SUBSCRIPTION SERVICE INTRODUCTION GUIDE FOR DATA CONSUMERS

Version 0.4

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1. Subscribing to a data feed

Data consumer can subscribe to data feed: the platform will them push updates.

Note: You web service needs to use SOAP 12 standard and not 11.

The first step is to create an account on the web portal. Then send an email to **transparency@entsoe.eu** titled "Data Consumer subscription rights request" containing the user mane for the previously created account.

Once the access rights have been granted you'll then be able to see on the data items portal a "Subscribe" link as shown below.

Before being able to actually subscribe to a data item update, you first have to go to the subscription configuration menu "your@email.com->"My Subscriptions channels" and define a Web service channel or an ECP channel.
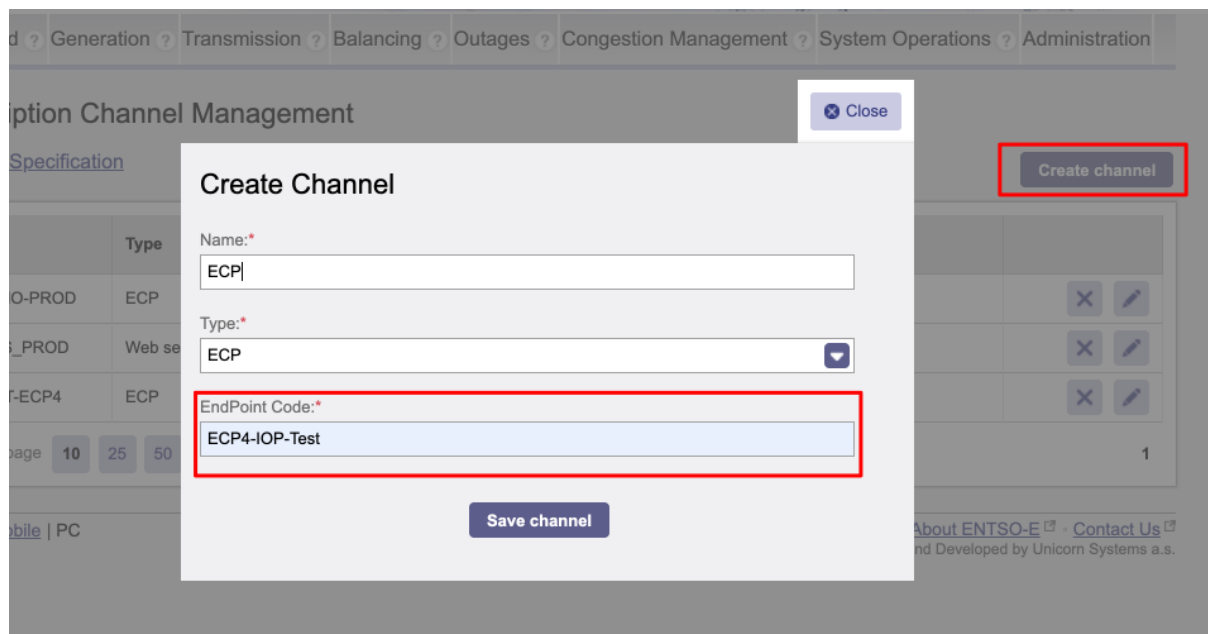
You can see the details by clicking on "My subscriptions":
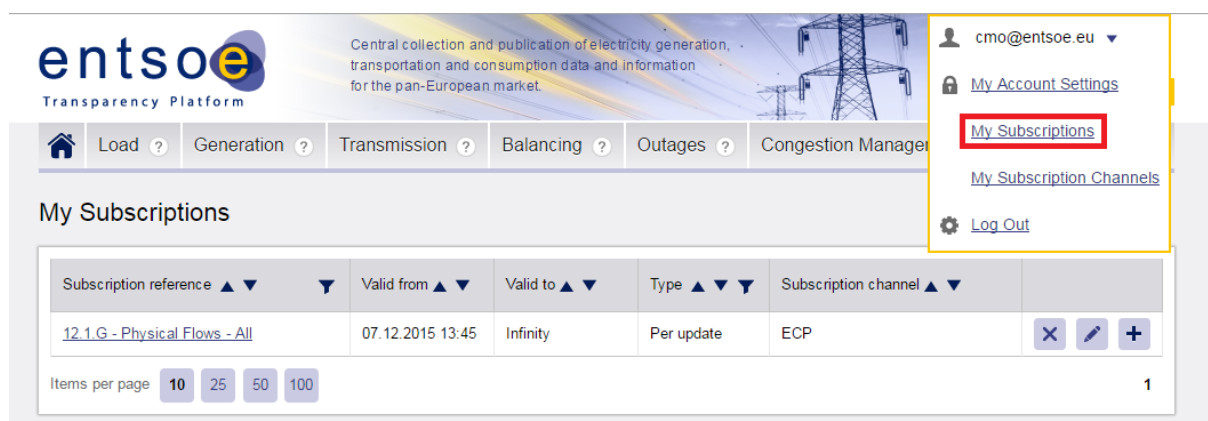
The platform will then be able to push the data to your endpoint using a web service call to the URL previously configured. Below a sample web service call:

