EMSA
European Maritime Safety Agency

Service Transition Activities

VERSION: 1.0
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1 Introduction

1.1 Objective

The objective of service transition phase is to transform the new or changed software into live service operation. The main activities of this phase are:

- Build and deploy software in test, pre-production and production environments
- Verify and validate the deliverables (documentation, software, etc.)
- Configuration Management (to maintain information about Configuration Items received from the contractors and generated internally during the source code build process)
- Set up the necessary monitoring for the new software release
- Draft the relevant incident management procedures.

To archive this objective, a set of activities needs to be performed by EMSA and the developer contractor.

1.2 Scope

The aim of this document is to describe the procedure that needs to be followed by EMSA and by the developer contractor during the transition phase. It describes the expected workflow between EMSA and developer contractor and the expected deliverables and timelines.

1.3 Out of the scope

It is out of the scope of this section/Annex the description of all the activities performed by EMSA or by the developer contractor during this phase. Moreover, the activities presented below are not exhaustively described.

2 Procedure

The transition phase can be divided in three different activities, planning, testing and monitoring. Each activity is described below.

2.1 Planning activity

The planning activity is the first activity of the transition phase. It consists in defining the content of the software release, when the software will be delivered for testing, the maximum release candidates that can be delivered, the maximum time EMSA has to execute the tests and the production date.
This planning should be proposed by the developer contractor and agreed by EMSA. In most of the cases, the production date is fixed.

Trigger	Input	Output
A software release is planned and the release content is defined.	None	Transition phase plan

This activity should start once a software release is planned and the content of the release is defined.

The figure below presents the relevant tasks to be executed in the planning activity.

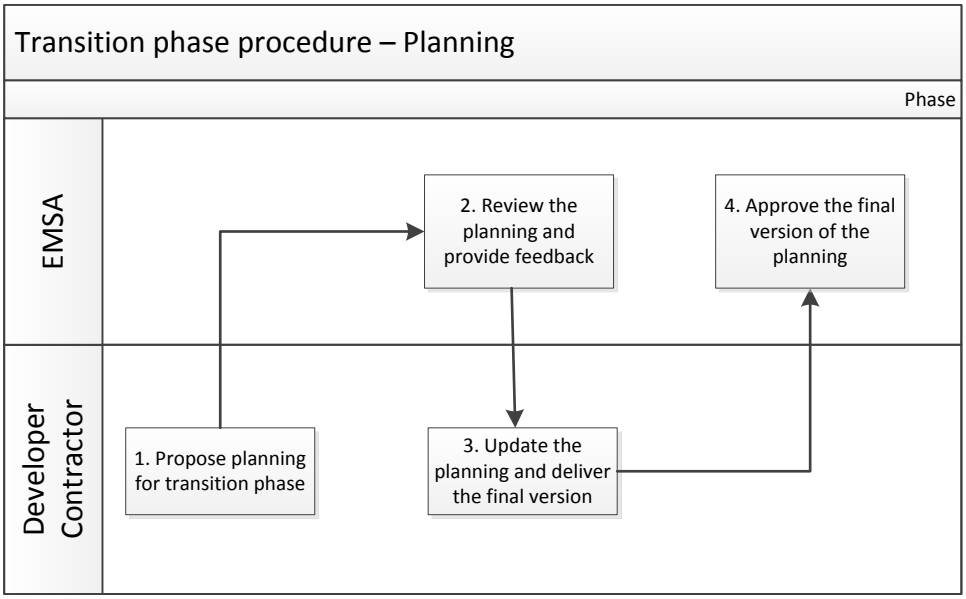

Figure 01 – Planning activity

1. Propose planning for transition phase task

This task consists in proposing a transition phase plan and shall be performed by the developer contractor. When drafting the planning, the contractor shall take into consideration the following:

- If the production date has a fixed date.
- Based on the software release content, define:
  - if one, two of three software release candidates (RC) will be delivered for testing
  - the type of tests that EMSA has to execute to validate this release (functional, non-functional)

The output of this task is a draft version of the Transition phase plan document. This document should include at least the following information:

- Release content
  - List of anomalies/bugs to correct (if applicable mentioning the associated TeamForge artifact).
  - List of enhancements/new functionalities
- Implementation schedule (Task, Responsibility and Milestone). The table below presents an example of the implementation schedule.

