

SATURN EURONEXT GLOBAL REPORTING SOLUTION

XML WEBSERVICES SPECIFICATIONS

Version 1.0

23 March 2021



PREFACE

ABOUT THIS DOCUMENT

The purpose of this document is to provide a support and examples on Webservices usage for SATURN application, more specifically on the API (Application Programming Interface) setup with XML format.

This document should be read in conjunction with the Webservices specification, available on the Euronext portal.

DOCUMENT AUDIENCE

This document should be read by Euronext clients using XML format through their API for regulatory reporting purposes.

WHAT'S NEW?

The following lists the changes related to this version. The full document history is available [here](#).

Version	Date	Changes
1.0	23/03/2021	New document : <ul style="list-style-type: none">Adding Request Header and Request Body.Under the Request Body section, services usage is described followed by filter/request examples and response examples.

SUPPORT

Please find below the contact details:

- Operational Client Services Desk : clientsupport@euronext.com
- Belgium +32 2 620 0585
- France +33 1 8514 8585
- Ireland +353 1 617 4289
- Netherlands +31 20 721 9585
- Portugal +351 2 1060 8585
- UK +44 20 7660 8585

This document is for information purposes only. The information and materials contained in this document are provided 'as is' and Euronext does not warrant the accuracy, adequacy or completeness and expressly disclaims liability for any errors or omissions. This document is not intended to be, and shall not constitute in any way a binding or legal agreement, or impose any legal obligation on Euronext. This document and any contents thereof, as well as any prior or subsequent information exchanged with Euronext in relation to the subject matter of this presentation, are confidential and are for the sole attention of the intended recipient. Except as described below, all proprietary rights and interest in or connected with this publication shall vest in Euronext. No part of it may be redistributed or reproduced without the prior written permission of Euronext. Portions of this presentation may contain materials or information copyrighted, trademarked or otherwise owned by a third party. No permission to use these third party materials should be inferred from this presentation.

Euronext refers to Euronext N.V. and its affiliates. Information regarding trademarks and intellectual property rights of Euronext is located at <https://www.euronext.com/terms-use>.

© 2021 Euronext N.V. - All rights reserved.

TABLE OF CONTENTS

1.	XML FORMAT SPECIFICATIONS	4
1.1.	REQUEST HEADER	4
1.2.	REQUEST BODY.....	4
1.2.1.	Authentication service : AuthenticateUser.....	4
1.2.2.	Submit APA transactions service : submitTx.....	5
1.2.3.	Submit ARM transactions service : submitTx.....	7
1.2.4.	Submit OBOE transactions service : submitTx	11
1.2.5.	Submit ShortLongCode service : submit	12
1.2.6.	Get transactions service : getTx.....	13
1.2.7.	Upload file service : upload	18
1.2.8.	Get Uploaded file service : getuploadedfiles	19
1.2.9.	Get Instruments service : instruments/get.....	22
1.2.10.	Quotes submission service : quotes (APA Pre-Trade).....	24

1. XML FORMAT SPECIFICATIONS

Each request (incoming and outgoing) must contain a specific header and a specific body.

1.1. REQUEST HEADER

A header is **mandatory** for ALL REQUESTS coming to SATURN. It will allow SATURN to process the messages sent by client's API in XML format, instead of JSON (default format).

A specific header must be sent through curl:

```
"Accept: application/xml"  
"Content-Type: application/xml"
```

Except for Upload service (upload) where below header must be sent:

```
"Accept: application/xml"  
"Content-Type: multipart/form-data"
```

Examples:

- Authenticate request

```
curl -X POST https://saturn-api-h.euronext.com/SaturnWebServices/rest/Authentication/AuthenticateUser -H  
"Content-Type: application/xml" -H "Accept: application/xml" -H "Authorization: Basic  
'(user:password_in_md5)encoded_in_base64' " --cert [client_certificate].pem --cacert  
digicert_intermediate.pem -k -i -v --proxy [PROXY]
```

- Upload request

```
curl -X POST -H "Content-Type: multipart/form-data" -H "Accept: application/xml"  
-H "Authorization: Bearer [TOKEN]" -F "data=@./Essai.csv" https://saturn-api-  
h.euronext.com/SaturnWebServices/rest/files/upload --cert [client_certificate].pem --cacert  
digicert_intermediate.pem -k -i -v --proxy [PROXY]
```

1.2. REQUEST BODY

1.2.1. AUTHENTICATION SERVICE : AUTHENTICATEUSER

This section contains different responses for the authentication service.

Resource path: */SaturnWebServices/rest/Authentication/AuthenticateUser*

1.2.1.1. Response Login OK

The token is returned :

```
<UserToken>  
  <token>eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJzZWl0IiwiaXNzIjoiaXV0aDAiLCJleHAiOjE1MTMxNjM1NjR9.ENV1Ch8HFMhkOxKo9nW2M1B00rdxO1lBsfZAIU08Pzo</token>  
</UserToken>
```

1.2.1.2. Response Login KO (credential)

Below error message is returned:

```
<ReturnObject>
  <code>401</code>
  <msg>Access denied ! Check your login/password (103)</msg>
  <recordCount>1</recordCount>
  <data/>
</ReturnObject>
```

1.2.1.3. Response Login KO (password)

Below error message is returned:

```
<ReturnObject>
  <code>401</code>
  <msg>Access denied ! Check your login/password (100)</msg>
  <recordCount>1</recordCount>
  <data/>
</ReturnObject>
```

1.2.1.4. Response Login KO (Bad IP)

Below error message is returned:

```
<ReturnObject>
  <code>401</code>
  <msg>Access denied ! Check your login/password (109)</msg>
  <recordCount>1</recordCount>
  <data/>
</ReturnObject>
```

