

**EUROPEAN COMMISSION**

**EUROPEAN MARITIME SAFETY AGENCY**

Cais Do Sodré 1249-206 Lisbon, Portugal

# SafeSeaNet Installation and Configuration Manual

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SSN

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### *Document Approval*

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## 1 Introduction

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### 1.1 Purpose

The SSN EIS installation and configuration is a guide for the installation of the SSN applications. Specifically, the purpose of this document is to:

- 1 Specify the installation environment (installation machine type and software pre-requisites);
- 2 Provide a set of pre-installation steps and checks;
- 3 Specify the actual SSN installation procedure;
- 4 Provide a set of post-installation steps and checks.

### 1.1 Scope

This document provides up-to-date technical documentation on:

- Software infrastructure required for the SSN.
- Installation of COTS.
- Installation of the SSN applications.

The primary intended audience of this document are system administrators responsible for the installation and configuration of SSN.

### 1.2 Reference documents

<b>Id</b>	<b>Reference</b>	<b>Title</b>	<b>Version</b>
R1	SSN-SDD	SSN System Design	1.78
R2	SSN-Sddb	SSN System Database Design	1.55
R3	E24492-04	Installation Guide for Oracle WebLogic Server	12c (12.1.3)
R4	E24499-02	Creating Domains Using the Configuration Wizard	12c (12.1.3)
R5	E24425-06	Using Clusters for Oracle WebLogic Server	12c (12.1.3)
R6	SSN-App-Deployment-Cluster	SSN-EIS application deployment on a WebLogic Server Cluster	1.10

**Table 1-1: Reference Documents**

### 1.3 Abbreviations and Acronyms

A list of the principal abbreviations and acronyms used in the document is provided here for a better understanding of this document.

<b>Abbreviation</b>	<b>Definition</b>
ADM	Administrator
AMN	Administrator Manual

Abbreviation	Definition
DBA	Database Administrator
COTS	Commercial Off-The-Shelf (Product)
EIS	European Index Server
EMSA	European Maritime Safety Agency
GUI	Graphical User Interface
HTTP	Hypertext Transfer Protocol
II	INTRASOFT International
IPR	Installation Procedures Manual
JSP	Java Server Pages
LAN	Local Area Network
MNG	Management Console
N/A	Not Applicable or Not Available
NCA	National Competent Authority
PC	Personal Computer
PM	Project Manager
PRO	Port Authority
RDBMS	Relational Data Base management system
REST	Representational State Transfer
PQP	Project & Quality Management Plan
QAO	II Quality Assurance Officer
QC	Quality Control
SP	Service Pack
SRD	System Requirements Definition
SSN	SafeSeaNet
UMN	User Manual
UTF8	Unicode Transformation Format-8. The 8-bit encoding of Unicode. It is a variable-width encoding. One Unicode character can be 1 byte, 2 bytes, 3 bytes, or 4 bytes in UTF-8 encoding. Characters from the European scripts are represented in either 1 or 2 bytes. Characters from most Asian scripts are represented in 3 bytes. Supplementary characters are represented in 4 bytes.
WFS	Web Feature Service

**Table 1-2: Abbreviations and Acronyms**

## 2 Software Infrastructure

This Section provides a description of the software infrastructure required for the installation of SSN EIS.

### 2.1 Deployment Topology and Network Connectivity

SSN is a 3-tier application and different components will be installed in different computer nodes. The SSN topology comprises of the following machines:

- One or more client machines - **web clients** - that the SSN users use to access the system through the Internet using a web browser. The number of the client machines can be increased according to the number of the application users. All the client side needs is a standard Internet browser.
- The **Administrator workstation(s)** - which are used to manage the system resources, are Windows XP/Vista/7 machines with intranet and internet connection.
- The Application server is a Redhat Linux machine running Enterprise Edition v.5.0 operating system. The "Oracle WebLogic application server" is installed on this machine. The SSN applications are deployed on this server.
- The Database server is a Redhat Linux machine running Enterprise Edition v. 5.0 operating system where the ORACLE RDBMS version 12c R1 is installed and it provides the data storage. The ORACLE RDBMS stores the EIS\_ADMIN and REF\_ADMIN Databases.

The Training and Test environments should be identical to the production, as far as the deployment topology is concerned.

### 2.2 COTS Software configuration

The Software products required for the SSN System are presented in this section. Information on installing each product can be found in the installation guide of the product as provided by its vendor.

Software	Requirement
Operating System	Redhat Linux Enterprise Edition v. 5.0
Application Server	Oracle Weblogic12c R3 (12.1.3)

Table 2-1. Application Server Software Products

Software	Requirement
Operating System	Redhat Linux Enterprise Edition v. 5.0
Database	Oracle 12c R1 Enterprise Edition (12.1.0.2.0)
Partitioning option	Oracle Partitioning

Table 2-2. Database Server Software Products

The products required for the Administrator workstations are included in Table 2-3.



<b>Software</b>	<b>Requirement</b>
Operating System	Desktop OS (Linux or MS Windows)
Browser	Chrome – Chromium or Mozilla Firefox (latest version) where cookies and java applet should be enabled.
Network	ORACLE Net Client 12c R1

**Table 2-3. Administrator Client Software Products**

The products required for Web client are included in Table 2-4.

<b>Software</b>	<b>Requirement</b>
Operating System	Desktop OS (Linux or MS Windows)
Browser	Chrome – Chromium or Mozilla Firefox (latest version) where cookies and java script should be enabled.
Document Viewer	For the documents provided by the SSN Web application in electronic format the following viewers required:  Acrobat Reader (for the documents generated in PDF format; e.g. notification details).  MS Word (for the documents generated in doc format; e.g. Port Reporting Notification).

**Table 2-4. Web Client Software Products**

## 3 System Management Overview

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The SSN Administrator is responsible for the correct installation and configuration of the system. This section describes the specific responsibilities and the tasks performed by this actor.

