr": "Planification familiale",
                    "label_pr": "Planeamento familiar"
                }
            },
            {
                "label": {
                    "label_en": "Condoms",
                    "label_sp": "Preservativos",
                    "label_fr": "Présservatifs",
                    "label_pr": "Preservativos"
                }
            }
        ],
        "organisation": {
            "label": {
                "label_en": "Ministry of Health",
                "label_sp": null,
                "label_fr": null,
                "label_pr": null
            }
        },
        "regionList": [
```

```
                {
                    "label": {
                        "label_en": "National",
                        "label_sp": "Nacional",
                        "label_fr": "National",
                        "label_pr": "Nacional"
                    }
                }
            ],
            "currentVersionId": 14
        },
        "planningUnitList": [
            {
                "planningUnit": {
                    "planningUnitId": 2478,
                    "label": {
                        "label_en": "Copper TCu380A Intrauterine Device, 1
Each",
                        "label_sp": null,
                        "label_fr": null,
                        "label_pr": null
                    },
                    "forecastingUnit": {
                        "forecastingUnitId": 222,
                        "label": {
                            "label_en": "Copper TCu380A Intrauterine Device",
                            "label_sp": null,
                            "label_fr": null,
                            "label_pr": null
                        },
                        "productCategory": {
                            "label": {
                                "label_en": "Intrauterine Devices",
                                "label_sp": "",
                                "label_fr": "",
                                "label_pr": ""
                            }
                        }
                    },
                    "unit": {
                        "label": {
                            "label_en": "Pieces",
                            "label_sp": "",
```

```json
                    "label_fr": "",
                    "label_pr": ""
                }
            },
            "multiplier": 1.0
        },
        "supplyPlanData": [
            {
                "transDate": "2017-11-01",
                "regionCount": 1,
                "regionCountForStock": 0,
                "openingBalance": 0,
                "actualConsumptionQty": null,
                "forecastedConsumptionQty": null,
                "nationalAdjustment": 0,
                "manualPlannedShipmentQty": 0,
                "manualSubmittedShipmentQty": 0,
                "manualApprovedShipmentQty": 0,
                "manualOnholdShipmentQty": 0,
                "manualShippedShipmentQty": 0,
                "manualReceivedShipmentQty": 0,
                "erpPlannedShipmentQty": 0,
                "erpSubmittedShipmentQty": 0,
                "erpApprovedShipmentQty": 0,
                "erpOnholdShipmentQty": 0,
                "erpShippedShipmentQty": 0,
                "erpReceivedShipmentQty": 0,
                "expiredStock": 0,
                "closingBalance": 0,
                "mos": 0.0,
                "amc": 29562.0,
                "amcCount": 1,
                "unmetDemand": 0,
                "minStockMos": 18.0,
                "minStockQty": 532116.0,
                "maxStockMos": 24.0,
                "maxStockQty": 709488.0
            },
            {
                "transDate": "2017-12-01",
                "regionCount": 1,
                "regionCountForStock": 0,
                "openingBalance": 0,
```

```
                    "actualConsumptionQty": null,
                    "forecastedConsumptionQty": null,
                    "nationalAdjustment": 0,
                    "manualPlannedShipmentQty": 0,
                    "manualSubmittedShipmentQty": 0,
                    "manualApprovedShipmentQty": 0,
                    "manualOnholdShipmentQty": 0,
                    "manualShippedShipmentQty": 0,
                    "manualReceivedShipmentQty": 0,
                    "erpPlannedShipmentQty": 0,
                    "erpSubmittedShipmentQty": 0,
                    "erpApprovedShipmentQty": 0,
                    "erpOnholdShipmentQty": 0,
                    "erpShippedShipmentQty": 0,
                    "erpReceivedShipmentQty": 0,
                    "expiredStock": 0,
                    "closingBalance": 0,
                    "mos": 0.0,
                    "amc": 24729.0,
                    "amcCount": 2,
                    "unmetDemand": 0,
                    "minStockMos": 18.0,
                    "minStockQty": 445122.0,
                    "maxStockMos": 24.0,
                    "maxStockQty": 593496.0
                },
                {
                    "transDate": "2018-01-01",
                    "regionCount": 1,
                    "regionCountForStock": 1,
                    "openingBalance": 0,
                    "actualConsumptionQty": 29562,
                    "forecastedConsumptionQty": 13975,
                    "nationalAdjustment": 624960,
                    "manualPlannedShipmentQty": 0,
                    "manualSubmittedShipmentQty": 0,
                    "manualApprovedShipmentQty": 0,
                    "manualOnholdShipmentQty": 0,
                    "manualShippedShipmentQty": 0,
                    "manualReceivedShipmentQty": 0,
                    "erpPlannedShipmentQty": 0,
                    "erpSubmittedShipmentQty": 0,
                    "erpApprovedShipmentQty": 0,
```

