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Test and Qualification Plan Allocation 2.0

Tranche 2

Versioning

Version	Date	Description
0.1	4 May 2022	Initial version
0.2	9 May 2022	Adjusted version after first internal review
0.5	16 June 2022	Review comments processed
0.9	4 July 2022	Review comments processed
1.0	11 July 2022	0.9 version (Draft) converted to 1.0 version (Final)
1.1	25 October 2022	- Adapted: paragraph 4.2.1 Qualification by BRP: description method of semi-autonomous qualification BRP - Added: paragraph 4.2.2 Method and criteria BRP qualification - Added paragraph 4.2.3 Organize date & time BRP qualification

Referenced documents

No.	Description	Date
1	BRS Allocatiegegevens Elektriciteit v1.0	16-12-2021
2	BS Exchange allocation data electricity v 1.0	16-12-2021
3	Technical Guide - Measurements & Allocations Documents v1.7	24-05-2022
4	Test and Qualification Guide v1.4	04-07-2022
5		

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1. Introduction

1.1 Purpose of this document

The purpose of this Testing and Qualification Plan is to inform all market parties involved about the approach, resources and activities related to testing and qualifying the messages exchanged with TenneT's MMChub in the context of Allocation 2.0 Tranche 2.

This plan also provides insight into the expectations that market parties may have with regard to support from TenneT.

1.2 Context

In order to use the electronic messaging system, as described in the Grid Code section 13.33, market parties must be qualified by TenneT. All relevant market parties have already done so for the new XML messages belonging to Allocation 2.0 Tranche 1 and following this the market parties BRP, DSO, FSO¹ and TSO will also have to do so for the XML messages which will be implemented at the Go-live of Tranche 2 and exchanged via the MMChub.

Qualification of these messages is in addition to the qualification already done for Tranche 1.

See Appendix 1 for an overview of the relevant messages belonging to Tranche 2.

1.3 Impact of the changes

With Tranche 2, the following changes will be implemented:

- MSCONS² and E31 are replaced by messages as specified in Appendix 1.
- Message routing changes from mail via CPS to web service based routing via the MMChub.
- Messages have been adjusted in content due to process changes from IC273 (temporary solution allocation profile-based connections) and IC276 (Allocation of GV-TMT and KV-SMA per energy facility).

1.4 Objective

In addition to facilitating testing, the ultimate goal of the testing and qualification process is to test whether market parties have sufficient knowledge and skills to use and exchange the electronic messaging correctly. In concrete terms, this means that it must be demonstrated that:

- A market player is able to send syntactically and semantically correct messages.
- A market player is able to receive, check and respond to messages with the appropriate response.

Before, during and after qualification, market participants, whether organized via the BAS GAT or not, can continue to use the facilities offered.

¹ FSO = Facilitating System Operator: the term used by TenneT to refer to the operator of a closed distribution system (in Dutch: gesloten distributie systeem (GDS)).

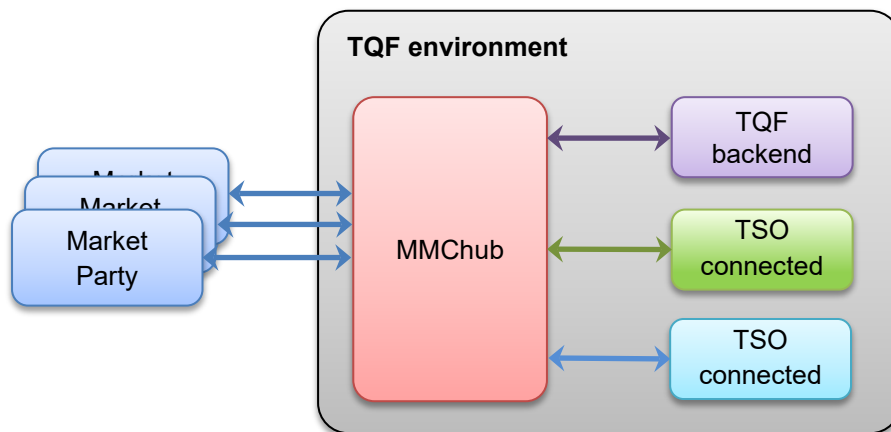
² This concerns only the MSCONS message sent by the system operator (DSO/TSO) to BRP

2. Test and qualification process

2.1 In scope

Within the scope of the testing and qualification process:

- Testing and qualification of the messages as described in Business Service "Supply aggregated volumes for electricity" and as shown in Appendix 1.
- Provision of the TQF (Test & Qualification Facility) environment for:
 - Testing against a simulated market role of the TQF backend (see section 3.1)
 - Testing with connected market parties and/or connected system of the TSO³ (see section 3.2)
 - Qualification (see section 4)
- Support by TenneT in testing against the TQF backend, TSO connected systems and qualification, as well as technical support for the other tests mentioned in paragraph 3.4.
- Reporting on the progress of the qualification of the market players to MFF/BAS.



