

Standard vetting interoperability test (SV-IOP)

2024 Regional Coordination Processes Data Exchange
Specification

SOC approved | 14 February 2024

TABLE OF CONTENTS

Brief overview	3
Registration	4
Benefits for participants.....	5
Estimated efforts.....	5
Planning.....	6
Annex A: General information on interoperability tests.....	9

BRIEF OVERVIEW

Standard vetting interoperability tests (SV-IOP) are an essential part for ensuring that data exchange standards and specifications fit the purpose of business requirements and to enable applications to be interoperable. Additionally, interoperability test support early detection of errors, bugs, or issues, fostering cost reduction and improved quality.

ENTSO-E agreed to organise yearly SV-IOP aiming at facilitating the standardisation process of Regional Coordination Processes (RCP) related data exchange and its subsequent implementation in the business processes. This directly reduces software vendors'¹ efforts to implement the standard and contributes to the utilities' (e.g., TSOs, RCCs, DSOs, etc.) comprehension of the tools' capabilities.

In the Regional Coordination Processes Data Exchange Specification (RCP DES) and in the 2024 SV-IOP edition, ENTSO-E focuses on the necessary data exchanges supporting the Coordinated Security Analysis (CSA) business process as defined in the EU Regulation ([EU COM 2017/1485](#)). This is achieved using the ENTSO-E Network Code (NC) profiles², which extend CGMES³ defined in the IEC 61970-600-1 and IEC 61970-600-2 standards.

The Coordinated Capacity Calculation (CCC), Outage Planning Coordination (OPC) and Short-Term Adequacy (STA) business processes will be covered in future versions of the RCP DES and addressed in upcoming SV-IOPs.

The 2024 SV-IOP will verify and validate the RCP DES and NC Profiles through the facilitation of their implementation engaging utilities (i.e., TSOs, conformity labs, standardisation bodies, and vendors). The high-level scope of SV-IOP on RCP DES includes:

- Vetting RCP Data Exchange Specification
- Validating the test use cases and test configurations (using both fictitious data and realistic data). The deliverables produced by drafting teams on RCP Data Exchange Specification will be used.
- Focus on NC profiles v2.2 and v2.3.
- Clarification on NC profiles, test use cases and configurations
- Transition between different CGMES and NC profiles versions. Execute tests to verify the linkage with grid models exchanged using CGMES set of profiles.

It is planned that the SV-IOP takes place in Brussels in the second week of July 2024 (3-5 days). The definitive date will be announced after the kick-off call on the 12th of March at 16:30 ([link](#) to register)

¹ Vendors should be understood as commercial product vendor, open-source implementers, and TSOs' internal implementers.

² Visit the [CGMES Library/Network Code profiles](#).

³ Common Grid Model Exchange Standard (2021)

REGISTRATION

Participants need to fill the [online form](#) by 7 March 2024 by the end of the day. This will register them to the kick-off call on the 12th of March at 16:30 PM (CET, Brussels time), where ENTSO-E will share more details on the SV-IOP organisation.

Their participation on the online meetings between March and June and the physical test event on the week of the second week of July 2024 in Brussels (at ENTSO-E premises) will be required.

For further inquiries or details, do not hesitate to contact the ENTSO-E Secretariat sending an email to cim@entsoe.eu.

BENEFITS FOR PARTICIPANTS

Participating in the preparation calls between March and July brings various benefits. Participants will receive the latest information on the RCP DES and related profiles’ specifications. Together with an overview of the state-of-art technologies to support flexible data exchange services, this will be relevant for the design and planning of the Regional Coordination Processes’s implementation projects.

On the other hand, vendors will receive updates on upcoming industry needs. They will also be able to challenge specifications by prototyping key parts of the overall complex data exchanges. Vendors will also be able to promote their products via direct interactions and eventually as part of a concluding SV-IOP report which will include information on tooling that was used in the tests.

Overall, this event intends to help getting a better picture of gaps and expectations towards development for the next years as well as clarifying areas where standards should be enhanced.

ESTIMATED EFFORTS

The estimated time effort for participants is outlined in the tables below. The IOP participation will require physical presence in Brussels for 3-5 days.