### 3.1 SSN Administrator

The SSN Administrator is responsible for the correct functioning of the Application Server and the Database Server. This section describes the specific responsibilities and the tasks performed by this actor.

The SSN Administrator:

1. Accesses the SSN hardware; i.e. the Application Server and the Database Server machines, the Administrator workstations;
2. Installs and configures the SSN COTS on the Database Server (see 4.3), the Application Server (see 4.4) and the Administrator workstations (see 4.1);
3. Creates the tablespaces (see 5.1.1) and the *eis\_admin* and *eis\_user* ORACLE database user-schema owner and application user - (see 5.1.2) and the *eis\_admin* schema objects (see 5.1.3) of the SSN Database.
4. Deploy the SSN Applications on the Application Server (see 5.2).

SSN Administrator must have:

1. System administrator knowledge (and privileges) of the operating systems;
2. The required skills for the correct installation, configuration and administration of the SSN COTS (see section 2.2).

Administration of some of these components might be delegated to individual administrators (e.g. database administrator, web administrator) who report to the SSN Administrator.

## 4 Software Installation

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This section provides instructions on how to install the SSN EIS bespoke software and specific remarks, when necessary, that should be taken into account when installing the required COTS.

The installation procedure for each of the COTS software products required by SSN EIS is described in the respective documentation. The person(s) performing the installation of the COTS should refer to this documentation whenever necessary.

### 4.1 Administrator Workstations

The SSN system requires the installation of the products listed in the Table 2-3 on the Administrator workstations. The SSN Administrator is responsible for the installation, configuration and operation of the Administrator workstations.

The Oracle SQL Developer IDE or ORACLE 12c R1 client components should be installed on the Administrator workstations in order to enable the administrator to establish network sessions between the Windows machine and the LINUX server that hosts the SSN Database. The Administrator workstations could be also used to execute the scripts to create the database schema objects as described in section 5.1 of this document.

### 4.2 Web Clients

The client workstations are used to access the Web application.

The Acrobat Reader should also be installed on web client machines in order to view and print the documents generated in PDF format.

### 4.3 Database Server

The SSN system requires the installation of the products listed in the Table 2-2 on the Database Server.

The RDBMS ORACLE 12c R1 Enterprise Edition with the Partitioning option should be installed. The section 4.3.1 gives details for the SSN Database creation.

The SSN Administrator should use a LINUX account member of OSDBA group to logon to the SSN Server for the installation, configuration and operation of the ORACLE RDBMS. No special user rights are required.

The SSN Administrator should also create the directory to store the Location code files that will be downloaded from the site of UNESE and will be used for uploading Location codes onto the SSN Database. The directory used for the loading of the UNESE files on the SSN Database is listed in Table 4-1. The oracle LINUX account member of OSDBA who owns the SSN Database should have "read and write" access on these directories.

Directory	Description
SSN_IMP_DIR	The directory where the UNESE files are located; e.g. /oradata/ora10g/EIS11G/SSN_IMP_DIR

**Table 4-1. UNESE files' directories**

### 4.3.1 SSN Database parameters

The SSN Database is used to store the SSN repository:

- schema named *EIS\_ADMIN* that consists of the actual data the SSN Database packages;
- schema *EIS\_USER* is used as the data source defined in the Web Logic server used to access the *EIS\_ADMIN* schema objects;
- schema *REF\_ADMIN* is used to store the Reference Location and Reference Vessel repositories as well as the *SSN\_USERS* specific tables.

Refer to sections 5.1.1 and 5.1.2 for instruction on how to create the SSN tablespaces and schemas (users) respectively.

The parameters and the required values that need to be set for the database during its creation can be seen in Table 4-2. All other parameters that need to be set during the database creation will be set according to the needs determined by the DBA.

Parameter	Value
CHARACTER SET	AL16UTF16
NATIONAL CHARACTER SET	AL16UTF16
DB_BLOCK_SIZE	8192

Table 4-2. Database Default Instance Parameters

## 4.4 Application Server

The SSN System requires the installation of the products listed in the Table 2-1 on the Application Server.

The SSN Administrator should use a LINUX account to logon to the Application Server for the installation, configuration and operation of the Oracle Weblogic server.

The Oracle Weblogic server is installed on this machine. No special customisation during the installation procedure is required.

### 4.4.1 Oracle WebLogic Server Configuration

The SSN Administrator should use the *Configuration Wizard* (*\$MW\_HOME/wlserver/common/bin/config.sh*, where *\$MW\_HOME* is the directory that contains the product installation; e.g. */Oracle/Middleware/Oracle\_Home*) provided by the *ORACLE WebLogicServer* for the domain configuration - refer to [R4] for more details.

More specific, a new *Domain* should be created- e.g. named *ssn\_domain* located on the domain directory *\$DOMAIN\_HOME*, with the next components:

1. An *Administration Server* - e.g. named *adminServer*
2. The *Managed Servers* to host the EIS applications - e.g. named *eisServer* and *eisConsoleServer*.
3. The *Managed Servers* to host the Resources applications - e.g. named *eisResourcesCoreServer* and *eisResourcesConsoleServer*.
4. A *Cluster* - that is groups of managed server instances that work together to provide scalability and high availability for applications. Clusters can improve performance

and provide failover when a server instance becomes unavailable. The servers within a cluster can either run on the same machine or reside in different machines.

The configuration wizard provides screens to set the next options:

- Create the administrator account; a user, which will be assigned the Administrator role – e.g. User name *weblogic*, User password *weblogic*.
- Specify the *Administration* and *Managed* Servers the start mode, Listen address *twls03.emsa.eu*, Listen port *7001*, SSL enabled, SSL listen port *7002*
- Select JDK
- [Configuring Oracle WebLogic Server to Disable Authentication](#) (domain level).  
Disabling Oracle WebLogic Server's authentication allows authentication to be passed through and handled by EIS applications for REST services.