2.2 Out of scope

Out the scope of this testing and qualification process:

- Technical SoapReply/Response and SoapRequest message exchange with the MMChub.
- Coordination and execution of the integration tests RNB AT, leading group ('kopgroep') tests, BAS GAT and other tests with affiliated market parties other than TSO.

2.3 Deliverables

The following documents will be delivered for the test and qualification process:

- Test and Qualification Plan Allocation 2.0 (this document)
- Qualification scenarios (Appendix 2 of this document)
- Template Qualification Report (Appendix 3 of this document)
- Test and qualification guide (separate document)

³ These are test or acceptance environments of the backend systems of the TSO

2.4 Preconditions

The following preconditions apply to the test and qualification process:

- The documentation, as mentioned under "Referenced documents" (page 2), is final and adopted.
- The market party has already qualified for the message exchange of Tranche 1.
- The market party is expected to use an production like automated system
- The qualification scenarios for tranche 2 for each market role are known (see appendix 2).
- The market party has connectivity with TQF (see Test and Qualification guide).
- The TQF environment is set up for:
 - Syntactical checks of the messages (xsd validation)
 - Semantical checks of the Notifications, with the exception of checks on master data and/or reference data other than the sector calendar, both on behalf of market role BRP and TSO
 - Testing and checking the Acknowledgement based on a message sent by TQF.

2.5 Planning

The schedule for the testing and qualification process is as follows:

Topic	Planning
EDSN/RNB integration tests	1 August to 30 September 2022
Semantic testing for all market parties	From 1 September 2022
Qualification individual market parties	1 October to 15 December 2022
RNB AT Chain testing	31 October to 23 December 2022
Leading group ('kopgroep) tests	5 December to 23 December 2022
BAS User Acceptance Test	2 January to 17 February 2023
Dryrun 1 and Dryrun 2 (prior to Go-live)	N.a.

2.6 Communication

Questions about connectivity and substantive questions relating to testing and qualification can be send to TenneT at allocatie2@tennet.eu. The qualification reports can also be sent to this address.

Questions about the process documentation, such as the BRS and Business Service, should be addressed to BAS.

3. Testing

3.1 Testing against simulated market role

A market participant can test autonomously with the TQF backend by:

- Send messages as "sender" to a simulated market role.
The TQF backend will check the messages against the controls relevant for the particular simulated market role (and implemented in the TQF backend at that time).
- As "receiver" by sending messages by means of the TQF backend, which must be replied to with an Acknowledgement that will then be checked by the TQF backend.

3.2 Testing with connected market parties

When two market parties want to exchange messages, this can and may be done via the TQF environment, provided that:

- The market parties concerned have jointly agreed on this.
- These tests do not affect the other tests and qualifications.

3.3 Testing with TSO connected systems

Similar to 'testing with connected market parties', but in this case one of the connected market parties is the TSO. This can be either the connected system through which allocation messages are sent or the system through which these messages are received.

3.4 Other tests

In addition to the above-mentioned tests as mentioned in paragraphs 3.1 to 3.3, the TQF environment is also available for other tests as mentioned in paragraph 2.5, including the RNB Acceptance test, leading group tests and BAS GAT.

4. Qualification

4.1 General

A market party must qualify for each message (based on ContentType) that it must be able to send from its market role to other market role(s) as mentioned in the overview in Appendix 1.

Also, a market party must be able to receive and process any message (based on ContentType) that it expects based on its market role. The ability to receive and process Notifications is implicitly tested by the qualification of Acknowledgements.

A market party performs the qualification per market role and will, depending on the ContentType, have to perform one or more qualification scenarios in accordance with Appendix 2. The qualification is only completed once all qualification scenarios relevant to the market role have been completed.

4.2 Qualification procedure

4.2.1 Qualification by BRP

The BRP must qualify for all ContentTypes (of the Acknowledgements), regardless of whether or not the BRP has allocation points of all allocation groups in its portfolio.

See Appendix 2 for the total overview of the qualification scenarios. Scenarios 16 to 28 are for the BRP.

The BRP can perform the qualification completely autonomously in TQF. For this purpose, functionality will be delivered which guides the BRP step by step through the process per scenario. When specific data is required for the message to be sent by TQF (e.g. EAN18 of the network area or message period), the BRP can enter this data during the execution of the scenario, after which TQF sends out a Notification with this data. The BRP must respond with the appropriate Acknowledgement. TQF will check this Acknowledgement for syntax, semantics and content.

In contrast to Tranche 1, error situations are now also tested which the BRP should answer with the correct rejection.

