

Appendix A to the Tender Specifications

Scenarios for Evaluation

Tender n° EMSA/OP/09/2015

The present document specifies the Scenarios for Evaluation to be used as part of the Award Criteria for each of the Lots as specified in the Tender Specifications. The tenderers are requested to submit the technical solutions to the respective scenario of the Lots to which they are tendering. EMSA might require the implementation of the evaluation scenarios according to the tenderers proposal.

1. Lot 1: Portal Technology

Scenario Description

To support and to reduce overhead in some functional tests, the EMSA Portal shall provide an option to impersonate a portal user. This new option shall provide the following benefits:

- Have the same permissions as the impersonate user
- Create any web content/media in the name of the impersonate user
- Any action performed should be with the name of the impersonate user
- Have the same look and feel as the impersonate user (apart of a visual element indicating that the user is being impersonated)

The "Impersonate User" component shall be developed, taking into consideration the following requirements:

- A new action to impersonate, under the Users Option in the Liferay Control Panel
- A new top bar with the elements: The user logged in, the user impersonate, an option to get back to normal view.
- This component should be only available to a limited number of roles. Must be possible to configure what roles have the privileges to impersonate others. Liferay Administrators shall have the privileges to impersonate any user.
- After choosing the option, Liferay will redirect to the entry page of the impersonate user
- The user's password could not be changed
- Due to the sensitive actions that an impersonate user can perform, all the actions performed will be log in a database table

Scenario Response Requirements

Tenderers shall describe with the highest level of details possible, how they propose to address this new project. Address at least the following topics:

- Project Plan
 - Tasks (small overview shall be included)
 - Effort proposed per Profile (refer to the Profiles table in chapter 11)
 - Total project time
 - Total cost
- Specifications. Address at least:
 - Solution and architecture proposed
 - Context diagram including the major components
 - Data flows
 - Liferay configurations
- Project Deliverables (including documentation)

2. Lot 2: Identity Management and Single Sign-On

Scenario Description

EMSA IdM infrastructure currently uses Oracle Identity Management version 10gR3 (OIM) as described in the System Landscape present in the General Conditions of the Framework Contract. OIM is the owner of EMSA user's repository and is responsible to provide all user management functionalities to EMSA systems; reporting is within these responsibilities.

Among several other reports, the following ones are required to be integrated into an external reporting tool (like JASPER BI):

- Full list of users. For each user, the following information should be provided as a minimum:
 - UserId
 - Status
 - First Name
 - Last Name
 - E-mail
 - Creation date
 - List of Organizations
 - List of Roles/Groups
- List of Roles. For each Role, the report should also list the users having that role assigned.

The following architecture is foreseen:

- Reporting tool shall connect directly to the database
- Connection shall be made through a read-only database user
- A set of custom developed Materialized Views shall be accessible for reporting purposes

Scenario Response Requirements

Considering a default OIM installation, within their bids, tenderers must provide detailed information on how they propose to address such a project, detailing as a minimum the following points:

- The materialized views proposed
- The queries used for refreshing the materialized views.

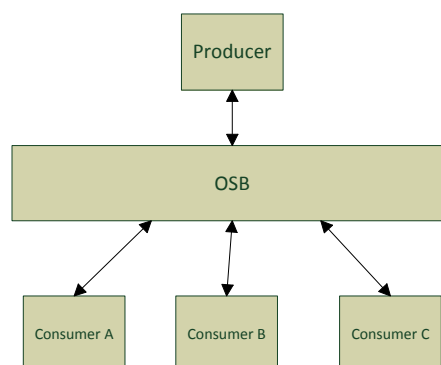
3. Lot 3: Integration and Non-functional Capabilities

Scenario Description

Consider the following integration scenario: System "Producer" is responsible managing (basically CRUD operation) a set of configurations that have to be provisioned to several other systems ("Consumer A", "Consumer B", "Consumer C"). After an initial analysis set of constraints were identified:

- All "Consumers" expose a provisioning interface as Web Services but definition of the Web Service are different from "Consumer" to "Consumer"
- "Consumers" are returning different success and error codes
- Although "Producer" deals with all the configuration parameters, "Consumers" can only accept their own configuration parameters
- Some configuration parameters have to be provisioned to more than one "Consumer"
- In some situations, provisioning order is mandatory and a synchronous workflow is needed. As an example, "Consumer A" has to be provisioned in first place and only if the action is successfully executed, "Consumer B" will be provisioned.
- Although not mandatory, it is recognized as an advantage the ability of retrying the provisioning action in case of a "Consumer" is not available or returning an error code.
- The set of provisioning rules is fixed but might change frequently
- Other "Consumers" might be added

Having these points in mind, the following architecture was decided:



Scenario Response Requirements

Within their bids, tenderers must provide detailed information on how they propose to address such a project, detailing as a minimum the following points:

- Technical approach, advantages and disadvantages;
- Implementation details and tasks
- List of Project documentation and templates used;
- Conformance and integration with EMSA system and application landscape;
- How will the constraints identified above will be addressed and surpassed.
- Flexibility and details on how to change provisioning workflow and adding systems