Task	Responsibility	Milestone
Deliver the software **v1.4.00-RC1**	Developer contractor	T0
Build and deploy the software **v1.4.00-RC1** in test environment	EMSA	T0 + 1 day
Perform functional tests in test environment and report the identified issues to the contractor	EMSA	T0 + 2 weeks
Correct the identified issues and deliver the software v1.4.00-RC2	Developer contractor	T0 + 3 weeks
Build and deploy the software **v1.4.00-RC2** in test environment	EMSA	T0 + 3 weeks + 1 day
Perform functional tests in test environment and report the identified issues to the contractor.	EMSA	T0 + 4 weeks
Build and deploy the software **v1.4.00 RC2** in Pre-Production	EMSA	T0 + 4 weeks + 1 day
Perform non-functional and additional functional tests in pre-production environment and report the identified issues to the contractor	EMSA	T0 + 6 weeks
Correct and delivery software **v1.4.00-RC3**	Developer	T0 + 7 weeks

	contractor	
Build and deploy the software **v1.4.00-RC3** in test environment	EMSA	T0 + 7 weeks + 1 day
Perform functional tests in test environment and report the identified issues to the contractor.	EMSA	T0 + 8 weeks
Build and deploy the software **v1.4.00-RC3** in Pre-Production	EMSA	T0 + 8 weeks + 1 day
Perform non-functional and additional functional tests in pre-production environment and report the identified issues to the contractor.	EMSA	T0 + 9 weeks
v1.4.00-RC3 is accepted by EMSA as **final version** of software v1.4.00.	Developer contractor	T0 + 9 weeks
Stability period of 2 weeks	EMSA	T0 + 11 weeks
Deploy final version in Production	EMSA	T0 + 11 weeks + 1 day

Table 1 – Example of Implementation schedule

T0=10/10/2015

Note:

If less RCs than planned are needed to reach the final version, a possible change in Production Data can be assessed by EMSA.

If more RCs are needed, the Production data has to be rescheduled, it is important to assess the correct amount or RCs during the planning to avoid this.

2. Review the planning and provide feedback

This task consists in verifying if the draft transition phase plan submitted by the developer contracted is aligned with the EMSA expectation in terms of timings and number of release candidates. It is out of the scope of this revision assess the release content. This activity should have been done in the service design phase.

If needed, EMSA will contact the developer contractor to request clarifications.

After the verification, EMSA should provide the draft transition plan document with EMSA remarks to the developer contractor.

3. Update the planning and deliver the final version

The developer contractor shall include the EMSA remarks in the planning, issue the final version of the document and deliver it to EMSA.

4. Approve the final version of the planning

EMSA shall approve the final version of the transition phase plan.

2.2 Testing activity

The testing activity is the second activity of the transition phase and can be performed in parallel with the monitoring activity. It consists in build and deploy the software, perform the Site Acceptance Tests (SAT) and verify if all the expected documentation was delivered.

Trigger	Input	Output
Approved Transition phase plan	Requirements Document Service Design Package (SDP) Architecture Document	- Test Plan (EMSA will provide a Test Plan template e.g. to make import of Test Cases into TestLink easier) - Test scripts - Data test (data/file/script necessary for testing) - FAT Test report(s) - Source code of the final release - COTS - Configuration files per environment - Applicable scripts (e.g. database scripts, database migration scripts, deployment scripts to perform weblogic server installation) - Release notes - Installation and configuration manual. - Monitoring specifications - SAT report

This activity can start once the transition phase plan is approved.

The figure below shows the tasks to be performed in the testing activity phase and the description of those tasks are defined in the table below.