```json
                    "erpOnholdShipmentQty": 0,
                    "erpShippedShipmentQty": 0,
                    "erpReceivedShipmentQty": 0,
                    "expiredStock": 0,
                    "closingBalance": 595398,
                    "mos": 25.27084686,
                    "amc": 23560.6667,
                    "amcCount": 3,
                    "unmetDemand": 0,
                    "minStockMos": 18.0,
                    "minStockQty": 424092.0006,
                    "maxStockMos": 24.0,
                    "maxStockQty": 565456.0008
                }
            ]
        },
        {
            "planningUnit": {
                "planningUnitId": 2635,
                "label": {
                    "label_en": "Medroxyprogesterone Acetate 150 mg/mL, IM
Injection (1 mL Vial), 1 Vial",
                    "label_sp": null,
                    "label_fr": null,
                    "label_pr": null
                },
                "forecastingUnit": {
                    "forecastingUnitId": 6071,
                    "label": {
                        "label_en": "Medroxyprogesterone Acetate 150 mg/mL,
IM Injection (1 mL Vial) Vial",
                        "label_sp": null,
                        "label_fr": null,
                        "label_pr": null
                    },
                    "productCategory": {
                        "label": {
                            "label_en": "Injectable Contraceptives",
                            "label_sp": "",
                            "label_fr": "",
                            "label_pr": ""
                        }
                    }
```

```json
            },
            "unit": {
                "label": {
                    "label_en": "Unit",
                    "label_sp": null,
                    "label_fr": null,
                    "label_pr": null
                }
            },
            "multiplier": 1.0
        },
        "supplyPlanData": [
            {
                "transDate": "2017-11-01",
                "regionCount": 1,
                "regionCountForStock": 0,
                "openingBalance": 0,
                "actualConsumptionQty": null,
                "forecastedConsumptionQty": null,
                "nationalAdjustment": 0,
                "manualPlannedShipmentQty": 0,
                "manualSubmittedShipmentQty": 0,
                "manualApprovedShipmentQty": 0,
                "manualOnholdShipmentQty": 0,
                "manualShippedShipmentQty": 0,
                "manualReceivedShipmentQty": 0,
                "erpPlannedShipmentQty": 0,
                "erpSubmittedShipmentQty": 0,
                "erpApprovedShipmentQty": 0,
                "erpOnholdShipmentQty": 0,
                "erpShippedShipmentQty": 0,
                "erpReceivedShipmentQty": 0,
                "expiredStock": 0,
                "closingBalance": 0,
                "mos": 0.0,
                "amc": 191645.0,
                "amcCount": 1,
                "unmetDemand": 0,
                "minStockMos": 18.0,
                "minStockQty": 3449610.0,
                "maxStockMos": 24.0,
                "maxStockQty": 4599480.0
            },
```