1.2.2. SUBMIT APA TRANSACTIONS SERVICE : SUBMITTX

This section contains different requests and responses for the submitTx service. (APA)

Resource path: */SaturnWebServices/rest/transactionReports/submitTx*

1.2.2.1. Submit request (OK result)

Request:

```
<TransactionsToSubmit>
  <tradereport>1</tradereport>
  <traderef>FNWNAHUGM16P798T6KX7HGX75CJGCGP03QXRR8EL9R4E0</traderef>
  <side>2</side>
  <venue>XOFF</venue>
  <executingfirm>549300ZX3GFJGRFNQ344</executingfirm>
  <transactionreportingapaindicator>2</transactionreportingapaindicator>
  <volume>4007906.51297</volume>
  <tradeprice>645921.18044</tradeprice>
  <tradingdatetime>1447778577897900</tradingdatetime>
  <securityid>EUNL00164216</securityid>
  <isettlement>0</isettlement>
```

```
<qntymeasurementunitnotation>TOCD</qntymeasurementunitnotation>
<qntymeasurementunit>1659724</qntymeasurementunit>
<notionalamount>1954446</notionalamount>
<emissionallowancetypetid>2</emissionallowancetypetid>
<itransactiontobecleared>1</itransactiontobecleared>
<publicationdatetime>1289501635136000</publicationdatetime>
<instrumentidtype>0</instrumentidtype>
<executingbroker>549300SZKMCJPPF1VH37</executingbroker>
<enteringcounterpart>EXPA</enteringcounterpart>
<pricecurrency>HKD</pricecurrency>
<quantitycurrency>DZD</quantitycurrency>
<tradingcapacity1>3</tradingcapacity1>
<tradingcapacity2>2</tradingcapacity2>
<bypasscontrolflag>0</bypasscontrolflag>
<quantitynotation>1</quantitynotation>
<pricenotation>2</pricenotation>
<deferralindicator>1</deferralindicator>
<freetext1>Giraud</freetext1>
<freetext2>Victoria</freetext2>
<freetext3>Jaune</freetext3>
<freetext4>Seat</freetext4>
<freetext5>Doha</freetext5>
<otcposttradeindicator>2-11</otcposttradeindicator>
<investmentfirmdirectiveindicator>0</investmentfirmdirectiveindicator>
<submittingentityid>5493003SZ08DW3R34S38</submittingentityid>
</TransactionsToSubmit>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>1</recordCount>
  <data>Trade added {FNWNAHUGM16P798T6KX7HGX75CJGCGP03QXRR8EL9R4EO}</data>
</ReturnObject>
```

1.2.2.2. Submit request (KO result)

Request:

```
<TransactionsToSubmit>
  <tradereport>1</tradereport>
  <traderef></traderef>
  <side>2</side>
  <venue>XOFF</venue>
  <executingfirm>549300ZX3GFJGRFNQ344</executingfirm>
  <transactionreportingapaindicator>2</transactionreportingapaindicator>
  <volume>4007906.51297</volume>
  <tradeprice>645921.18044</tradeprice>
  <tradingdatetime>1447778577897900</tradingdatetime>
  <securityid>EUNL00164216</securityid>
  <isettlement>0</isettlement>
```

```
<qntymeasurementunitnotation>TOCD</qntymeasurementunitnotation>
<qntymeasurementunit>1659724</qntymeasurementunit>
<notionalamount>1954446</notionalamount>
<emissionallowancetypetid>2</emissionallowancetypetid>
<itransactiontobecleared>1</itransactiontobecleared>
<publicationdatetime>1289501635136000</publicationdatetime>
<instrumentidtype>0</instrumentidtype>
<executingbroker>549300SZKMCJPPF1VH37</executingbroker>
<enteringcounterpart>EXPA</enteringcounterpart>
<pricecurrency>HKD</pricecurrency>
<quantitycurrency>DZD</quantitycurrency>
<tradingcapacity1>3</tradingcapacity1>
<tradingcapacity2>2</tradingcapacity2>
<bypasscontrolflag>0</bypasscontrolflag>
<quantitynotation>1</quantitynotation>
<pricenotation>2</pricenotation>
<deferralindicator>1</deferralindicator>
<freetext1>Giraud</freetext1>
<freetext2>Victoria</freetext2>
<freetext3>Jaune</freetext3>
<freetext4>Seat</freetext4>
<freetext5>Doha</freetext5>
<otcposttradeindicator>2-11</otcposttradeindicator>
<investmentfirmdirectiveindicator>0</investmentfirmdirectiveindicator>
<submittingentityid>5493003SZ08DW3R34S38</submittingentityid>
</TransactionsToSubmit>
```

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>[traderef] '' Field should be a text in the size range of 1-52 characters
  consisting of capital Latin letters (A-Z) and numbers;</msg>
</ErrorObject>
```

1.2.3. SUBMIT ARM TRANSACTIONS SERVICE : SUBMITTX

This section contains different requests and responses for the submitTx service. (ARM)

Resource path: /SaturnWebServices/rest/transactionReports/submitTx

1.2.3.1. Submit request (OK result)

Request:

```
<TransactionsToSubmit>
  <tradereport>1</tradereport>
  <traderef>TRADEREFERENCCELINI74094AA854144831</traderef>
  <side>2</side>
  <venue>XICE</venue>
  <executingfirm>549300UPZ83BMVN7WS47</executingfirm>
  <transactionreportingapaindicator>1</transactionreportingapaindicator>
  <volume>7726212.56337</volume>
```