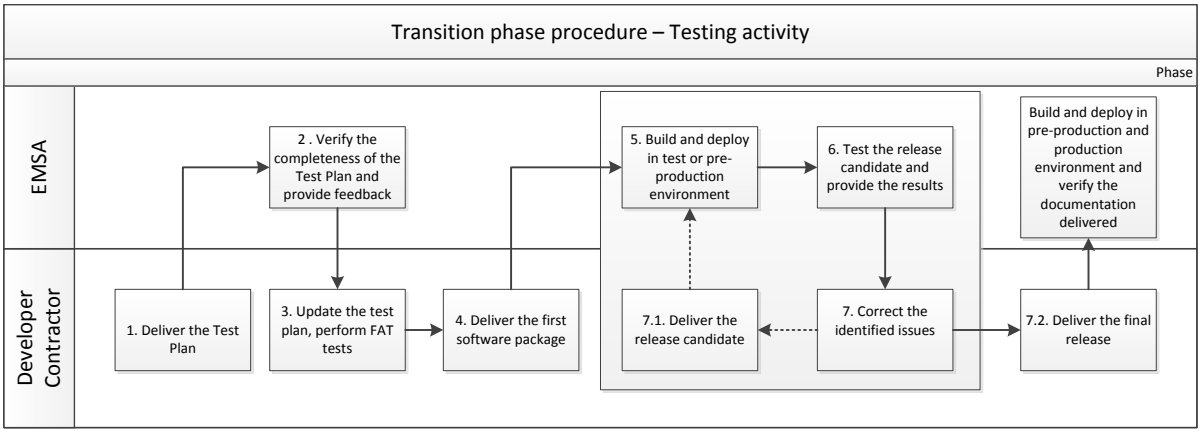

Figure 02 – Testing activity

Task	Responsibility	Description
1. Deliver the Test Plan	Developer contractor	The test plan shall be drafted by the developer contractor and shall be used to validate the correct implementation of the software release. The test plan shall include at least the following: - Test cases to be used to validate the software release - Regression tests to be executed. - Performance test, if applicable The draft test plan shall be delivered to EMSA. The test report shall be delivered at least 2 weeks before the planned FAT
2. Verify the completeness of the Test Plan and provide feedback	EMSA	Verify the completeness of the test plan and if needed, request the developer contractor to add test cases to the test plan.
3. Update the test plan, perform FAT tests	Developer contractor	The test plan shall be updated to incorporate EMSA request and the final version shall be released. All the tests defined in the test plan shall be executed and the results of the tests shall be included in the FAT test report.
4. Deliver the first software package	Developer contractor	The first software release package shall be prepared and shall include at least the following items: - FAT Test report(s) - all the tests scripts used to automate test cases during the FAT and the

		instructions about how to execute them - Data test (data/file/script necessary for testing) - Documentation for new features - Source code - Configuration files - Applicable scripts (e.g database, database migration scripts, deployment scripts to perform weblogic server installation) - Release notes (it should include the how to roll-back to the previous release and the Points of no return) - Installation and configuration manual, including the full installation manual (from scratch) and "delta" installation manual (e.g. instructions on how to upgrade from version 1.3 to 1.4) - Monitoring specifications The monitoring specifications document should define the infrastructure/application monitoring requirements (what should be monitor), controls (how it should be monitored) and how to recover in case of incident. Additionally, the business monitoring requirements included in the tender specifications/request for change are to be implemented and included in the monitoring specification document, along with the specification how to monitor them.
5. Build and deploy in test and/or pre-production environment	EMSA	The build will be performed based on the source code and configurations files, following the EMSA standard procedure (using Hudson / Archiva / Sonar). Support from the development contractor may be needed if EMSA faces any issue while building the software. This task will be executed for each release candidate.
6. Test the release candidate and	EMSA	Tests shall be performed to validate the release candidate and the results shall be sent to the

provide the results		developer contractor. This task will be executed for each release candidate.
7. Correct the identified issues	Developer contractor	The errors identified during the tests shall be corrected. This task will be executed after the tests of each release candidate.
7.1. Deliver the release candidate	Developer contractor	This task is executed only if a new release candidate shall be generated (e.g. RC2 or RC3) The source code including the correction of the issues identified, configuration files and scripts shall be delivered for testing. The updated Release Notes shall be also delivered.
7.2. Deliver the final release	Developer contractor	The final release shall be prepared and it shall include: - Source code - Configuration files - Applicable scripts - Release notes - Installation and configuration manual
8. Build and deploy in pre-production and production environment and verify the documentation delivered	EMSA	The build will be performed for pre-production and production environments. The final release of the software will be deployed in pre-production and have to stay in pre-production during 2 weeks (stability period). It is also verified if all the documentation was delivered. After the stability period, the application is deployed in production environment.