The EIS system consists of the next applications:

1. the *ssn-core-app* application that exposes the *ssn-core-ejb*
2. the *ssn-seg-ws* application that provides the Voyage and Enrichment services
3. the SSN web console group of applications that provides the HTML SSN consoles. These are 4 distinct web applications packaged as Web application Archives(WAR);
  - a. *ssn-find-notification-console*
  - b. *ssn-send-notification-console*
  - c. *ssn-application-management-console*
  - d. *ssn-reports-statistics-console*
  - e. the *ssn-web-common* that is a shared library of common libraries used by the SSN console applications
4. the *ssn-xmlprotocol-app* application that provides the XML functionality / Web Services;

The Resources system consists of the next applications:

1. the *ssn-resources-core-app* application that exposes the *ssn-resources-core-ejb*
2. the *ssn-shipparticulars-ws* application that provides the SSN Vessel Service
3. the *ssn-idm-ws* application that provides the IDM Web Services functionality
4. the *ssn-subscriber-ws* application that provides the endpoints for CLD, COD and CCD announcements
5. the SSN Resources web console group of applications that provides the HTML SSN Resources consoles. These are 4 distinct web applications packaged as Web application Archives(WAR);
  - a. *ssn-vessel-operational-console*
  - b. *ssn-vessel-base-console*
  - c. *ssn-geo-console*
  - d. the *ssn-web-common* that is a shared library of common libraries used by the SSN console applications

The homogeneous deployment is recommended for performance reasons - refer also [R5] (section Clustering Best Practices - Minimize Remote Calls & Distributed Transactions Increase Remote Calls) and [R6].

The alternative deployment solution is to deploy on the same *Managed* server – e.g. named *eisServer* - the *ssn-core-app*, *ssn-seg-ws* and *ssn-xmlprotocol-app* and remotely (on a different *Managed* server e.g. named *eisConsoleServer*) the SSN web console group of applications because of non critical performance nature of the SSN web applications

The WebLogic Administrator should use the *Administration Console* to manage the EIS application server components listed below:

1. The database service component:

- A new JDBC Data Source should be created. In the ORACLE Weblogic domain create a new GridLink Datasource.

Give a name of the Data source– e.g. named *SSN-JDBC Data Source* – , a **JNDI name** as *ssn/jdbc/ssnDS* of **Database Type** *Oracle* and **DatabaseDriver** *\*Oracle's Driver (Thin XA) for GridLink Connections* *Versions:Any*.

Press Next – no option for Transaction Options.

Press Next and select on GridLink data source connection Properties Options the option *Enter complete JDBC URL*.

Press Next and define the connection properties in the **Complete JDBC URL**. As **user name** enter *EIS\_USER* and the password.

Press next and Test GridLink Database Connection

Press next and set the ONS Client Configuration.

Press next and select as target both the *Managed* Servers named *eisServer*, *eisConsoleServer*, *eisResourcesCoreServer* and *eisResourcesConsoleServer* and finally press finish.

It is recommended to set the JDBC statement timeout attribute for SSN system; the suggested value is 200 (seconds).

```
<?xml version='1.0' encoding='UTF-8'?>
<jdbc-data-source xmlns="http://xmlns.oracle.com/weblogic/jdbc-data-source"
xmlns:sec="http://xmlns.oracle.com/weblogic/security"
xmlns:wls="http://xmlns.oracle.com/weblogic/security/wls"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.oracle.com/weblogic/jdbc-data-source
http://xmlns.oracle.com/weblogic/jdbc-data-source/1.0/jdbc-data-source.xsd">
<name>SSN JDBC GridLink Data Source</name>
<jdbc-driver-params>
<url>jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=r
ac-server)(PORT=1521))(CONNECT_DATA=(SERVICE_NAME=ssndb)))</url>
<driver-name>oracle.jdbc.xa.client.OracleXADataSource</driver-name>
<properties>
<property>
<name>user</name>
<value>EIS_USER</value>
</property>
</properties>
<password-
encrypted>{AES}NgayuNLgZ/g8Qtg240WCmg6rfWmMA8/s9x0ai4/gmM4=</pa
ssword-encrypted>
</jdbc-driver-params>
<jdbc-connection-pool-params>
<initial-capacity>15</initial-capacity>
<max-capacity>30</max-capacity>
<test-table-name>SQL ISVALID</test-table-name>
<statement-timeout>200</statement-timeout>
</jdbc-connection-pool-params>
<jdbc-data-source-params>
<jndi-name>ssn/jdbc/ssnDS</jndi-name>
<global-transactions-protocol>TwoPhaseCommit</global-transactions-
protocol>
</jdbc-data-source-params>
<jdbc-oracle-params>
<fan-enabled>>false</fan-enabled>
<ons-node-list></ons-node-list>
<ons-wallet-file></ons-wallet-file>
<active-gridlink>>true</active-gridlink>
</jdbc-oracle-params>
</jdbc-data-source>
```