```
<tradeprice>162409.02395</tradeprice>
<tradeid>TRADINGVENUEDCTU4710838199</tradeid>
<tradingdatetime>1416737876174600</tradingdatetime>
<securityid>BE6215434620</securityid>
<isettlement>0</isettlement>
<execwfirmlgotradingindicator>3</execwfirmlgotradingindicator>
<commodityderivativeindicator>1</commodityderivativeindicator>
<netamount>794025.7</netamount>
<pricecurrency>MAD</pricecurrency>
<tradingcapacity1>3</tradingcapacity1>
<bypasscontrolflag>1</bypasscontrolflag>
<quantitynotation>1</quantitynotation>
<pricenotation>5</pricenotation>
<complextradecomponentid>CMPLXTRDIDTSYX2295497656</complextradecomponentid>
<countrybranchmembership>PT</countrybranchmembership>
<executionwithinfirm>EXECUTORSGEC18662</executionwithinfirm>
<freetext1>Martin</freetext1>
<freetext2>Renaud</freetext2>
<freetext3>Gris</freetext3>
<freetext4>Mercedes</freetext4>
<freetext5>Doha</freetext5>
<otcposttradeindicator>2-11</otcposttradeindicator>
<investmentfirmdirectiveindicator>1</investmentfirmdirectiveindicator>
<derivativenotionalincreasedecrease>2</derivativenotionalincreasedecrease>
<secfinancingtransactionindicator>1</secfinancingtransactionindicator>
<shortsellingindicator>0</shortsellingindicator>
<transmissionoforderindicator>1</transmissionoforderindicator>
<transmittingfirmidbuyer>549300JLIJXBS0RLNL80</transmittingfirmidbuyer>
<transmittingfirmidseller>549300V7S0SECYXD2130</transmittingfirmidseller>
<upfrontpayment>295108</upfrontpayment>
<upfrontpaymentcurrency>EUR</upfrontpaymentcurrency>
<waiverindicator>1-2-3</waiverindicator>
<buyerSellerExtension>
  <BuyerSellerExtension>
    <buyerbirthdate>1967-02-07</buyerbirthdate>
    <buyerfirstname>CATHERINE</buyerfirstname>
<buyeridentificationcode>NG19840613CLARABONNE</buyeridentificationcode>
    <buyeridentificationtype>3</buyeridentificationtype>
    <buyersurname>MOREL</buyersurname>
    <buyernationalidtype>1</buyernationalidtype>
  </BuyerSellerExtension>
  <BuyerSellerExtension>
    <sellerbirthdate>1951-01-17</sellerbirthdate>
    <sellerfirstname>PATRICE</sellerfirstname>
<selleridentificationcode>IN19500124JEROMDUMAS</selleridentificationcode>
    <selleridentificationtype>3</selleridentificationtype>
    <sellersurname>WILLIAMS</sellersurname>
    <sellernationalidtype>1</sellernationalidtype>
  </BuyerSellerExtension>
  <BuyerSellerExtension>
    <buyerdecisionmakerbirthdate>1977-02-14</buyerdecisionmakerbirthdate>
<buyerdecisionmakerfirstname>CLARA</buyerdecisionmakerfirstname>
```



```
<buyerdecisionmakeridentificationcode>BM19500110ROLANBONNE</buyerdecisionmakeridentif  
icationcode>  
<buyerdecisionmakeridentificationtype>2</buyerdecisionmakeridentificationtype>  
<buyerdecisionmakersurname>MARTIN</buyerdecisionmakersurname>  
<buyerdecisionmakernationalidtype>1</buyerdecisionmakernationalidtype>  
    </BuyerSellerExtension>  
    <BuyerSellerExtension>  
        <sellerbirthdate>1972-02-13</sellerbirthdate>  
        <sellercountrybranch>PT</sellercountrybranch>  
        <sellerfirstname>PIERRE</sellerfirstname>  
<selleridentificationcode>TU19500416LISSABLANC</selleridentificationcode>  
        <selleridentificationtype>3</selleridentificationtype>  
        <sellersurname>LEROY</sellersurname>  
        <sellernationalidtype>1</sellernationalidtype>  
    </BuyerSellerExtension>  
</buyerSellerExtension>  
</TransactionsToSubmit>
```

Response:

```
<ReturnObject>  
    <code>200</code>  
    <msg>OK</msg>  
    <recordCount>5</recordCount>  
    <data>Trade added {TRADEREFERENCCELINI74094AA854144831}</data>  
    <data>BuyerSellerExtension added:  
Traderef/txtid/BuyerEellerExtensioentid{TRADEREFERENCCELINI74094AA854144831/99910246318  
201/55555555574825706}</data>  
    <data>BuyerSellerExtension added:  
Traderef/txtid/BuyerEellerExtensioentid{TRADEREFERENCCELINI74094AA854144831/99910246318  
201/55555555574825707}</data>  
    <data>BuyerSellerExtension added:  
Traderef/txtid/BuyerEellerExtensioentid{TRADEREFERENCCELINI74094AA854144831/99910246318  
201/55555555574825708}</data>  
    <data>BuyerSellerExtension added:  
Traderef/txtid/BuyerEellerExtensioentid{TRADEREFERENCCELINI74094AA854144831/99910246318  
201/55555555574825709}</data>  
</ReturnObject>
```

1.2.3.2. Submit request (KO result)

Request:

```
<TransactionsToSubmit>  
    <tradereport>1</tradereport>  
    <traderef>TRADEREFERENCCELINI74094AA854144831</traderef>  
    <side>2</side>  
    <venue></venue>  
    <executingfirm>549300UPZ83BMVN7WS47</executingfirm>  
    <transactionreportingapaindicator>1</transactionreportingapaindicator>  
    <volume>7726212.56337</volume>  
    <tradeprice>162409.02395</tradeprice>  
    <tradeid>TRADINGVENUEDCTU4710838199</tradeid>  
    <tradingdatetime>1416737876174600</tradingdatetime>  
    <securityid>BE6215434620</securityid>
```