Table 02 – Description of the testing activity tasks

2.3 Monitoring activity

The monitoring activity is the third activity of the transition phase and can be performed in parallel with the testing activity and after the delivery of the monitoring specifications. It consists in setting up the necessary monitoring tools to properly monitor the new software release.

Trigger	Input	Output
Delivery of the first software package Application shall be deployed in pre-production	Monitoring specifications	- Monitoring specifications - Nagios sensors implemented - Incident management procedures

The figure below shows the tasks to be performed in the monitoring activity and the description of those tasks are defined in the table below.

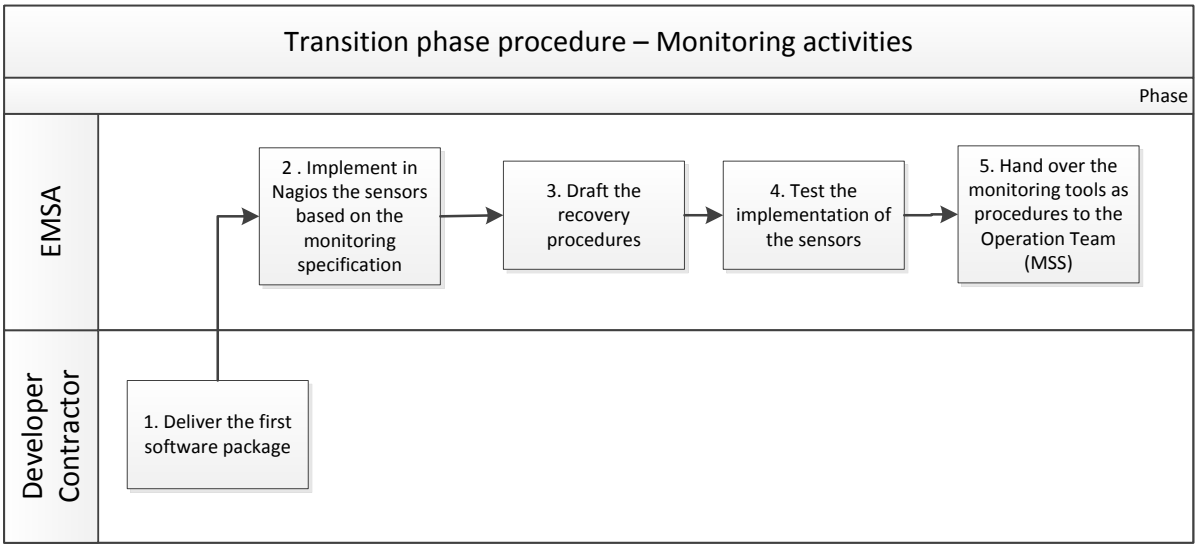

Figure 03 – Monitoring activity

Task	Responsibility	Description
1. Deliver the first software package	Developer contractor	Described in the table 02 – Testing activity When drafting the monitoring specification document, the contractor shall take into consideration that the monitoring tools should not execute queries to the application /operational database schema. In case of need to create tables for monitoring purposes, these tables

		should belong to another schema or there should exist a specific user having access to these “monitoring” tables.
2. Implement in Nagios the sensors based on the monitoring specification	EMSA	Based on the monitoring specification, Nagios sensors shall be implemented.
3. Draft the incident management procedures	EMSA	Incident management procedures shall be drafted for each new sensor implemented. This procedure will be used by MSS operator when a Nagios sensor triggers an alert. It shall be assessed if the new release has an impact on the existing procedures and update them if needed.
4. Test the implementation of the sensors	EMSA	The sensors implemented in NAGIOS shall be tested to guarantee its correct implementation.
5. Hand over the monitoring tools as procedures to the Operation Team (MSS)	EMSA	Training shall be provided to the MSS operator on the new sensors and procedures. The hand-over is completed once the application is in production and all the MSS operators are trained.

Table 03 – Monitoring activity