**Table 4-3 Example of JDBC\_Data\_Source-3643-jdbc.xml.**

2. The JMS components should be created:

- A new JMS Server should be created on *Managed Server* – e.g. named *SSN-JMSServer-Core* with target the *eisServer*– without persistent store
- A new JMS Module should be created – e.g. named *SSN-SystemModule* with target the *eisServer* and **Descriptor File Name** *jms/ssn-systemmodule-jms.xml*. Two sub-deployments should be created, e.g. named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-SystemModule* with target the *eisServer* and *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-JMSServer* with target the *SSN-JMSServer*. The following resources should be created in the JMS Module:
  - a) A Connection Factory - e.g. named *SSN-ConnectionFactory* and **JNDI name** *ssn/jms/ConnectionFactory* - with **Default Delivery Mode (on sub-deployment named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-SystemModule*)**, *Non-Persistent* and *XA Connection Factory Enabled*.
  - b) Nine Queues on sub-deployment named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-JMSServer*– e.g.
    - *SSN-InQueue* with **JNDI name** *ssn/jms/IncomingQueue*,
    - *SSN-OutQueue* with **JNDI name** *ssn/jms/OutcomingQueue*,
    - *SSN-WaitQueue* with **JNDI name** *ssn/jms/WaitingForReplyQueue*,
    - *SSN-UriSource Queue* with **JNDI name** *ssn/jms/UriSourceQueue*
    - *SSN-VoyageCalculationQueue* with **JNDI name** *ssn/jms/OutcomingQueue*
    - *SSN-NotificationPropagationQueue* with **JNDI name** *ssn/jms/NotificationPropagationQueue*
    - *SSN-IncidentReportQueue* with **JNDI name** *ssn/jms/IncidentReportQueue*
    - *SSN-IncidentReportRecipientOutgoingQueue* with **JNDI name** *ssn/jms/IncidentReportTxQueue*
    - *SSN-MRSPropagationQueue* with **JNDI name** *ssn/jms/MRSPropagationQueue*

With **Delivery Mode Override** *Non-Persistent*

The queues handle

- the Request / Response messages,
- the asynchronous document downloading option for the aforementioned messages,
- the Incident Report Tx and Ack messages,
- the notification to be propagated via email,
- the voyage consolidation (PortPlus notification),
- the MRS notifications to be propagated.



- A new JMS Server should be created on *Managed Server* – e.g. named *SSN-Resources-JMSServer* with target the *eisResourcesCoreServer* – without persistent store
- A new JMS Module should be created – e.g. named *SSN-Resources-SystemModule* with target the *eisResourcesCoreServer* and **Descriptor File Name** *jms/ssn-resources-systemmodule-jms.xml*. Two sub-deployments should be created, e.g. named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-Resources-SystemModule* with target the *eisResourcesCoreServer* and *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-Resources-JMSServer* with target the *SSN-Resources-JMSServer*. The following resources should be created in the JMS Module:
  - c) A Connection Factory – e.g. named *SSN-ConnectionFactory* and **JNDI name** *ssn/resources/jms/ConnectionFactory* – with **Default Delivery Mode (on sub-deployment named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-Resources-SystemModule*), Non-Persistent** and *XA Connection Factory Enabled*.
  - d) Two Queues on sub-deployment named *BEA\_JMS\_MODULE\_SUBDEPLOYMENT\_SSN-Resources-JMSServer* – e.g.
    - *SSN-OutgoingVesselQueue* with **JNDI name** *ssn/resources/jms/OutgoingVesselQueue*,
    - *SSN-SyncVesselQueue* with **JNDI name** *ssn/resources/jms/SyncVesselQueue*

With **Delivery Mode Override** *Non-Persistent*

The queues handle

- the Announcement messages for Vessels and
- the database entries for Vessels synchronisation.

Deciding on persistent or non-persistent queues one must answer the question: In case of a server fall out, do we want to process the Announcement messages for Vessels and the database entries for Vessels synchronisation once the server has resumed operation? The queues are non-persistent.

If the system is required to process the Announcement messages for Vessels and the database entries for Vessels synchronisation after a system fall out then the queues must be defined as persistent.

It should be noted that the Notification, the Request and Response messages are processed in a synchronous manner, not placed in a queue, and thus the information they carry are processed and stored on the database directly upon receipt.

```

<jms-server>
<name>SSN-JMSServer</name>
<target>eisServer</target>
</jms-server>
<jms-server>
  <name>SSN-Resources-JMSServer</name>
  <target>eisResourcesCoreServer</target>
</jms-server>
...
<jms-system-resource>
<name>SSN-SystemModule</name>
<target>eisServer</target>
<sub-deployment>
<name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-SystemModule</name>
<target>eisCoreServer</target>
</sub-deployment>
<sub-deployment>
<name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-JMSServer</name>
<target>SSN-JMSServer</target>
</sub-deployment>
<descriptor-file-name>jms/ssn-systemmodule-jms.xml</descriptor-file-name>
</jms-system-resource>
<jms-system-resource>
  <name>SSN-Resources-SystemModule</name>
  <target>eisResourcesCoreServer</target>
  <sub-deployment>
    <name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-Resources-
SystemModule</name>
    <target>eisResourcesCoreServer</target>
  </sub-deployment>
  <sub-deployment>
    <name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-Resources-
JMSServer</name>
    <target>SSN-Resources-JMSServer</target>
  </sub-deployment>
  <descriptor-file-name>jms/ssn-resources-systemmodule-
jms.xml</descriptor-file-name>
</jms-system-resource>