```
<isettlement>0</isettlement>
<execwfirmlgotradingindicator>3</execwfirmlgotradingindicator>
<commodityderivativeindicator>1</commodityderivativeindicator>
<netamount>794025.7</netamount>
<pricecurrency>MAD</pricecurrency>
<tradingcapacity1>3</tradingcapacity1>
<bypasscontrolflag>1</bypasscontrolflag>
<quantitynotation>1</quantitynotation>
<pricenotation>5</pricenotation>
<complextradecomponentid>CMLXTRDIDTSYX2295497656</complextradecomponentid>
<countrybranchmembership>PT</countrybranchmembership>
<executionwithinfirm>EXECUTORSGEC18662</executionwithinfirm>
<freetext1>Martin</freetext1>
<freetext2>Renaud</freetext2>
<freetext3>Gris</freetext3>
<freetext4>Mercedes</freetext4>
<freetext5>Doha</freetext5>
<otcposttradeindicator>2-11</otcposttradeindicator>
<investmentfirmdirectiveindicator>1</investmentfirmdirectiveindicator>
<derivativenotionalincreasedecrease>2</derivativenotionalincreasedecrease>
<secfinancingtransactionindicator>1</secfinancingtransactionindicator>
<shortsellingindicator>0</shortsellingindicator>
<transmissionoforderindicator>1</transmissionoforderindicator>
<transmittingfirmidbuyer>549300JLIJXBS0RLNL80</transmittingfirmidbuyer>
<transmittingfirmidseller>549300V7S0SECYXD2130</transmittingfirmidseller>
<upfrontpayment>295108</upfrontpayment>
<upfrontpaymentcurrency>EUR</upfrontpaymentcurrency>
<waiverindicator>1-2-3</waiverindicator>
<buyerSellerExtension>
  <BuyerSellerExtension>
    <buyerbirthdate>1967-02-07</buyerbirthdate>
    <buyerfirstname>CATHERINE</buyerfirstname>
    <buyeridentificationcode>NG19840613CLARABONNE</buyeridentificationcode>
    <buyeridentificationtype>3</buyeridentificationtype>
    <buyersurname>MOREL</buyersurname>
    <buyernationalidtype>1</buyernationalidtype>
  </BuyerSellerExtension>
  <BuyerSellerExtension>
    <sellerbirthdate>1951-01-17</sellerbirthdate>
    <sellerfirstname>PATRICE</sellerfirstname>
    <selleridentificationcode>IN19500124JEROMDUMAS</selleridentificationcode>
    <selleridentificationtype>3</selleridentificationtype>
    <sellersurname>WILLIAMS</sellersurname>
    <sellernationalidtype>1</sellernationalidtype>
  </BuyerSellerExtension>
  <BuyerSellerExtension>
    <buyerdecisionmakerbirthdate>1977-02-14</buyerdecisionmakerbirthdate>
    <buyerdecisionmakerfirstname>CLARA</buyerdecisionmakerfirstname>
    <buyerdecisionmakeridentificationcode>BM19500110ROLANBONNE</buyerdecisionmakeridentificationcode>
    <buyerdecisionmakeridentificationtype>2</buyerdecisionmakeridentificationtype>
    <buyerdecisionmakersurname>MARTIN</buyerdecisionmakersurname>
    <buyerdecisionmakernationalidtype>1</buyerdecisionmakernationalidtype>
```

```
        </BuyerSellerExtension>
        <BuyerSellerExtension>
            <sellerbirthdate>1972-02-13</sellerbirthdate>
            <sellercountrybranch>PT</sellercountrybranch>
            <sellerfirstname>PIERRE</sellerfirstname>
            <selleridentificationcode>TU19500416LISSABLANC</selleridentificationcode>
            <selleridentificationtype>3</selleridentificationtype>
            <sellersurname>LEROY</sellersurname>
            <sellernationalidtype>1</sellernationalidtype>
        </BuyerSellerExtension>
    </buyerSellerExtension>
</TransactionsToSubmit>
```

Response:

```
<ErrorObject>
    <code>600</code>
    <msg>[venue] '' Field should be an ISO 10383 like MIC code;</msg>
</ErrorObject>
```

1.2.4. SUBMIT OBOE TRANSACTIONS SERVICE : SUBMITTX

This section contains different requests and responses for the submitTx service. (OBOE)

Resource path: /SaturnWebServices/rest/transactionReports/submitTx

1.2.4.1. Submit request (OK result)

Request:

```
<TransactionsToSubmit>
    <tradereport>1</tradereport>
    <traderef>TRADEREFERENCCELINI7403448A95V4644831</traderef>
    <side>2</side>
    <counterpartytype>1</counterpartytype>
    <venue>XMSM</venue>
    <executingfirm>549300UPZ83BMVN7WS47</executingfirm>
    <transactionreportingapaindicator>5</transactionreportingapaindicator>
    <volume>555</volume>
    <tradeprice>162409.0495</tradeprice>
    <tradingdatetime>1598969976174600</tradingdatetime>
    <securityid>IE00BDZRXD00</securityid>
    <enteringcounterpart>969500AUXWPSHFPM60</enteringcounterpart>
    <euronexttradeflags>4</euronexttradeflags>
    <pricecurrency>GBP</pricecurrency>
    <tradingcapacity1>1</tradingcapacity1>
    <bypasscontrolflag>0</bypasscontrolflag>
    <quantitynotation>1</quantitynotation>
    <deferralindicator>0</deferralindicator>
    <freetext1>OBOE</freetext1>
    <otcposttradeindicator>0</otcposttradeindicator>
    <waiverindicator>7</waiverindicator>
</TransactionsToSubmit>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>1</recordCount>
  <data>Trade added {TRADEREFERENCCELINI7403448A95V4644831}</data>
</ReturnObject>
```

1.2.4.2. Submit request (KO result)

Request:

```
<TransactionsToSubmit>
  <tradereport>5</tradereport>
  <traderef>TRADEREFERENCCELINI7403448A95V464D4831</traderef>
  <side>2</side>
  <counterpartytype>1</counterpartytype>
  <venue>XMSM</venue>
  <executingfirm>549300UPZ83BMVN7WS47</executingfirm>
  <transactionreportingapaindicator>5</transactionreportingapaindicator>
  <volume>555</volume>
  <tradeprice>162409.0495</tradeprice>
  <tradingdatetime>1598969976174600</tradingdatetime>
  <securityid>IE00BDZRXD00</securityid>
  <enteringcounterpart>969500AUXWPSHFPM60</enteringcounterpart>
  <euronexttradeflags>4</euronexttradeflags>
  <pricecurrency>GBP</pricecurrency>
  <tradingcapacity1>1</tradingcapacity1>
  <bypasscontrolflag>0</bypasscontrolflag>
  <quantitynotation>1</quantitynotation>
  <deferralindicator>0</deferralindicator>
  <freetext1>OBOE</freetext1>
  <otcposttradeindicator>0</otcposttradeindicator>
  <waiverindicator>7</waiverindicator>
</TransactionsToSubmit>
```

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>Tradereport{5} is not allowed</msg>
</ErrorObject>
```

1.2.5. SUBMIT SHORTLONGCODE SERVICE : SUBMIT

This section contains different requests and responses for the submit service. (ShortLongCode)

Resource path: /SaturnWebServices/rest/shortcodeLongcodeResource/submit

1.2.5.1. Submit request (OK result)

Request:

```
<ShortcodeLongcode>
  <sshortcode>1247</sshortcode>
  <slongcode>LONGCODE0014</slongcode>
  <codetype>6</codetype>
  <markettype>2</markettype>
  <deffectivedate>2021-03-27</deffectivedate>
  <denndate>2050-01-05</denndate>
</ShortcodeLongcode>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>0</recordCount>
  <data>ShortcodeLongcode added {1247}</data>
</ReturnObject>
```

1.2.5.2. Submit request (KO result)

Request:

```
<ShortcodeLongcode>
  <sshortcode>1247</sshortcode>
  <slongcode>LONGCODE001%4</slongcode>
  <codetype>4</codetype>
  <markettype>2</markettype>
  <deffectivedate>2021-03-27</deffectivedate>
  <denndate>2050-01-05</denndate>
</ShortcodeLongcode>
```

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>[slongcode][1025] Invalid characters (the Algorithm Identification Code
must only contain numeric and/or capitalized alphabetic characters)</msg>
</ErrorObject>
```

1.2.6. GET TRANSACTIONS SERVICE : GETTX

This section contains different filters and responses for the getTx service.

Resource path: /SaturnWebServices/rest/transactionReports/getTx

1.2.6.1. Request with one filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>traderef</name>
```

```
        <value>7347NFH0J73HOIBDB6VJ7P3LK9C2CLKEAR1FF0WQ4ZF03</value>
        <operator>EQ</operator>
    </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>1</recordCount>
  <data>
    <type>transactionsReports</type>
    <tsgeneration>2020-07-22T11:13:23Z</tsgeneration>
    <status>3</status>
    <errors/>
    <traderef>7347NFH0J73HOIBDB6VJ7P3LK9C2CLKEAR1FF0WQ4ZF03</traderef>
    <executingfirm>549300WCGB70D06XZS54</executingfirm>
    <origin>SATURN</origin>
    <saturnuser>apiUser1</saturnuser>
    <tradereport>1</tradereport>
    <side>2</side>
    <investmentfirmdirectiveindicator>0</investmentfirmdirectiveindicator>
    <transmissionoforderindicator>0</transmissionoforderindicator>
    <derivativenotionalincreasedecrease>1</derivativenotionalincreasedecrease>
    <upfrontpayment>1000.0000000</upfrontpayment>
    <upfrontpaymentcurrency>EUR</upfrontpaymentcurrency>
    <countrybranchmembership>FR</countrybranchmembership>
    <cntryofinvestor>FR</cntryofinvestor>
    <cntryofexecutor>FR</cntryofexecutor>
    <shortsellingindicator>1</shortsellingindicator>
    <secfinancingtransactionindicator>0</secfinancingtransactionindicator>
    <investmentdecisionwithinfirmnationalidtype>1</investmentdecisionwithinfirmnationalid
type>
    <executionwithinfirm>FR00000122</executionwithinfirm>
    <executionwithinfirmnationalidtype>1</executionwithinfirmnationalidtype>
    <venue>FRAA</venue>
    <execwfirmlgottradingindicator>1</execwfirmlgottradingindicator>
    <invdecwfirmlgottradingindicator>1</invdecwfirmlgottradingindicator>
    <tradingcapacity1>3</tradingcapacity1>
    <tradingcapacity2>2</tradingcapacity2>
    <commodityderivativeindicator>0</commodityderivativeindicator>
    <pricenotation>1</pricenotation>
    <netamount>789.45600</netamount>
    <transactionreportingapaindicator>1</transactionreportingapaindicator>
    <quantitycurrency>EUR</quantitycurrency>
    <pricecurrency>EUR</pricecurrency>
    <quantitynotation>1</quantitynotation>
    <securityid>DE000A1H36X9</securityid>
    <volume>193.00000</volume>
    <tradeprice>835.961170000000000000</tradeprice>
    <tradeid>7347NFH0J73HOIBDB6VJ7P3LK9C2CLKEAR1FF0WQ4ZF03</tradeid>
```

```
<tradingdatetime>1595409202593000</tradingdatetime>
<isettlement>0</isettlement>
<acknowledge>NOT ACK</acknowledge>
<tsreceive>2020-07-22T11:13:23Z</tsreceive>
<instrumentdto>
  <mic>FRAA</mic>
  <isin>DE000A1H36X9</isin>
  <currency>EUR</currency>
  <tick_size_denominator>1</tick_size_denominator>
  <tick_size_numerator>1</tick_size_numerator>
  <cfi>OBFTFB</cfi>
  <amr>XXXXXXXXXXXXXXXXXX</amr>
  <symbol_Index>1142834</symbol_Index>
  <tolerance>0</tolerance>
  <price_decimals>2</price_decimals>
</instrumentdto>
</data>
</ReturnObject>
```