Examples of error situations are:

- Message period in the future
- Message period longer than one calendar day
- Time series with incorrect number of positions
- Missing time series for offtake or feed-in
- Negative values for offtake or feed-in
- Non-valid EAN18 from Grid Area

Which error situation will occur in which scenario (Appendix 2, scenarios 17, 21, 24 and 28) is not described in this test and qualification plan.

It is also not described whether and in which scenario the optional CorrelationID is included in the BusinessDocumentHeader.

4.2.2 Working method and assessment criteria qualification BRP

During qualification, the BRP will be tested with 13 of the available 33 test scenarios in TQF.

- All 13 scenarios must be successfully completed before a BRP successfully qualifies for Tranche 2. Evidence is as follows:
 - BRP should forward the overview with the 13 successful CorrelationIDs to TenneT (see template Annex 3);
 - A TenneT process specialist will feedback to BRP by e-mail whether the qualification has been successfully completed, unless the checks warrant further investigation, in which case further coordination with BRP will follow
- A BRP should respond correctly and automatically within 5minutes to all 13 test scenarios by means of an ack message.
- In case of no timely Ack feedback from BRP, in coordination with TenneT, the relevant test scenario can be restarted
- If during the qualification 3 times there is no correct or late (>5min) response, the qualification process will be stopped and TenneT's Process Specialist will step in and consult with BRP on necessary adjustments before a new qualification run can be scheduled with other test scenarios as well.
- If the qualification is completed, where there are 1 or 2 errors, the following happens:
 - Feedback to BRP with request to resolve errors
 - After errors are resolved, this is reported by BRP to allocatie2@tennet.eu and the relevant test scenario is re-triggered and reviewed.
 - A TenneT process specialist reports back to BRP whether the qualification has been successfully completed, unless the sample warrants further investigation, in which case coordination with BRP follows

4.2.3 Organize date & time BRP qualification

BRP must indicate a request for qualification (by e-mail to allocatie2@tennet.eu) and also state:

- The desired qualification execution date and time (1-hour window, in which TenneT is also available for support)
- Supply required and desired (master) data that TenneT uses for the messages to be sent out to BRP
 - For N101: EAN18 Allocation point
 - For N131: EAN18 Allocation point
 - For N141: EAN18 Allocation point
 - For N102: EAN18 Grid area + EAN13 Supplier
 - For N111: EAN18 Grid area + EAN13 Supplier
 - For N121: EAN18 Grid area + EAN13 Supplier
 - For N132: EAN18 Grid area + EAN13 Supplier
 - For N142: EAN18 Grid area + EAN13 Supplier
 - For N151: EAN18 Grid area

4.2.4 Qualification by DSO, FSO and TSO

Network Operators must qualify the ContentTypes (of the Notifications), according to the Message Overview in Attachment 1. This is automatically fulfilled by running the relevant qualification scenarios as described in Attachment 2. Scenarios 1 to 14 are for the DSO. Scenarios 1 to 4, 6, 7, 11 and 15 are for the FSO and TSO.

The messages associated with these scenarios are sent by the system operators to TQF. Whether these messages are sent to the simulated market role or to the TSO's connected system is decided by each

individual network operator. The same applies to the (master) data to be used in the messages.

In addition to the semantic checks by TQF, or a connected system and/or Process Specialist, the content of the messages will also be assessed to ensure that they correspond to the expectation that fits the scenario.

4.3 Qualification report

When the market party has successfully completed all scenarios relevant to it, the market party immediately sends the Qualification Report to allocatie2@tennet.eu. In the Qualification Report, the CorrelationID of the message sent for the scenario concerned is filled in for each scenario.

Within two working days of receipt, TenneT assesses the Qualification Report and the market party receives feedback on the result.

See Appendix 3 for the template of the Qualification Report.

Appendix 1: Message overview

The overview below shows which ContentType must be able to be sent from market role to market role.

Message	ContentType Notification & Request	Process TypeID	Sender				Receiver			
			BRP	DSO	FSO	TSO	BRP	DSO	FSO	TSO
Daily report "allocation data per individual allocation point TMT"	ALLOCATION_SERIES_NOTIFICATION_N101	N101		x	x	x	x			x
	ACK_ALLOCATION_SERIES_NOTIFICATION_N101		x			x		x	x	x
Daily report "allocation data per individual allocation point NVL"	ALLOCATION_SERIES_NOTIFICATION_N131	N131		x	x	x	x			
	ACK_ALLOCATION_SERIES_NOTIFICATION_N131		x					x	x	x
Daily report "allocation data per individual allocation point DIM"	ALLOCATION_SERIES_NOTIFICATION_N141	N141		x			x			
	ACK_ALLOCATION_SERIES_NOTIFICATION_N141		x					x		
Daily report "aggregated allocation data allocation points TMT"	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102	N102		x	x	x	x			x
	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102		x			x		x	x	x
Daily report "aggregate allocation data for SMA allocation points".	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N111	N111		x			x			x
	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N111		x			x		x		
Daily report "aggregated allocation data allocation points PRF"	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121	N121		x			x			x
	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121		x			x		x		
Daily report "aggregated allocation data allocation points NVL"	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N132	N132		x	x	x	x			x
	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N132		x			x		x	x	x
Daily report "aggregated allocation data allocation points DIM"	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N142	N142		x			x			x
	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N142		x			x		x		
Daily report "Residual volume Correction Factor and Profile fractions per grid area".	ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	N151		x	x	x	x			
	ACK_ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151			x						x
			x					x	x	x
						x		x		