```

**Table 4-4 Example of config.xml; part of JMS Resources.**

```
<?xml version='1.0' encoding='UTF-8'?>
<weblogic-jmsxmlns="http://xmlns.oracle.com/weblogic/weblogic-jms"
xmlns:sec="http://xmlns.oracle.com/weblogic/security"
xmlns:wls="http://xmlns.oracle.com/weblogic/security/wls"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.oracle.com/weblogic/weblogic-jms
http://xmlns.oracle.com/weblogic/weblogic-jms/1.1/weblogic-jms.xsd">
  <connection-factory name="SSN-ConnectionFactory">
    <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
    SystemModule</sub-deployment-name>
    <jndi-name>ssn/jms/ConnectionFactory</jndi-name>
    <default-delivery-params>
      <default-delivery-mode>Non-Persistent</default-delivery-mode>
      <default-time-to-deliver>0</default-time-to-deliver>
      <default-time-to-live>0</default-time-to-live>
      <default-priority>4</default-priority>
      <default-redelivery-delay>0</default-redelivery-delay>
      <send-timeout>10</send-timeout>
      <default-compression-threshold>2147483647</default-compression-
      threshold>
    </default-delivery-params>
    <transaction-params>
      <transaction-timeout>3600</transaction-timeout>
      <xa-connection-factory-enabled>true</xa-connection-factory-enabled>
    </transaction-params>
    <security-params>
      <attach-jmsx-user-id>>false</attach-jmsx-user-id>
    </security-params>
  </connection-factory>
  <queue name="SSN-InQueue">
    <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
    JMSServer</sub-deployment-name>
    <delivery-params-overrides>
      <delivery-mode>Non-Persistent</delivery-mode>
      <time-to-deliver>-1</time-to-deliver>
      <time-to-live>-1</time-to-live>
      <priority>-1</priority>
      <redelivery-delay>1000</redelivery-delay>
    </delivery-params-overrides>
    <delivery-failure-params>
```

```
<redelivery-limit>1</redelivery-limit>
</delivery-failure-params>
<jndi-name>ssn/jms/IncomingQueue</jndi-name>
</queue>
<queue name="SSN-NotificationPropagationQueue">
  <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
  JMSServer</sub-deployment-name>
  <delivery-params-overrides>
    <delivery-mode>Non-Persistent</delivery-mode>
    <time-to-deliver>-1</time-to-deliver>
    <time-to-live>600000</time-to-live>
    <priority>-1</priority>
    <redelivery-delay>5000</redelivery-delay>
  </delivery-params-overrides>
  <delivery-failure-params>
    <redelivery-limit>-1</redelivery-limit>
    <expiration-policy>Discard</expiration-policy>
  </delivery-failure-params>
  <jndi-name>ssn/jms/NotificationPropagationQueue</jndi-name>
</queue>
<queue name="SSN-OutQueue">
  <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
  JMSServer</sub-deployment-name>
  <delivery-params-overrides>
    <delivery-mode>Non-Persistent</delivery-mode>
    <time-to-deliver>-1</time-to-deliver>
    <time-to-live>600000</time-to-live>
    <priority>-1</priority>
    <redelivery-delay>5000</redelivery-delay>
  </delivery-params-overrides>
  <delivery-failure-params>
    <redelivery-limit>2</redelivery-limit>
    <expiration-policy>Discard</expiration-policy>
  </delivery-failure-params>
  <jndi-name>ssn/jms/OutcomingQueue</jndi-name>
</queue>
<queue name="SSN-WaitQueue">
  <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
  JMSServer</sub-deployment-name>
  <delivery-params-overrides>
    <delivery-mode>Non-Persistent</delivery-mode>
```

```
<time-to-deliver>-1</time-to-deliver>
<time-to-live>180000</time-to-live>
<priority>-1</priority>
</delivery-params-overrides>
<jndi-name>ssn/jms/WaitingForReplyQueue</jndi-name>
</queue>
<queue name="SSN-UriSourceQueue">
<sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
JMSServer</sub-deployment-name>
<delivery-params-overrides>
<delivery-mode>Non-Persistent</delivery-mode>
<time-to-deliver>-1</time-to-deliver>
<time-to-live>3600000</time-to-live>
<priority>-1</priority>
</delivery-params-overrides>
<jndi-name>ssn/jms/UriSourceQueue</jndi-name>
</queue>
<queue name="SSN-VoyageCalculationQueue">
<sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
JMSServer</sub-deployment-name>
<delivery-params-overrides>
<delivery-mode>Non-Persistent</delivery-mode>
<time-to-deliver>-1</time-to-deliver>
<time-to-live>-1</time-to-live>
<priority>-1</priority>
<redelivery-delay>5000</redelivery-delay>
</delivery-params-overrides>
<delivery-failure-params>
<redelivery-limit>1</redelivery-limit>
<expiration-policy>Discard</expiration-policy>
</delivery-failure-params>
<jndi-name>ssn/jms/VoyageCalculationQueue</jndi-name>
</queue>
<queue name="SSN-IncidentReportQueue">
<sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
JMSServer</sub-deployment-name>
<delivery-params-overrides>
<delivery-mode>Non-Persistent</delivery-mode>
<time-to-deliver>-1</time-to-deliver>
<time-to-live>-1</time-to-live>
<priority>-1</priority>
```

```

</delivery-params-overrides>
<jndi-name>ssn/jms/IncidentReportQueue</jndi-name>
</queue>
<queue name="SSN-IncidentReportRecipientOutgoingQueue">
  <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
  JMSServer</sub-deployment-name>
  <delivery-params-overrides>
    <time-to-deliver>-1</time-to-deliver>
    <time-to-live>-1</time-to-live>
    <priority>-1</priority>
    <redelivery-delay>60</redelivery-delay>
  </delivery-params-overrides>
  <delivery-failure-params>
    <redelivery-limit>2</redelivery-limit>
  </delivery-failure-params>
  <jndi-name>ssn/jms/IncidentReportTxQueue</jndi-name>
</queue>
  <queue name="SSN-MRSPropagationQueue">
    <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
    JMSServer</sub-deployment-name>
    <delivery-params-overrides>
      <delivery-mode>Non-Persistent</delivery-mode>
      <time-to-deliver>-1</time-to-deliver>
      <time-to-live>600000</time-to-live>
      <priority>-1</priority>
      <redelivery-delay>5000</redelivery-delay>
    </delivery-params-overrides>
    <delivery-failure-params>
      <redelivery-limit>1</redelivery-limit>
      <expiration-policy>Discard</expiration-policy>
    </delivery-failure-params>
    <jndi-name>ssn/jms/MRSPropagationQueue</jndi-name>
  </queue>
</weblogic-jms>

```

**Table 4-5 Example of ssn-systemmodule-jms for eisServer.**

```

<?xml version='1.0' encoding='UTF-8'?>
<weblogic-jms      xmlns="http://xmlns.oracle.com/weblogic/weblogic-jms"
xmlns:sec="http://xmlns.oracle.com/weblogic/security"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:wls="http://xmlns.oracle.com/weblogic/security/wls"