1.2.6.2. Request with OR filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <subFilterOR>
      <name>venue</name>
      <value>XWAR</value>
      <operator>LK</operator>
    </subFilterOR>
    <subFilterOR>
      <name>venue</name>
      <value>XMAL</value>
      <operator>LK</operator>
    </subFilterOR>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>3</recordCount>
  <data>
    <type>transactionsReports</type>
    <tsgeneration>2021-03-23T16:04:33Z</tsgeneration>
    <status>4</status>
    <errors>[EXECUTINGFIRM][2008] Wrong Executing Firm, please fill with your LEI;[TRADINGDATETIME][4002] Date is too far in the past;[PRCECURRENCY][1002] Please do not fill, unexpected value;[WAIVERINDICATOR][1002] Please do not fill, unexpected value;[TRADEID][1002] Please do not fill, unexpected value</errors>
    <traderef>TRADEREFERENCEKKFP5097032189</traderef>
```

```
<executingfirm>549300V7S0SECYXD2130</executingfirm>
<origin>SATURN</origin>
<saturnuser>apiUser1</saturnuser>
<tradereport>1</tradereport>
<side>2</side>
<investmentfirmdirectiveindicator>1</investmentfirmdirectiveindicator>
<transmissionoforderindicator>1</transmissionoforderindicator>
<transmittingfirmidbuyer>549300FEEXEH0B3TS5U26</transmittingfirmidbuyer>
<transmittingfirmidseller>549300JLIJXBS0RLNL80</transmittingfirmidseller>
<derivativenotionalincreasedecrease>2</derivativenotionalincreasedecrease>
<upfrontpayment>852847.0000000</upfrontpayment>
<upfrontpaymentcurrency>JOD</upfrontpaymentcurrency>
<countrybranchmembership>CY</countrybranchmembership>
<complextradecomponentid>CMPLXTRDIDPBJF4155353308</complextradecomponentid>
<waiverindicator>1-2-3</waiverindicator>
<shortsellingindicator>1</shortsellingindicator>
<secfinancingtransactionindicator>1</secfinancingtransactionindicator>
<freetext1>White</freetext1>
<freetext2>Juliette</freetext2>
<freetext3>Bleu</freetext3>
<freetext4>Lamborghini</freetext4>
<freetext5>Amsterdam</freetext5>
<executionwithinfirm>EXECUTORKZSJ62549</executionwithinfirm>
<otcposttradeindicator>2-11</otcposttradeindicator>
<submittingentityid>549300RTMFHSNT6PX029</submittingentityid>
<venue>XMAL</venue>
<execwfirmlgotradingindicator>2</execwfirmlgotradingindicator>
<tradingcapacity1>3</tradingcapacity1>
<commodityderivativeindicator>0</commodityderivativeindicator>
<pricenotation>5</pricenotation>
<netamount>970072.19344</netamount>
<transactionreportingapaindicator>1</transactionreportingapaindicator>
<quantitycurrency>LRD</quantitycurrency>
<pricecurrency>GBX</pricecurrency>
<bypasscontrolflag>1</bypasscontrolflag>
<quantitynotation>2</quantitynotation>
<securityid>FRENX0164041</securityid>
<volume>1097735.05678</volume>
<tradeprice>607548.9406000000000000</tradeprice>
<tradeid>TRADINGVENUEKJUO71057082</tradeid>
<tradingdatetime>1381410981469300</tradingdatetime>
<isettlement>0</isettlement>
<instrumentidtype>1</instrumentidtype>
<acknowledge>NOT ACK</acknowledge>
<tsreceive>2021-03-23T16:04:33Z</tsreceive>
</data>
</ReturnObject>
```


1.2.6.3. Request with more than one filter (AND)

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>venue</name>
    <value>XWAR</value>
    <operator>LK</operator>
  </filterList>
  <filterList>
    <name>side</name>
    <value>1</value>
    <operator>EQ</operator>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>1</recordCount>
  <data>
    <type>transactionsReports</type>
    <tsgeneration>2021-03-23T16:04:33Z</tsgeneration>
    <status>4</status>
    <errors>[EXECUTINGFIRM][2008] Wrong Executing Firm, please fill with your
LEI;[TRADINGDATETIME][4002] Date is too far in the past;[PRICECURRENCY][1002]
Please do not fill, unexpected value;[WAIVERINDICATOR][1002] Please do not fill,
unexpected value;[TRADEID][1002] Please do not fill, unexpected value</errors>
    <traderef>TRADEREFERENCEUYH1664926410</traderef>
    <executingfirm>5493007A42HGLCKRPR61</executingfirm>
    <origin>SATURN</origin>
    <saturnuser>apiUser1</saturnuser>
    <tradereport>1</tradereport>
    <side>1</side>
    <investmentfirmdirectiveindicator>0</investmentfirmdirectiveindicator>
    <transmissionoforderindicator>1</transmissionoforderindicator>
    <transmittingfirmidbuyer>549300V7S0SECYXD2130</transmittingfirmidbuyer>
    <transmittingfirmidseller>549300BXEK8ERXFO7G21</transmittingfirmidseller>
    <derivativenotionalincreasedecrease>1</derivativenotionalincreasedecrease>
    <upfrontpayment>698975.0000000</upfrontpayment>
    <upfrontpaymentcurrency>XAF</upfrontpaymentcurrency>
    <countrybranchmembership>ID</countrybranchmembership>
    <complextradecomponentid>CMPLXTRDIDYAZ09926610589</complextradecomponentid>
    <waiverindicator>1-2-3</waiverindicator>
    <shortsellingindicator>2</shortsellingindicator>
    <secfinancingtransactionindicator>0</secfinancingtransactionindicator>
    <freetext1>Dufour</freetext1>
    <freetext2>Lissandro</freetext2>
    <freetext3>Bleu</freetext3>
    <freetext4>BMW</freetext4>
    <freetext5>Amsterdam</freetext5>
```

```
<executionwithinfirm>EXECUTORAANH81978</executionwithinfirm>
<otcposttradeindicator>2-11</otcposttradeindicator>
<submittingentityid>5493003SZ08DW3R34S38</submittingentityid>
<venue>XWAR</venue>
<execwfirmlgotradingindicator>2</execwfirmlgotradingindicator>
<tradingcapacity1>3</tradingcapacity1>
<commodityderivativeindicator>0</commodityderivativeindicator>
<pricenotation>3</pricenotation>
<netamount>995182.35347</netamount>
<transactionreportingapaindicator>1</transactionreportingapaindicator>
<pricecurrency>BHD</pricecurrency>
<bypasscontrolflag>1</bypasscontrolflag>
<quantitynotation>1</quantitynotation>
<securityid>EUBE00164052</securityid>
<volume>7150764.34630</volume>
<tradeprice>228462.050380000000000000</tradeprice>
<tradeid>TRADINGVENUEOULA883646012</tradeid>
<tradingdatetime>1382990328804300</tradingdatetime>
<isettlement>0</isettlement>
<instrumentidtype>1</instrumentidtype>
<acknowledge>NOT ACK</acknowledge>
<tsreceive>2021-03-23T16:04:33Z</tsreceive>
</data>
</ReturnObject>
```