Appendix 2: Qualification scenarios

Scenario	ContentType Notification & Request	Description	Qualifying Party			
			BRP	DSO	FSO	TSO
1	ALLOCATION_SERIES_NOTIFICATION_N101	Message to TSO for an allocation point over D-1, for which the MV has provided measured and valid measurement data		x	x	x
2	ALLOCATION_SERIES_NOTIFICATION_N101	Message to TSO for an allocation point about N-5, for which the MV did not provide measurement data		x	x	x
3	ALLOCATION_SERIES_NOTIFICATION_N101	Message to TSO for an allocation point about the last change to summer or winter time ^{*)}		x	x	x
4	ALLOCATION_SERIES_NOTIFICATION_N131	Message to BRP for a grid loss connection		x	x	x
5	ALLOCATION_SERIES_NOTIFICATION_N141	Message to BRP for a dimensioned connection		x		
6	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102	Message to TSO for an aggregation of allocation group TMT		x	x	x
7	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102	Message to BRP for an aggregation of allocation group TMT		x	x	x
8	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N111	Message to TSO for an aggregation of allocation group SMA		x		
9	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121	Message to TSO for an aggregation of allocation group PRF for all profile categories		x		
10	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121	Message to TSO for an aggregation of allocation group PRF for a grid area in which not all profile categories are active		x		
11	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N132	Message to TSO for an aggregation of allocation group NVL		x	x	x
12	AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N142	Message to TSO for an aggregation of allocation group DIM		x		
13	ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	Message to TSO with RCF and standard profile fractions for all profile categories		x		
14	ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	Message to TSO with RCF and dynamic profile fractions, for which a fallback was partly used		x		
15	ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	Message to BRP with RCF, without profile fractions			x	x
16	ACK_ALLOCATION_SERIES_NOTIFICATION_N101	Response to a correct message for an allocation point TMT	x			
17	ACK_ALLOCATION_SERIES_NOTIFICATION_N101	Response to an erroneous message for an allocation point TMT	x			
18	ACK_ALLOCATION_SERIES_NOTIFICATION_N131	Response to a correct message for an allocation point NVL	x			
19	ACK_ALLOCATION_SERIES_NOTIFICATION_N141	Response to a correct message for an allocation point DIM	x			
20	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102	Response to correct message with aggregated allocation data for allocation group TMT	x			
21	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N102	Response to erroneous message with aggregated allocation data for allocation group TMT	x			
22	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N111	Response to correct message with aggregated allocation data for allocation group SMA	x			
23	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121	Response to correct message with aggregated allocation data for allocation group PRF	x			
24	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N121	Response to erroneous message with aggregated allocation data for allocation group PRF	x			
25	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N132	Response to correct message with aggregated allocation data for allocation group NVL	x			
26	ACK_AGGREGATED_ALLOCATION_SERIES_NOTIFICATION_N142	Response to correct message with aggregated allocation data for allocation group DIM	x			
27	ACK_ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	Response to a correct message with RCF and profile fractions	x			
28	ACK_ALLOCATION_FACTOR_SERIES_NOTIFICATION_N151	Response to erroneous message with RCF and profile fractions	x			

*) The fact that this message may be rejected with code 763 (Allocation data day message is delivered too late) is not relevant for this scenario

Appendix 3: Qualification report

Market party:

EAN13:

Market role: (BRP, DSO, FSO or TSO)

Enter below the CorrelationID (from the SOAP-header) corresponding to the scenario in question

Scenario ⁴				CorrelationID
BRP	DSO	FSO	TSO	
16	1	1	1	
17	2	2	2	
18	3	3	3	
19	4	4	4	
20	5			
21	6	6	6	
22	7	7	7	
23	8			
24	9			
25	10			
26	11	11	11	
27	12			
28	13			
	14			
		15	15	

⁴ The table is generic for all market roles. There is no logic and/or dependency between the numbers in the table (i.e. no matching of numbers).