Preparation phase	Clarification meetings to prepare the tests, discuss test data	SV-IOP attendance		
		Category A (simple cases) and not observer	Category B (simple cases) and observer	Category C (complex cases) and observer
TSOs	2 hours in March, 4 hours in April, 4 hours in May, 4 hours in June	voluntary	The IOP week (3-5 days)	The IOP week (3-5 days), may need to contribute more
		Category A (multiple customers)	Category B (single customer or inhouse dev)	Category C (RCC tools)
Vendors	2 hours in March, 4 hours in April, 4 hours in May, 4 hours in June	The IOP week (3-5 days)	The IOP week (3-5 days)	voluntary

PLANNING

Please find here a brief plan to conduct the SV-IOP 2024.

Preparation phase

Regular meetings will serve as preparation for the test. The first kick-off online meeting will take place with all registered participants on 12th March, 16:30 PM (CET). Participants should join all following calls, which will be decided and agreed on the kick-off meeting.

The meetings will focus on discussing issues and providing information necessary for performing the tests. Regular topics to be discussed could be as follows:

- Q&A on the NC profiles and RCP DES
- Test Use Cases
- Test configurations.

SV-IOP physical event – the second week of July 2024

The SV-IOP will include tests performed using prototype applications and following test use cases. The agenda of the physical meeting – SV-IOP includes the following:

- Test session
- Issues discussion
- Conclusion and recommendations.

Expected outcomes

- Confirmation on the maturity of RCP Data Exchange Specification. Proposals for amendments in case issues are found.
- Proposals for issue resolutions related to ENTSO-E NC Profiles v2.2, review planned modifications/enhancements.
- Validation of the test use cases that will be integrated in the NC profiles conformity assessment scheme.
- Validation of test configurations and/or propose additional test configurations.
- Recommendations regarding transition between different CGMES and NC profiles versions based on tests to verify the linkage with grid models exchanged using CGMES set of profiles.

Timeline (subjected to be revised after kick-off call)

Period	Activities	Who?
15 Feb. – 07 Mar. (17:00h CET)	<p>Registration process – vendors⁴ All interested vendors are welcome to register using the link to the registration form and submit the required information:</p> <ul style="list-style-type: none"> • Software/product what will have some support for NC profiles; • Expected number of participants. • Contact information of all participants <p>Registration process – test witnesses. All interested witnesses are welcome to register using the link to the registration form.</p> <p>Experts that are familiar with ENTSO-E NC profiles and/or CSA business process are encouraged to register.</p>	<p>Vendors: Commercial product vendor, open-source implementers, and TSOs’ internal implementers</p> <p>Witnesses: TSOs, Research Institutions, Conformity labs, Standardisation bodies, etc..</p>
12 March (16:30h CET)	<p>Kick-off meeting</p> <p>Align with the participants to discuss the scope clarify.</p>	All participants
March – June Proposed weekly calls (time to be discussed)	<p>Weekly calls with all participants and vendors.</p> <p>To prepare the tests, clarify open questions, and discuss test procedures.</p>	Registered participants and vendors.
Second week of July 2024	3-5 days physical SV-IOP test in Brussels.	Registered participants and vendors.
August	<p>Review of the IOP report.</p> <p>All participants will get the chance to review the draft report, which will be published by ENTSO-E.</p>	SV-IOP participants

⁴ Vendors should be understood as commercial product vendor, open-source implementers, and TSOs’ internal implementers.