Export requests (based on XML files in form of StatusRequest_MarketDocument) need to be delivered to the platform through one of the following integration channels:

> ECP

> Web Services

Submitted Requests are processed asynchronously; found data are delivered using the same channel as the one used for submission of the original Request. See the summary below:

> ECP

– Request in form of XML sent through ECP

– Response in form of XML delivered back to user´s ECP original requester' EndPoint.

> Web Services

– User call WS Put method with the StatusRequest_MarketDocument in their message payload

– It is possible to list incoming messages using ws list method and then call ws get method to download exports. Exported files are delivered in compressed element of incoming payload.

Integration Channels Monitoring contains the overview of monitored Integration Channels (ECP, Web services, FTPS, Web API). The channels are monitored by instance – a specific combination of user, channel type and purpose.

Organization	User	Purpose	Channel type	Last activity	Data volume [MB]	File Count	Threshold [h]	Monitoring	State	
N/A	dubbu.p@g...	Subscription	Web Service	N/A	0.00	0	24.0	Enabled	Unknown	✏

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User can use the edit Icon to change the Weight Constant, Threshold, Monitoring period for the respective subscription channels.

Weight Constant (must be positive number or 0)

- The significance of the last measured period between two subscription uses in Threshold calculation.

Threshold (mush be higher the 0.1)

- The expected maximal period length in hours between subsequent calls for subscriptions

Monitoring period

- The monitoring period is a global settings value, it represents the length of one monitoring cycle in hours.

A job runs for each monitoring period (which also equals to the minimal threshold value). Each channel which is enabled for monitoring is checked against its threshold.

- Channels not used for the duration of the configured threshold period is marked "Unknown" as not yet available for reporting data
- Channels inactive for longer than two configured threshold periods are marked as in-active and the status is of the channel reported through the Message board to the system administrator (role Administrators) and email sent to the subscriber about inactive status

2. Requests through ECP

Prerequisites

Download and Install ECP 4.0 following the Installation Guide under Link

https://www.entsoe.eu/data/ecp/

Registration keystores can be downloaded Registration Keystore (26/07/2022)

For any questions related to ECP installation and process for acquiring component access write to us at ecp@unicorn.com.

3. Request / Exports through Web Service

Please note, Webservices Endpoint where subscribed data is sent to is the responsibility of Data subscriber and ENTSOE is not responsible for Data providers location implementations.

Refer to the sample Data Feed Project repository for your reference, https://github.com/Laxmikanth-p/Subscriptions.

For any questions related to access and issues with connectivity and data exchange should be sent to transperency@entsoe.eu.

4. Response with Data

The response format is defined by the download scenarios described in the **Implementation guides**, which are an integral part of the transparency platform's **Manual of procedures**.

Also in the response, time is always expressed in UTC. System returns both partially and exactly matching data. Amount of returned data depends on regulation article. For example, a query for one day of a weekly forecast will always return a whole week. Likewise, if the requested time interval in a query for a day-ahead forecast covers the last hours of one day and the first hours of the following day, the response will contain complete data for both days.

For the following regulation articles the query response will contain data for a whole day (or a multiple of days, depending on the length of the requested time interval): 6.1.b, 12.1.b, 12.1.d, 12.1.f, 14.1.c and 14.1.d. For the following regulation articles, the query response will contain data for the requested MTU or BTU period(s): 6.1.a, 12.1.g, 16.1.a, 16.1.b&c, 17.1.d-h and 17.1.j.

When querying for daily, weekly, monthly or yearly data, the time interval in the response corresponds to the day in the timezone for which the transparency platform publishes the data. For example: A query for article 6.1.b Day-ahead load forecast for April 6 2016 in Czech republic will yield a response with a time interval starting at 2016-04-05T22:00Z and ending at 2016-04-06T22:00Z. In general, this is the timezone in which the area or border is physically located, however for articles 12.1.d Day-ahead Prices and 12.1.e Net Positions there are exceptions to this rule due to regional arrangements for capacity allocations.

Curve type in response is A01 for all data items except Production/Generation unit outages, where A03 is used.