```

```
xsi:schemaLocation="http://xmlns.oracle.com/weblogic/weblogic-jms
http://xmlns.oracle.com/weblogic/weblogic-jms/1.1/weblogic-jms.xsd">
  <connection-factory name="SSN-ConnectionFactory">
    <default-targeting-enabled>true</default-targeting-enabled>
    <jndi-name>ssn/resources/jms/ConnectionFactory</jndi-name>
    <default-delivery-params>
      <default-delivery-mode>Non-Persistent</default-delivery-mode>
      <default-time-to-deliver>0</default-time-to-deliver>
      <default-time-to-live>0</default-time-to-live>
      <default-priority>4</default-priority>
      <default-redelivery-delay>0</default-redelivery-delay>
      <send-timeout>10</send-timeout>
      <default-compression-threshold>2147483647</default-compression-
threshold>
    </default-delivery-params>
    <transaction-params>
      <transaction-timeout>3600</transaction-timeout>
      <xa-connection-factory-enabled>true</xa-connection-factory-enabled>
    </transaction-params>
    <security-params>
      <attach-jmsx-user-id>false</attach-jmsx-user-id>
    </security-params>
  </connection-factory>
  <queue name="SSN-OutgoingVesselQueue">
    <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
Resources-JMSServer</sub-deployment-name>
    <delivery-params-overrides>
      <delivery-mode>Non-Persistent</delivery-mode>
      <time-to-deliver>-1</time-to-deliver>
      <time-to-live>600000</time-to-live>
      <priority>-1</priority>
      <redelivery-delay>5000</redelivery-delay>
    </delivery-params-overrides>
    <delivery-failure-params>
      <redelivery-limit>1</redelivery-limit>
      <expiration-policy>Discard</expiration-policy>
    </delivery-failure-params>
    <jndi-name>ssn/resources/jms/OutgoingVesselQueue</jndi-name>
  </queue>
  <queue name="SSN-SyncVesselQueue">
    <sub-deployment-name>BEA_JMS_MODULE_SUBDEPLOYMENT_SSN-
```

```
Resources-JMSServer</sub-deployment-name>
  <delivery-params-overrides>
    <delivery-mode>Non-Persistent</delivery-mode>
    <time-to-deliver>-1</time-to-deliver>
    <time-to-live>600000</time-to-live>
    <priority>-1</priority>
    <redelivery-delay>5000</redelivery-delay>
  </delivery-params-overrides>
  <delivery-failure-params>
    <redelivery-limit>1</redelivery-limit>
    <expiration-policy>Discard</expiration-policy>
  </delivery-failure-params>
  <jndi-name>ssn/resources/jms/SyncVesselQueue</jndi-name>
</queue>
</weblogic-jms>
```

Table 4-6 Example of ssn-resources-systemmodule-jms for eisResourcesCoreServer.

3. The Mail Session which enables EIS applications to access a pre-configured javax.mail.Session object through JNDI.

Select to create a new Mail Session.

Configuration page: Configure

- the name for the Mail Session (e.g. SSNMailSession).
- The JNDI name must be JNDI=ssn/SSNMail
- Properties: set the following properties like:
  - mail.transport.protocol=smtp;
  - mail.smtp.host=172.22.250.244; (IP address of the Email server)
  - mail.smtp.user=Safe-Sea-Net; (existing email account)
  - mail.from=Safe-Sea-Net@emsa.europa.eu; (email account)
  - Select as target the *Managed* Servers named *eisServer*; the server hosts the ssn-xmlprotocol-app application that provides the SSN XML functionality / Web services.

```
<mail-session>
<name>SSNMailSession</name>
<target>eisServer</target>
<jndi-name>ssn/SSNMail</jndi-name>
<properties>mail.from=Safe-Sea-Net@emsa.europa.eu; mail.smtp.user=Safe-Sea-Net@emsa.europa.eu;
mail.smtp.port=25;mail.transport.protocol=smtp;mail.smtp.host=172.22.250.244</properties>
```



```
</mail-session>
```

Table 4-7 Example of config.xml; part of Mail Session.

1. The [JAX-RS 2.0](#) deployable library. The *Managed* Servers named *eisCoreServer* and *eisResourcesCoreServer* require the Jersey library located on `${WLS_HOME}/common/deployable-libraries/jax-rs-2.0.war`;
2. The JSF deployable library. The *Managed* Servers named *eisConsoleServer* hosts the `ssn-webconsole-app` application requires the JSF library located on `${WLS_HOME}/common/deployable-libraries/jsf-1.2.war`; it should be deployed before the SSN web console group of applications - example of wls config.xml part

```
<library>
<name>jsf#1.2@1.2.9.0</name>
<target>eisConsoleServer</target>
<module-type>war</module-type>
<source-path>/bea/bea1033/wlserver_10.3/common/deployable-libraries/jsf-
1.2.war</source-path>
<security-dd-model>DDOnly</security-dd-model>
</library>
```

Table 4-8 Example of config.xml; part of JSF library deployment.

**Note:** The database connection properties (database name, host, port, database user name and password) in this JDBC data source should be tested to make sure the installation goes smoothly.

The number of physical connections of the connection pool is related to the usage of the SSN Web application –i.e. the number of concurrent users and their activity. At first, the suggested **maximum number of physical connections** is 30. This number should be adjusted in time to accommodate more users as more Member states will become operational and more users will be using the system.

### Domain environment variables

The `log4j.properties`, `configuration.properties` and `star.properties` should exist on `${DOMAIN_HOME}` directory; the `configuration.properties` file includes the mapping of IdM roles to EIS tasks.