```json
{
    "transDate": "2017-12-01",
    "regionCount": 1,
    "regionCountForStock": 0,
    "openingBalance": 0,
    "actualConsumptionQty": null,
    "forecastedConsumptionQty": null,
    "nationalAdjustment": 0,
    "manualPlannedShipmentQty": 0,
    "manualSubmittedShipmentQty": 0,
    "manualApprovedShipmentQty": 0,
    "manualOnholdShipmentQty": 0,
    "manualShippedShipmentQty": 0,
    "manualReceivedShipmentQty": 0,
    "erpPlannedShipmentQty": 0,
    "erpSubmittedShipmentQty": 0,
    "erpApprovedShipmentQty": 0,
    "erpOnholdShipmentQty": 0,
    "erpShippedShipmentQty": 0,
    "erpReceivedShipmentQty": 0,
    "expiredStock": 0,
    "closingBalance": 0,
    "mos": 0.0,
    "amc": 199180.0,
    "amcCount": 2,
    "unmetDemand": 0,
    "minStockMos": 18.0,
    "minStockQty": 3585240.0,
    "maxStockMos": 24.0,
    "maxStockQty": 4780320.0
},
{
    "transDate": "2018-01-01",
    "regionCount": 1,
    "regionCountForStock": 1,
    "openingBalance": 0,
    "actualConsumptionQty": 191645,
    "forecastedConsumptionQty": 471958,
    "nationalAdjustment": 3484916,
    "manualPlannedShipmentQty": 0,
    "manualSubmittedShipmentQty": 0,
    "manualApprovedShipmentQty": 0,
    "manualOnholdShipmentQty": 0,
```