5. Acknowledgement

Users should ensure to return the Acknowledgement_MarketDocument compliant with a communication standard IEC 62325-504. **Your channel will be disabled after 100 successfully attempts if the response Acknowledgement message is not issued to Transparency platform from your Web services endpoint**.

The XSD is publicly available and can be downloaded from here

▼ IEC 62325-451-1: Acknowledgement Business Process And Contextual Model For CIM European Market.

International Standard Ed2 since 2017

Implementation Guide Acknowledgement business process and contextual model for CIM European market.

XSD iec 62325-451-1

Schema Acknowledgement

Archive Acknowledgement document (EAD)

Sample SOAP Response Message:

```xml
<?xml version = "1.0"?>
<SOAP-ENV:Envelope
    xmlns:SOAP-ENV = "http://www.w3.org/2003/05/soap-envelope"
SOAP-ENV:encodingStyle = "http://www.w3.org/2001/12/soap-encoding">
    <SOAP-ENV:Body>
        <msg:ResponseMessage
            xmlns:msg="http://iec.ch/TC57/2011/schema/message">
            <msg:Header>
                <msg:Verb>create</msg:Verb>
                <msg:Noun>ETP-DOCUMENT</msg:Noun>
                <msg:Context>PRODUCTION</msg:Context>
                <msg:AckRequired>true</msg:AckRequired>
                <Signature:Signature
                    xmlns:Signature="http://www.w3.org/2000/09/xmldsig#">
                    <Signature:SignedInfo>
                        <Signature:CanonicalizationMethod
Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                        <Signature:SignatureMethod
Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
                        <Signature:Reference URI="">
                            <Signature:Transforms>
                                <Signature:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
                                <Signature:Transform Algorithm="http://www.w3.org/TR/2001/REC-
xml-c14n-20010315"/>
                            </Signature:Transforms>
                            <Signature:DigestMethod
Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>

<Signature:DigestValue>fJnC574aFjTMWaNIdYOYeYmRKiU=</Signature:DigestValue>
                        </Signature:Reference>
                    </Signature:SignedInfo>

<Signature:SignatureValue>crfDcfTTmw53YWSiCQLlao3RsO+BCr…<Signature:SignatureValue>
                    <Signature:KeyInfo>

<Signature:X509Data><Signature:X509IssuerSerial><Signature:X509IssuerName>EMAILAD…</Signature:X509
9IssuerName><Signature:X509SerialNumber>3612034620298…</Signature:X509SerialNumber><Signature:X509
9IssuerSerial><Signature:X509SubjectName>1.2.840.113549.1.9.1=#161270626c7564736b7940676d61696c2e
636f6d,CN=pb,OU=uc,O=unicorn,L=HK,ST=Czech republic,C=CS</Signature:X509SubjectName>

<Signature:X509Certificate>MIID2TCCAsGgAwIBAgIJAK5y2eG8CXxUMA0=…</Signature:X509Certificate>
                        </Signature:X509Data>
                    </Signature:KeyInfo>
                </Signature:Signature>
            </msg:Header>
            <msg:Reply>
                <msg:Result>OK</msg:Result>
            </msg:Reply>
        </msg:ResponseMessage>
    </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

6. FAQ on Subscriptions:

1. What If the Subscriptions channel is not working?
   - Platform retry at least 10 time before inactivating the your channel . The subscribed data for an inactive channel will be held for 2 days and the subsequently archives the data.
   - A message is delivered which should appear in your registered user id dashboard about the inactive subscription channel, so that the user can take respective action. Apprently, Plaform administrator can also check the status of the inactive channel. In case the channel is active and data is not sent, please send us request to transparancy@entsoe.eu with the your registered user login and WS endpoint URL.

2. List of Certification Authority is supported by Transparency Platform Subscription Process?
   - In order to ensure secure access to data consumer's the Endpoint URL configured against Web Service channel via HTTPS protocol, the endpoint should be comply with listed default Certification Authority supported by Transparency platform.
   - America Online Root Certification Authority
   - Japanese Government/OU=ApplicationCA
   - Atos TrustedRoot 2011/O=Atos/C=DE
   - Greater Manchester/L=Salford/O=COMODO CA Limited/CN=COMODO Certification Authority
   - AC Camerfirma SA CIF A82743287/OU=http://www.chambersign.org/CN=Chambers of Commerce Root
   - AC Camerfirma SA CIF A82743287/OU=http://www.chambersign.org/CN=Global Chambersign Root
   - Certplus/CN=Class 2 Primary CA