1.2.7. UPLOAD FILE SERVICE : UPLOAD

This section contains different requests and responses for the upload service. (ARM)

Resource path: */SaturnWebServices/rest/files/upload*

1.2.7.1. Upload a good file

Request:

No request is needed, only a file as attachment.

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>1</recordCount>
  <data>
    <tid>2531</tid>
    <username>apiUser1</username>
    <msg/>
    <size>8789</size>
    <uploadedDate>1616519859000</uploadedDate>
    <fileName>test_3109.csv</fileName>
    <status>W</status>
  </data>
</ReturnObject>
```

1.2.7.2. Upload a bad file

Request:

No request is needed, only a file as attachment.

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>Unknown File Type! Maybe a mandatory field is missing</msg>
</ErrorObject>
```

1.2.7.3. Upload too many files

Request:

No request is needed, only a file as attachment.

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>Too many files</msg>
</ErrorObject>
```

1.2.8. GET UPLOADED FILE SERVICE : GETUPLOADEDFILES

This section contains different filters and responses for the getuploadedfiles service.

Resource path: /SaturnWebServices/rest/files/getuploadedfiles

1.2.8.1. Request with one filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>tid</name>
    <value>2530</value>
    <operator>EQ</operator>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>1</recordCount>
  <data>
    <tid>2530</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 3 transactions</msg>
```

```
<size>4478</size>
<uploadedDate>1616515546000</uploadedDate>
<fileName>test_ARM1_OK.csv</fileName>
<status>0</status>
</data>
</ReturnObject>
```

1.2.8.2. Request with OR filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <subFilterOR>
      <name>tid</name>
      <value>2530</value>
      <operator>EQ</operator>
    </subFilterOR>
    <subFilterOR>
      <name>tid</name>
      <value>2531</value>
      <operator>EQ</operator>
    </subFilterOR>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>2</recordCount>
  <data>
    <tid>2531</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 5 transactions</msg>
    <size>8789</size>
    <uploadedDate>1616519861000</uploadedDate>
    <fileName>test_3109.csv</fileName>
    <status>E</status>
  </data>
  <data>
    <tid>2530</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 3 transactions</msg>
    <size>4478</size>
    <uploadedDate>1616515546000</uploadedDate>
    <fileName>test_ARM1_OK.csv</fileName>
    <status>0</status>
  </data>
</ReturnObject>
```

1.2.8.3. Request with more than one filter (AND)

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>status</name>
    <value>0</value>
    <operator>EQ</operator>
  </filterList>
  <filterList>
    <name>uploadedDate</name>
    <value>2021-01-01</value>
    <operator>GT</operator>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>OK</msg>
  <recordCount>30</recordCount>
  <data>
    <tid>2530</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 3 transactions</msg>
    <size>4478</size>
    <uploadedDate>1616515546000</uploadedDate>
    <fileName>test_ARM1_OK.csv</fileName>
    <status>0</status>
  </data>
  <data>
    <tid>2529</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 9 transactions</msg>
    <size>8789</size>
    <uploadedDate>1616515473000</uploadedDate>
    <fileName>test_3109.csv</fileName>
    <status>0</status>
  </data>
  <data>
    <tid>2511</tid>
    <username>apiUser1</username>
    <msg>Succeed to insert, cancel or update 9 transactions</msg>
    <size>8789</size>
    <uploadedDate>1616428969000</uploadedDate>
    <fileName>test_3109.csv</fileName>
    <status>0</status>
  </data>
</ReturnObject>
```