Set 'GMT' timezone in Weblogic:

Modify the `setDomainEnv.sh` file; modify the `JAVA_PROPERTIES` property as shown below

```
JAVA_PROPERTIES="-Dplatform.home=${WL_HOME} -Dwls.home=${WLS_HOME} -
Dweblogic.home=${WLS_HOME} -Duser.timezone=GMT"
```

1. Edit the `${DOMAIN_HOME}/bin/setDomainEnv.sh` to add the two (2) needed environment variables presented in

```
# configure the location of the log4j.properties file
```

```
LOG4J_CONFIG_FILE=$DOMAIN_HOME/log4j.properties
# set timezone
JAVA_PROPERTIES="-Dplatform.home=${WL_HOME} -
Dwls.home=${WLS_HOME} -Dweblogic.home=${WLS_HOME} -
Duser.timezone=GMT "
export JAVA_PROPERTIES
```

**Table 4-9 Example of setDomainEnv.sh.**

## 5 Post-installation issues

---

### 5.1 Install SSN Database

All 4 schemas must be created namely:

- EIS\_ADMIN;
- EIS\_USER;
- REF\_ADMIN.

#### 5.1.1 Step 1: Create Tablespaces

**Performed by:** SSN Administrator using Oracle user *SYS* or *SYSTEM* – i.e. DBA privileges.

**EIS\_ADMIN Scripts:**

"1-tbs\_eis.sql" create EIS specific tablespaces:

- EIS\_DATA SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
- EIS\_INDX SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M

"2-tbs\_log.sql" create EIS logging tablespaces per partition:

- EIS\_LOG\_ICTX SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
- EIS\_LOG\_INDX SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
- EIS\_LOG\_YYYYMM SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M  
(one per partition)

"3-tbs\_not.sql" create EIS notifications specific tablespaces per partition:

- EIS\_NOT\_INDX SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
- EIS\_NOT\_YYYYMM SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M  
(one per partition)

"4-directory.sql" create the SSN\_IMP\_DIR directory used by the UN Location upload procedure. Replace xyz with the datafile path (e.g. /oradata/ora11g/EIS11G/SSN\_IMP\_DIR).

**REF\_ADMIN Scripts:**

"1-tbs\_ref.sql" create REF specific tablespaces:

- REF\_DATA SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
- REF\_INDX SIZE 100M AUTOEXTEND ON NEXT 100M MAXSIZE 2000M

#### 5.1.2 Step 2: Create schema owners and application users

**Performed by:** SSN Administrator using Oracle user *SYS* or *SYSTEM* – i.e. DBA privileges.

**EIS\_ADMIN, EIS\_USER, REF\_ADMIN Scripts:**

"5-eis\_admin.sql" create EIS\_ADMIN user and grant necessary permissions and quotas.

"6-eis\_user.sql" create EIS\_USER user and grant necessary permissions and quotas.

**REF\_ADMIN Script:** "2-ref\_admin.sql" create REF\_ADMIN user and grant necessary permissions and quotas.

### 5.1.3 Step 4: Create schema objects

#### **EIS\_ADMIN**

**Pre-requisite:** the EIS\_ADMIN user objects have been imported from SSN-EISv1.9 production database to the new SSN-EIS pre-production and production databases (for test and training the user objects from the corresponding environment shall be imported).

**Upgrade** from SSN-EISv1.9 to SSN-EISv2.x

**Performed by:** SSN Administrator logon the SSN Database as EIS\_ADMIN schema owner (Oracle user EIS\_ADMIN)

From the "SSNv2.x-Integrated-Scripts.zip" ->eis\_admin folder execute the script "eis\_admin\_main\_v2.x.sql" to execute the referenced scripts in sequence:

- "1.eis\_admin\_tbl.sql";
- "2.eis\_admin\_typ.sql";
- "3.eis\_admin\_usr.sql";
- "4.eis\_admin\_data.sql";
- "5.eis\_admin\_pkg.sql";
- "6.eis\_admin\_trg.sql";
- "7.eis\_admin\_vw.sql";

NOTE: the "SSNv2.x-Integrated-Scripts.zip" ->eis\_admin folder contains 2 additional scripts that must be executed as following:

- "8.eis\_admin\_ref\_syn\_v2.x.sql" must be executed after the REF\_ADMIN upgrade
- "9.eis\_admin\_stires\_syn\_v2.x.sql" must be executed after the STIRES\_SCHEMA upgrade.

#### **REF\_ADMIN**

**Pre-requisite:** the REF\_ADMIN user objects have been imported from SSN-REFv1.9 production database to the new SSN-REFv2.x pre-production and production databases (for test and training the user objects from the corresponding environment shall be imported).

**Upgrade** from SSN-REFv1.9 to SSN-REFv2.x

**Performed by:** SSN Administrator logon the SSN Database as REF\_ADMIN schema owner (Oracle user REF\_ADMIN)

From the "SSNv2.x-Integrated-Scripts.zip" ->ref\_admin folder execute the script "ref\_admin\_main\_v2.x.sql" to execute the referenced scripts in sequence:

- "1.ref\_admin\_tbl.sql";
- "2.ref\_admin\_syn.sql";
- "3.ref\_admin\_pkg.sql";

- "4.ref\_admin\_usr.sql";
- "5.ref\_admin\_data.sql";

## **EIS\_USER**

**Pre-requisite:** the EIS\_ADMIN schema is upgraded

**Performed by:** SSN Administrator logon the SSN Database as *EIS\_USER* schema owner (Oracle user *EIS\_USER*)

From the "SSNv2.x-Integrated-Scripts.zip" -> eis\_user folder execute the script "eis\_user\_syn\_v2.x.sql".

### **5.1.4 Verification**

The installation process of the database objects was successful if at the end of Step 4: Create schema objects, no errors were reported. In any case, the execution logs (named "[script name].lst" that are stored by default in the [HDD]:\[ORACLE Home]\bin directory) should be checked for any error message.

In order to verify the validity of the *EIS\_ADMIN* objects that were created, the following statements can be executed from the SQL\*Plus prompt by the user *EIS\_ADMIN*:

1. *SELECT OBJECT\_NAME*  
*FROM USER\_OBJECTS*  
*WHERE STATUS = 'INVALID' ;*

The statement will select the invalid database objects contained in the schema associated with the user *EIS\_ADMIN*. If no objects are selected the message "no rows selected" will be displayed which means that all the objects have been created successfully and are valid.