- Monitoring;
- Non-Functional testing approach, addressing availability, resilience, capacity
- Tools used for development, configuration, testing;
- Project work breakdown structure (3 levels);
- Project team, skills used and tasks assignments;
- Effort indication per profile;
- Estimated value

4. Lot 4: Data Warehouse, ETL and Related Technologies

Scenario Description

EMSA has 3 different environments for Jasper Reporting and BI platform:

- TEST Environment: single server
- PRE-PRODUCTION Environment: cluster with 2 nodes
- PRODUCTION Environment: cluster with 2 nodes

Tenderers shall describe with the highest level of details possible how they propose to address the Maintenance and Operations tasks for the previously described Jasper infrastructures. They should address at least the following topics:

- Monitoring procedures
- Critical events
- Daily tasks, Weekly and/or Monthly tasks
- Backup/Recover procedures
- Purge/Archiving procedures

In addition, taking into consideration that contractors are responsible for development of new Jasper artefacts (e.g. domains, ETL processes, reports, ...) and EMSA is responsible for deployment of those artefacts in the different environments, Tenderers shall describe as detailed as possible how they propose to organize a delivery package to contain the new artefacts and the proposed procedure to make the deployment in the different environments.

Scenario Response Requirements

Within their bids, tenderers must provide detailed information on how they propose to address the presented scenario, detailing as a minimum the following points:

- Draft Maintenance and Operations Manual for the Jasper infrastructure;
- Draft Project Plan for the future developments of the new Jasper artefacts;
- Definition of the delivery packages for the new Jasper artefacts;
- Deployment procedure for the new Jasper artefacts in the different environments as mentioned in the Scenario Description.

5. Lot 5: Geographic Information Systems

The current scenario is applicable to the evaluation of the Lot 5 capabilities. This scenario is purely for evaluation reasons and will not necessarily be launched under as a specific contract under the FwC contract, although EMSA reserves this possibility for future decision.

The document also describes the requirements for presenting the response in the bid. Tenderers should adhere to these presentation requirements in their proposal to address this scenario.

Scenario Description

EMSA intends to acquire/implement an Electronic Nautical Charts distribution system/service that will provide the ENC's to all EMSA Maritime Applications.

EMSA Maritime Applications are web-based applications that use the ENC maps as the base layer on top of which specific maritime data, relevant for each Maritime Application, is displayed. This "map base layer" is configurable on each application and it can be provided with vector raster file or using web services, like OGC WMS. Most of EMSA's Maritime Applications already connects to an ENC distribution system that EMSA has in-house and that intends to substitute for a state-of-the-art solution.

The main characteristics of the requested ENC distribution system/service are:

- WMS compliant with OGC and INSPIRE:
 - The bidder should take into account the INSPIRE view services which already specifies availability performance and capacity requirements that should be taken as reference.
 - The system should consider a tiling solution. Access provision via WMtS, with the ability to request / specify visible layers at different zoom levels (use of style layer descriptor). Tiling optimization is a key issue to reduce number of requests, increase performance and optimize bandwidth. Tiling should be available for a pre-defined number of projection systems.
 - Compression (JPG2000): Compression is essential in terms of service provision to mobile applications (images delivered using JPG2000 or other highly compressed lossless geographic enabled image format). Compression will also be a positive feature for the desktop application as it allows use in lower bandwidth conditions (i.e. when accessing by satellite uplink on-board a vessel).
- ENC's with World coverage;
- Projections: Mercator, UTM and UPS (Universal Polar Stereographic projection):
 - EMSA's preferred solution is to have all the requested projections using ENC data, but due to the specific nature of the type of data to be used in this system/service (ENC), the projections required might not be all available. As such, if considered needed, the bidder is allowed to find and identify alternative sources of data per projection and justify this choice presenting the associated limitations to the end-user service.
- 24/7 availability;
- Users: The current ENC system is accessed by 5 web applications. In total these web applications have around 2000 registered users.
- Hosting:

- Although EMSA has the necessary hosting capabilities to host the system that will distribute the ENC's to EMSA Maritime Applications (as it is currently the case), EMSA preference is to have a solution/service that can be considered cloud compliant and that can be hosted in the contractors premises. Being cloud compliant, EMSA may also decide to host this solution on a cloud facility to be contracted by EMSA.
- The bidder is invited to select the hosting solution that best fits their needs/restrictions and justify it.

Tenderers must justify all their technical options.

Scenario Response Requirements

The tenderer is invited to provide a solution by presenting the following:

- 1- Provide basic system architecture with the decomposition of the services into components, a brief description of the interfaces and protocols to be used between components as well as a deployment diagram.
- 2- (if relevant) Indicate which components may be available as COTS or libraries justifying their usage in the overall system architecture.
- 3- Specify the system interfaces and related open or de-facto standards that will be used in these interfaces. Please indicate this and justify its applicability.
- 4- (if relevant) Specify the visualization standards considered and justify its applicability.
- 5- Describe how the non-functional requirements are handled, including failure modes and possible recovery actions.
- 6- Provide a WBS and Gantt charts with estimated efforts.
- 7- Describe the major risks of the overall architecture you propose and what actions you will take to mitigate those risks.