1.2.9. GET INSTRUMENTS SERVICE : INSTRUMENTS/GET

This section contains different filters and responses for the instrument/get service. All other services used for referential retrieval works the same way. (LEI, MIC)

Resource path: /SaturnWebServices/rest/referentials/instruments/get

1.2.9.1. Request with one filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>isin</name>
    <value>AAE000173951</value>
    <operator>EQ</operator>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>1</recordCount>
  <data>
    <tid>32604685</tid>
    <mic>XLON</mic>
    <isin>AAE000173951</isin>
    <currency>USD</currency>
    <tick_size_denominator>1</tick_size_denominator>
    <tick_size_numerator>1</tick_size_numerator>
    <cfi>OSVTFR</cfi>
    <euronextcode>AAE000173951</euronextcode>
    <symbol_Index/>
    <sent_to_mdg>0</sent_to_mdg>
    <double_cap_volume>0</double_cap_volume>
    <volume_threshold>14444</volume_threshold>
    <tolerance>0</tolerance>
    <ideleted>0</ideleted>
  </data>
</ReturnObject>
```

1.2.9.2. Request with OR filter

Filters:

```
<filterAndSortObject>
  <filterList>
    <subFilterOR>
      <name>isin</name>
      <value>CH0024590272</value>
      <operator>EQ</operator>
    </subFilterOR>
  </filterList>
</filterAndSortObject>
```

```
        <name>cfi</name>
        <value>CEOIBU</value>
        <operator>EQ</operator>
    </subFilterOR>
</filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>success</msg>
  <recordCount>75</recordCount>
  <data>
    <tid>32588268</tid>
    <mic>XGAT</mic>
    <isin>CH0024590272</isin>
    <currency>EUR</currency>
    <tick_size_denominator>1</tick_size_denominator>
    <tick_size_numerator>1</tick_size_numerator>
    <cfi>ESVUFR</cfi>
    <symbol_Index/>
    <iliquidity>0</iliquidity>
    <adt>1755459.78000</adt>
    <lispretrade>200000</lispretrade>
    <sent_to_mdg>0</sent_to_mdg>
    <double_cap_volume>0</double_cap_volume>
    <tolerance>0</tolerance>
    <ideleted>0</ideleted>
  </data>
</ReturnObject>
```

1.2.9.3. Request with more than one filter (AND)

Filters:

```
<filterAndSortObject>
  <filterList>
    <name>isin</name>
    <value>CH0024590272</value>
    <operator>EQ</operator>
  </filterList>
  <filterList>
    <name>cfi</name>
    <value>CEOIBU</value>
    <operator>EQ</operator>
  </filterList>
</filterAndSortObject>
```

Response:

```
<ReturnObject>
  <code>200</code>
```

```
<msg>success</msg>
<recordCount>1</recordCount>
<data>
  <tid>3760261</tid>
  <mic>XTUC</mic>
  <isin>CH0024590272</isin>
  <currency>EUR</currency>
  <tick_size_denominator>1</tick_size_denominator>
  <tick_size_numerator>1</tick_size_numerator>
  <cfi>CEOIBU</cfi>
  <euronextcode>CH0024590272</euronextcode>
  <amr>XXXXXXXXXXXXXXXXXX</amr>
  <symbol_Index/>
  <iliquidity>0</iliquidity>
  <adt>1755459.78000</adt>
  <lispretrade>200000</lispretrade>
  <sent_to_mdg>0</sent_to_mdg>
  <double_cap_volume>0</double_cap_volume>
  <tolerance>0</tolerance>
  <ideleted>9</ideleted>
</data>
</ReturnObject>
```

1.2.10. QUOTES SUBMISSION SERVICE : QUOTES (APA PRE-TRADE)

This section contains different requests and responses for the quotes submission service.

Resource path: /SaturnWebServices/rest/quotes/submit

1.2.10.1. Submit quotes request (OK result)

Request:

```
<Quote>
<quotereport>1</quotereport>
<cmic>XEUE</cmic>
<side>1</side>
<price>77</price>
<currency>EUR</currency>
<liquidity>2</liquidity>
<quantity>100</quantity>
<securityid>EUNL00082137</securityid>
</Quote>
```

Response:

```
<ReturnObject>
  <code>200</code>
  <msg>submit successfull</msg>
  <recordCount>0</recordCount>
  <data/>
</ReturnObject>
```


1.2.10.2. Submit quotes request (KO result)

Request:

```
<Quote>
<quotereport>1</quotereport>
<cmic>XEUE</cmic>
<side>1</side>
<price>100</price>
<currency>EUR</currency>
<liquidity>2</liquidity>
<quantity>500</quantity>
<securityid>AAAA</securityid>
</Quote>
```

Response:

```
<ErrorObject>
  <code>600</code>
  <msg>[securityid] AAA Field should be a text string in the size range of 12
characters consisting of 2 capital Latin letters + 9 capital Latin letters Or
Numbers + 1 number</msg>
</ErrorObject>
```

DOCUMENT HISTORY

Version	Date	Author	Changes
1.0	23/03/2021	MME	New document : <ul style="list-style-type: none">▪ Adding Request Header and Request Body.▪ Under the Request Body section, services usage is described followed by filter/request examples and response examples.