```
                    "manualShippedShipmentQty": 0,
                    "manualReceivedShipmentQty": 3772200,
                    "erpPlannedShipmentQty": 0,
                    "erpSubmittedShipmentQty": 0,
                    "erpApprovedShipmentQty": 0,
                    "erpOnholdShipmentQty": 0,
                    "erpShippedShipmentQty": 0,
                    "erpReceivedShipmentQty": 0,
                    "expiredStock": 0,
                    "closingBalance": 7065471,
                    "mos": 36.38032282,
                    "amc": 194211.3333,
                    "amcCount": 3,
                    "unmetDemand": 0,
                    "minStockMos": 18.0,
                    "minStockQty": 3495803.9994,
                    "maxStockMos": 24.0,
                    "maxStockQty": 4661071.9992
                }
            ]
        }
    ]
}
```

4. Data dictionaries

Supply plan

S. no	Field name	Description
01	programId	Program Id
02	versionId	Version id of the Supply Plan
03	program	Program object
03.01	....label	Program label object
03.01.01	........label_en	English name
03.01.02	........label_sp	Spanish name
03.01.03	........label_fr	French name
03.01.04	........label_pr	Portuguese name

03.02	....healthAreaList	List of Health Areas objects that this Program is for
03.02.01	........label	Health Area label object
03.02.01.01	...........label_en	English name
03.02.01.02	...........label_sp	Spanish name
03.02.01.03	...........label_fr	French name
03.02.01.04	...........label_pr	Portuguese name
03.03	....organisation	Organisation that this Program is for
03.03.01	........label	Organisation label object
03.03.01.01	...........label_en	English name
03.03.01.02	...........label_sp	Spanish name
03.03.01.03	...........label_fr	French name
03.03.01.04	...........label_pr	Portuguese name
03.04	....regionList	List of Regions part of this Program
03.04.01	........label	Region label object
03.04.01.01	...........label_en	English name
03.04.01.02	...........label_sp	Spanish name
03.04.01.03	...........label_fr	French name
03.04.01.04	...........label_pr	Portuguese name
03.05	....currentVersionId	Latest version id for this Program
04	planningUnitList	List of Planning Units part of the Supply Plan
04.01	....planningUnit	Planning Unit object
04.01.01	........planningUnitId	Planning Unit Id
04.01.02	........label	Planning Unit label object
04.01.02.01	...........label_en	English name
04.01.02.02	...........label_sp	Spanish name
04.01.02.03	...........label_fr	French name
04.01.02.04	...........label_pr	Portuguese name
04.01.03	........forecastingUnit	Forecasting Unit that the Planning Unit belongs to
04.01.03.01	...........forecastingUnitId	Forecasting Unit Id
04.01.03.02	...........label	Forecasting Unit label object
04.01.03.02	...............label_en	English name
04.01.03.02	...............label_sp	Spanish name
04.01.03.02	...............label_fr	French name
04.01.03.02	...............label_pr	Portuguese name
04.01.03.03	...........productCategory	Product category object that this Forecasting Unit belongs to
04.01.03.03	...............label	Product category label object
04.01.03.03	...................label_en	English name
04.01.03.03	...................label_sp	Spanish name
04.01.03.03	...................label_fr	French name

04.01.03.03	...................label_pr	Portuguese name
04.01.04	........unit	Unit object that this Planning Unit belongs to
04.01.04.01	............id	Unit Id
04.01.04.02	............label	Unit label object
04.01.04.02	................label_en	English name
04.01.04.02	................label_sp	Spanish name
04.01.04.02	................label_fr	French name
04.01.04.02	................label_pr	Portuguese name
04.01.05	........multiplier	Multiply this into Planning Unit quantity to get the Forecasting Unit quantity
05.02	....supplyPlanData	List of supply plan data for each month (All quantities are in terms of PU)
05.01	....yyyy-mm-dd	Month that this record is for
05.02.01	........regionCount	No of regions in this months data
05.02.02	........regionCountForStock	No of regions that provided Consumption count for this month
05.02.03	........openingBalance	Opening Balance
05.02.04	........actualConsumptionQty	Actual Consumption, if not provided it will be null
05.02.05	........forecastedConsumptionQty	Forecasted Consumption, if not provided it will be null
05.02.06	........nationalAdjustment	Adjustment either Manual or automatically calculated
05.02.07	........manualPlannedShipmentQty	Manual Shipment expected to arrive this month, current status is Planned.
05.02.08	........manualSubmittedShipmentQty	Manual Shipment expected to arrive this month, current status is Submitted.
05.02.09	........manualApprovedShipmentQty	Manual Shipment expected to arrive this month, current status is Approves.
05.02.10	........manualOnholdShipmentQty	Manual Shipment expected to arrive this month, current status is OnHold.
05.02.11	........manualShippedShipmentQty	Manual Shipment expected to arrive this month, current status is Shipped.
05.02.12	........manualReceivedShipmentQty	Manual Shipment expected to arrive this month, current status is Received.
05.02.13	........erpPlannedShipmentQty	ERP linked Shipment expected to arrive this month, current status is Planned.
05.02.14	........erpSubmittedShipmentQty	ERP linked Shipment expected to arrive this month, current status is Submitted.
05.02.15	........erpApprovedShipmentQty	ERP linked Shipment expected to arrive this month, current status is Approves.
05.02.16	........erpOnholdShipmentQty	ERP linked Shipment expected to arrive this month, current status is OnHold.
05.02.17	........erpShippedShipmentQty	ERP linked Shipment expected to arrive this month, current status is Shipped.
05.02.18	........erpReceivedShipmentQty	ERP linked Shipment expected to arrive this month, current status is Received.
05.02.19	........expiredStock	Qty of PU's expiring this month
05.02.20	........closingBalance	Closing Balance
05.02.21	........mos	Calculated Months of Stock
05.02.22	........amc	Calculated Average Monthly Consumption
05.02.23	........amcCount	No of months used to calculate AMC
05.02.24	........unmetDemand	Calculated Unmet demand
05.02.25	........minStockMos	Minimum Stock in terms of Months of Stock
05.02.26	........minStockQty	Minimum Stock in terms of Qty
05.02.27	........maxStockMos	Maximum Stock in terms of Months of Stock
05.02.28	........maxStockQty	Maximum Stock in terms of Qty

5. Errors

a. HttpStatusCode - 401 (Unauthorized)

You can get this error if you have used an incorrect or invalid Token to call the API or if you have not passed the Token

b. HttpStatusCode - 406 (Not Acceptable)

You can get this error if the startDate provided is not of the correct format. The acceptable format is "YYYY-MM". Or if the value of the startDate is less than 1 year since today.

c. HttpStatusCode - 404 (Not Found)

You can get this error if the ProgramId that you have provided in the input does not have any data or if you do not have the rights to access this Program Id

d. HttpStatusCode - 500 (Server error)

An unknown error has occurred. Please provide us with the following information to help debug

- Exact URL that you had called
- The timestamp that the API was called
- Error code and message that you received