   - Unizeto Sp. z o.o./CN=Certum CA
   - Unizeto Technologies S.A./OU=Certum Certification Authority/CN=Certum Trusted Network CA
   - Madrid (see current address at www.camerfirma.com/address)/serialNumber=A82743287/O=AC Camerfirma S.A./CN=Chambers of Commerce Root - 2008
   - China Internet Network Information Center/CN=China Internet Network Information Center EV Certificates Root
   - ComSign CA/O=ComSign/C=IL
   - Cybertrust, Inc/CN=Cybertrust Global Root
   - US/O=Digital Signature Trust/OU=DST ACES/CN=DST ACES CA X6
   - DE/O=D-Trust GmbH/CN=D-TRUST Root Class 3 CA 2 2009
   - Digital Signature Trust Co./CN=DST Root CA X3
   - Deutsche Telekom AG/OU=T-TeleSec Trust Center/CN=Deutsche Telekom Root CA 2
   - DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root CA
   - Digital Signature Trust Co./OU=DSTCA E1
   - Elektronik Bilgi Guvenligi A.S./CN=e-Guven Kok Elektronik Sertifika Hizmet Saglayicisi
   - E-Tugra Certification Authority

- EBG Elektronik Sertifika Hizmet Sa\xC4\x9Flay\xC4\xB1c\xC4\xB1s\xC4\xB1/O=EBG Bili\xC5\x9Fim Teknolojileri ve Hizmetleri A.\xC5\x9E./C=TR
- Agencia Catalana de Certificacio (NIF Q-0801176-I)/OU=Serveis Publics de Certificacio/OU=Vegeu https://www.catcert.net/verarrel (c)
- AS Sertifitseerimiskeskus/CN=EE Certification Centre Root CA/emailAddress=pki@sk.ee
- Entrust.net Certification Authority (2048)
- Equifax Secure Certificate Authority
- Equifax Secure Global eBusiness CA-1
- Equifax Secure eBusiness CA-1
- DigiNotar/CN=DigiNotar Cyber CA/emailAddress=info@diginotar.nl
- DigiNotar/CN=DigiNotar Cyber CA

APPENDIX: Elements of Request

Element	Description
mRID	Each Status Request Document has to use a new unique mRID. Please note, request with already processed mRID's will be rejected by the platform.
type	Fixed value A59 (i.e. Status request for a status within a process, taken from DocumentTypeList of ENTSO-E Code List)
sender_MarketParticipant.mRID	Energy Identification Code (EIC code) of sender´s Organization which is registered in ENTSO-E Transparency platform. If the sender of a Request is not related to any Organization, the EIC code is not relevant. However the sender is mandatory field and therefore fake value with 16 characters has to be used (e.g. 1234567890123456).
sender_MarketParticipant.marketRole	Sender role is not relevant for the functionality, however it is mandatory field and therefore certain value shall be provided. One of values in RoleTypeList of ENTSO-E Code List should be used, following codes are typical A01 (Trade responsible party) A04 (System Operator) A07 (Transmission capacity allocation) A13 (Consumer) A29 (Capacity Trader) A33 (Information Receiver)
receiver_MarketParticipant.mRID	Energy Identification Code (EIC code) of receiver´s Organization. In this case it is always Transparency platform and therefore organization ENTSO-E. The code is therefore 10X1001A1001A450 (ENTSO-E, i.e. European Network of Transmission System Operators for Electricity)
receiver_MarketParticipant.marketRole	Receiver role is always fixed because ENTSO-E Transparency platform still keeps a single code A32 (Market information aggregator)

Attribute Instance Component class	This class contains two elements (attribute and attributeValue) and can be present many times within single StatusRequest_MarketDocument. The number of occurrences depends on number of attributes that are required for a search (See the attached Implementation Guide for a list of those attributes).
attribute	A name of an attribute which is part of metadata used for search of data. See the attached Implementation Guide for a name of attributes.
attributeValue	A value corresponding to attribute name present in the same instance of AttributeInstanceComponent class. Value is used for search of data.

References

1. **ENTSO-E Transparency platform**

   – [Implementation Guides](#)
   – [Manual of Procedures](#)

2. **EC 62325-451-5 Problem statement and status request business process, contextual and assembly models for European market**

Available at IEC stores: https://webstore.iec.ch/publication/21818

3. **REE WS Connection Kit for IEC 62325-504**

TSO REE has developed the application "Connection Kit" that implements an IEC 62325-504 web service client. This application is an open source project that can be accessed from the bitbucket repository: https://bitbucket.org/smree. Installation files as well as user guides and other documents can be downloaded at: https://bitbucket.org/smree/eemws-core/downloads

REE support line at soportesios@ree.es can be consulted for any technical queries or issues on installation procedure and further configuration for the Connection Toolkit.