SafeSeaNet

Commissioning Tests Process

Version 1.2

Date: 10-04-2017

EMSA

1. Background

The objective of the Commissioning Test (CT) is to ensure that national SSN systems can support reliably, timely, and accurately the exchange of data of a MS with the other MSs though the central SSN system. Following the successful completion of the CT, EMSA issues the Welcome on-Board (WoB) Document which verifies that the national SSN system is ready to enter into production.

The CT process is required whenever there are major changes to the interface between the central SSN system and the national SSN systems of the MSs. These changes happen when there is an amendment to the existing legal framework which requires new messages or pieces of information to be exchanged between the MSs.

The CT currently performed checks only the interface between the MS national SSN system and the central SSN and not the capability of the MS to exchange operational data. EMSA experienced cases of MSs whereby the national SSN systems were tested and passed successfully the CT, but the MS has not developed the infrastructure or the functionalities needed to feed data to the national system.

In certain cases the MS provided manual responses for testing the interface using scripts without having developed the components supporting the functionalities e.g. of the waste and security messages or completing their implementations to generate the request/response messages.

After the successful completion of the CT for SSN V3 and the entrance into production of MSs, EMSA experienced many issues not identified during the tests. The figures below represent examples showing the monitoring results for some of the above indicators for specific MSs. Figure 1 shows an increase of the number of ship calls which was due to erroneous compilation of the ship calls:

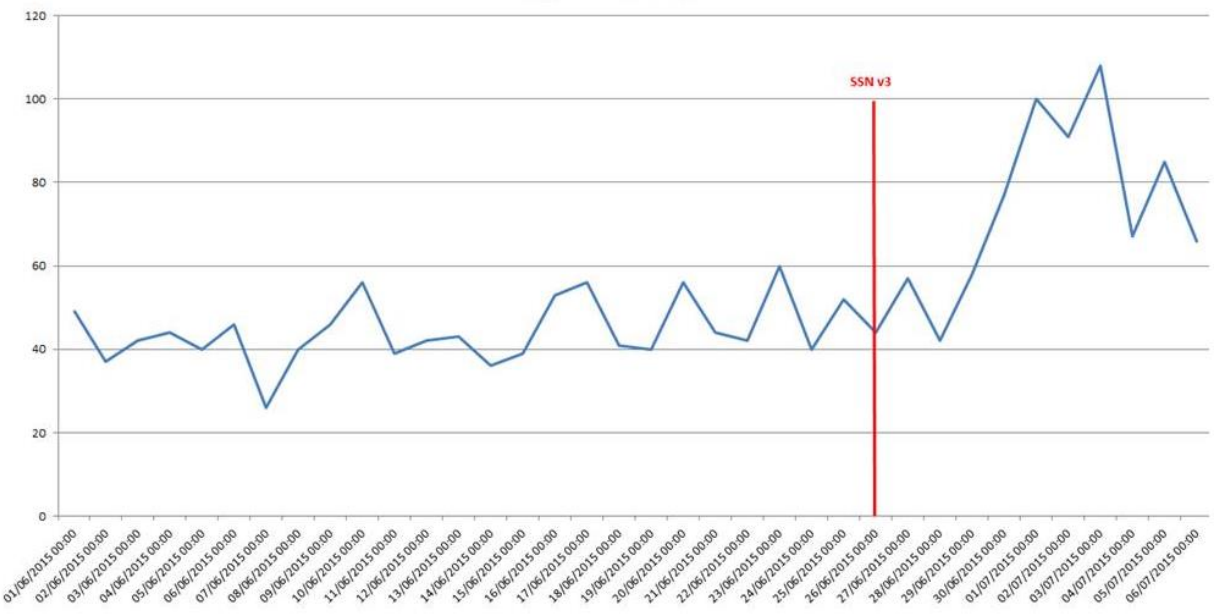

Figure 1: Increase of number of ship calls after switching to SSN v3

Figure 2 presents another example of a MS which presented an increase of rejected messages after switching to SSN v3:

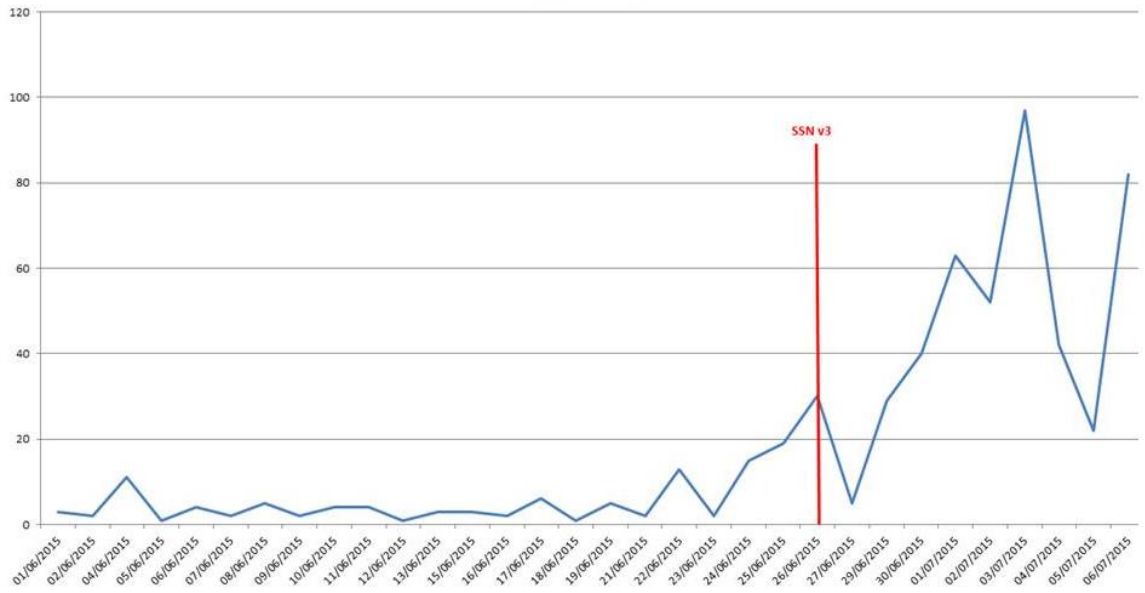

Figure 2: Increase of rejected messages after switching to SSN v3

In both cases the CTs were carried out successfully and MSs entered into production for SSN V.3 without detecting the due deficiencies. There are also many other examples of undetected problems among which the most often is the problems related to the request/response functionality.

These deficiencies impact not only the quality of SSN but also other applications depended from SSN such as THETIS.

2. Objective

The objective of this document is to propose improvements to the CT process to increase the accuracy of the test results, improving the overall quality of the service, especially in view of the forthcoming major deployment of SSN v.4.

3. Methodology

The proposal is to extend the existing CT process for an additional testing period during which the national SSN will be tested with real operational data.

The CT will be carried out in two phases. Both phases will be executed using the Test environment of the MS that will be connected to the Pre-Production environment available at EMSA. Further description of the phases follows:

3.1 First Phase

This phase will be the same as the current CT which ensures that the technical interface between the central SSN and the national SSN applications meets the technical standards set. The CT entails the successful completion of the commissioning test plan, as set out in the Commissioning Plan documents (Part A and Part B for ancillary tests).

EMSA will continue asking the MS the delivery of the logs pertaining to specific test cases associated with relevant functionalities during the assessment of the test results. The logs will be assessed by EMSA. If some tests need to be repeated, EMSA will also request the regression testing documents and the associated logs to ensure that the previously executed tests are being re-executed against new versions of deliveries.

The results of the first phase would be provided in ***ten working days*** in the form of a *Test Report*. When this phase will complete EMSA will issue a "technical interface compliance" document for the MS which successfully passed the CT.

3.2 Second Phase

After the successfully completion of the first phase and once the MSs will be ready to provide the real data, EMSA will perform the validation of the national SSN system.

The validation step uses actual production data that is ingested by the MS in their Test environment connected to EMSA Pre-Production environment. This set of production data will be converted to be compliant with the version under validation, e.g. production data in v3 will have to be transformed in v4 format in order to be used in this second phase.

None of the MS Authority nor agent would be involved since that conversion of the current V3 operational data into V4 format would be done at the National Central system level connecting with EMSA SSN Central system.

The use of the EMSA Pre-Production environment fulfils SSN security and data protection requirements since this environment is not available to external users. In any case, MSs can also remove sensitive data before the transformation process as an additional measure for data protection.

During this phase the MS will not stop sending data to the SSN Production environment. The behaviour and results will be analysed in a ***one-week period***.

Upon the successful completion of the second phase EMSA will confirm that the national SSN system is ready to operate in the Production environment. The validation report will be included as part of the WoB document.

4. Actions

The following actions are proposed in order to accomplish the new commissioning test process:

- New Commissioning Tests methodology to be presented for agreement to MS during the next SSN Workshop.
- The MS Commissioning Test plan will be amended to include the methodology proposed.
- Commissioning test plan and "SSN-HDK-002 - Helpdesk for commissioning tests & Welcome on Board" procedure to be amended.
- Welcome on Board document will be amended to include the Validation Report.

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