October

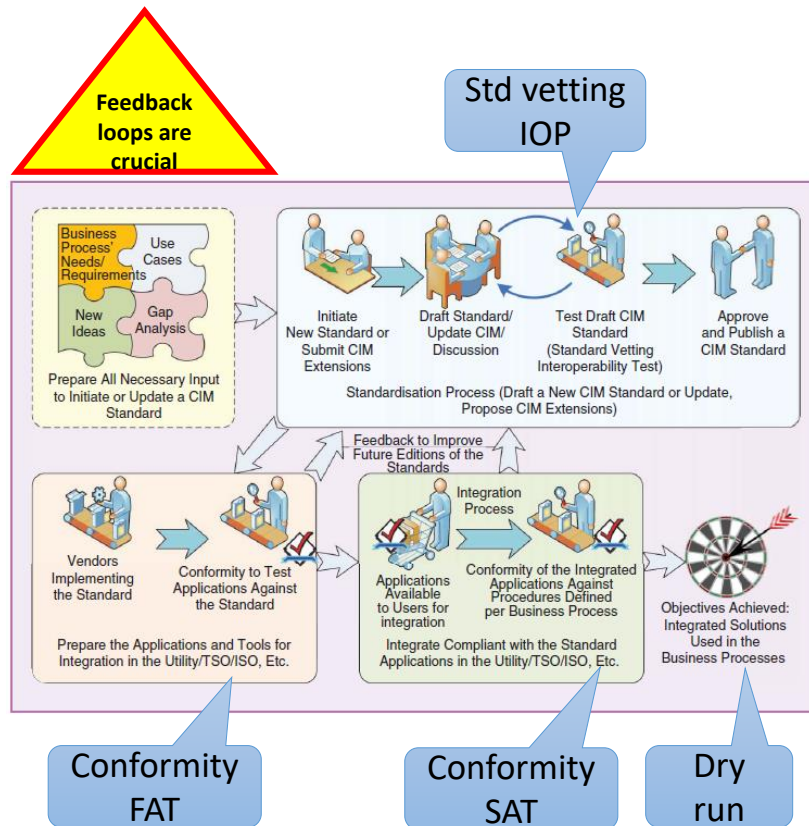
Publication of the final SV-IOP Report.

ENTSO-E

As a major outcome, the report includes identified issues for standardisation consideration e.g. IEC

ANNEX A: GENERAL INFORMATION ON INTEROPERABILITY TESTS

The following figures illustrate the overall process and indicate in which stages interoperability tests are crucial.



Development	Std vetting IOP	<ul style="list-style-type: none"> During standard/specification development Confirming test configurations Confirming test procedures 	<ul style="list-style-type: none"> Support from business processes necessary to ensure participation from TSOs, RCCs, Vendors
Formal & General	Conformity FAT	<ul style="list-style-type: none"> Testing tools for conformity with standard/specifications 	<ul style="list-style-type: none"> Formal process that follows Conformity Assessment Scheme dedicated to the implementation scope. It is crucial that business processes require Vendors to participate and be attested for conformity with the specification
	Conformity SAT	<ul style="list-style-type: none"> Testing TSOs, DSOs, RCCs, etc for conformity with business process 	<ul style="list-style-type: none"> Vendors are engaged in the discussions, but the testing is focused on how a utility meets the requirement of a business process.
Business process/project specific	Dry run	<ul style="list-style-type: none"> As part of roll out of new version of a business process 	<ul style="list-style-type: none"> This is very close to go-live of the business version with a specific version of the standard. The process should run as expected.

Usual format of the test is 3-5 days depending on the scope which is agreed depending on the business needs.

Benefits in performing standard vetting interoperability tests are:

- Support TSOs, RCC, Vendors in understanding requirements and how they are addressed in the standardisation process. Close gaps due to misinterpretations.
- Collect community opinion on the feasibility to implement the standard. Standard can be modified based on the feedback based on prototype (pilot) implementations that occur in the process to prepare for the IOP.
- Vendors would better understand the need and the challenge in different business processes in scope for a given IOP (e.g., it could be TYNDP, CGM building, CSA, CCC, OPC, STA etc.).
- Assess interoperability challenge and set the right test use cases for conformity as well as verify necessary test data that are basis for development of conformity process.
- Development of good specification/standard is a complex process. Different milestones are important, and the process needs to be followed strictly to minimise risks in implementation of business processes. If a step is skipped the risk should be assessed. The role of different actors is important.

Business units (e.g., units that implement business processes and need to conform to them) are requested to:

- To take care of requirements, requesting vendors to be active.
- Be part of the decision making and taking.
- Require conformity testing.

plan implementation and transition

Standardisation units (units responsible for the standardisation activities translating business requirements to standards) are requested to:

- Translate business requirements into the specification.
- Gather community of TSOs, Vendors, etc.
- Challenge requirements when not clear or difficult to harmonise.
- Organise interoperability testing and prepare conformity testing.
- Support business units in planning assessing feasibility and differences between versions.