2. *DESC NOTIFICATIONS;*

The statement will describe the *EIS\_ADMIN.NOTIFICATIONS* table. If the object has been created successfully the description of the table that is the list of its columns will be printed on the screen. In case the object is not created the error: "ORA-04043: object NOTIFICATIONS does not exist" will be displayed.

3. *SELECT COUNT(1)*  
*FROM NOTIFICATIONS;*

The statement will count the *notifications* info stored on the SSN Database.

4. *SELECT COUNT(1)*  
*FROM LOCATIONS;*

The statement will count the *Locations data* info on the SSN Database.

In order to verify the validity of the *REF\_ADMIN* objects that were created, the following statements can be executed from the SQL\*Plus prompt by the user *REF\_ADMIN*:

1. *SELECT OBJECT\_NAME*  
*FROM USER\_OBJECTS*

```
WHERE STATUS = 'INVALID' ;
```

The statement will select the invalid database objects contained in the schema associated with the user *REF\_ADMIN*. If no objects are selected the message "*no rows selected*" will be displayed which means that all the objects have been created successfully and are valid.

2. *SELECT COUNT(1)*

```
FROM RVR_VESSELS;
```

The statement will count the *vessels* info stored on the SSN-REF Database.

In order to verify the validity of the *EIS\_USER* synonyms and grants, the following statements can be executed from the SQL\*Plus prompt by the user *EIS\_USER*:

```
SELECT COUNT(1)
```

```
FROM VOYAGES; (or any other table in the EIS_ADMIN schema)
```

The statement will select the *vessels* info stored on the SSN Database.

In order to verify the validity of the *SSN\_USER* synonyms and grants, the following statements can be executed from the SQL\*Plus prompt by the user *SSN\_USER*:

```
SELECT *
```

```
FROM APPLICATION_PARAMETERS;
```

The statement will select the *application parameters* info stored on the SSN Database.

## 5.2 Deployment of the SSN Applications

### 5.2.1 Deploy SSN Application

**Performed by:** SSN Administrator

Attention: Before you will proceed with the deployment, make sure that the database is ready for use.

Copy

- the *ssn-core-app.ear*, *ssn-seg-ws.war*, *ssn-xmlprotocol-app.ear* files in the *\$ORACLE\_HOME/user\_projects/domains/\$DOMAIN\_NAME/servers/eisServer/upload* directory of the Oracle WebLogic server;
- *ssn-web-common.war*, *ssn-application-management-console.war*, *ssn-find-notification-console.war*, *ssn-send-notification-console.war*, *ssn-reports-statistics-console.war* files in the *\$ORACLE\_HOME/user\_projects/domains/\$DOMAIN\_NAME/servers/eisConsoleServer/upload* directory of the Oracle WebLogic server

Using the Administration console (Type [http://\[AdminServer:7001\]/console](http://[AdminServer:7001]/console) in Chrome (or Firefox), e.g. <http://172.22.250.21:7001/console>).

Deploy the EIS applications on the ORACLE WebLogic server.

- 1) Deployment for the first time

In order to deploy the shared library (ssn-web-common.war), you should perform the following steps:

- Go to the link "**Deployments**"
- Select the button "**Install**"
- Go to the link "**upload your file(s)**"
- Select the button "**Next**"
- Select "**ssn-web-common.war**" and "**Next**"
- Choose the option "Install this deployment as a library"
- Select as target the *Managed* Server named *eisConsoleServer*
- Select the button "**Finish**", "**Save**"
- The message: "Settings updated successfully." will be displayed.
- Select the button "**Save**"

For the rest of deployments unit and for each of them (4 EAR and 4 WAR files), you should:

- Go to the link "**Deployments**"
- Select the button "**Install**"
- Go to the link "**upload your file(s)**"
- Select the button "**Next**"
- Select one of them and "**Next**"
- Choose the option "Install this deployment as an application"
- Select as target the *Managed* Server named
  - *eisServer* for ssn-core-app, ssn-seg-ws.war, ssn-xmlprotocol-app
  - *eisConsoleServer* for ssn-application-management-console, ssn-find-notification-console, ssn-send-notification-console, ssn-reports-statistics-console
- Select the button "**Finish**", "**Save**"
- The message: "Settings updated successfully." will be displayed.
- Select the button "**Save**"

After doing that, you should:

- Go to the link "**Deployments**"

At this stage, you should see the 3 ear files and 4 war files with the State "**Prepared**"

- Select all of them, and press the button "**Start**" -> "**Servicing all requests**"
- Select "**Yes**"

Please note that the shared library (ssn-web-common) cannot be explicitly stopped or started; it is only used by other applications.

At this stage, the message: "Start requests have been sent to the selected Deployments." will be displayed and the 3 ear files with the State **"Active"**. The deployment is done.

**Note:** Order of WebLogic servers startup: the *eisServerWebLogic* server hosts the *ssn-core-app* application should be started at first; then the others servers may be started at any order.

In case that different WebLogic domains host the *eisServer* and *eisConsoleServer* Managed servers the Cross Domain Security Between them should be configured to overcome the wls error: [Security:090398] Invalid Subject: principals=[weblogic, Administrators, ...]; on application startup using the WebLogic console.

## 2) Upgrade the deployment

- Go to the link **"Deployments"**
- Select all of them, and press the button **"Stop" -> "Force Stop Now"**
- Select **"Yes"**

At this stage, you should see the 3 ear files with the State **"Prepared"**

- Select all of them, and press the button **"Delete"**
- Select **"Yes"**

At this stage, you should do the data transfer (ear files) to the server and then deploy again the files (refer to the "Deployment for the first time").

**Fallback:** In case that the aforementioned URL when requested from a valid Web Browser returns an error the following actions must be taken:

1. Verify the syntax of the URL;
2. Verify the connection pool and the data source creation;
3. Verify that the all the prerequisites have been satisfied with focus on the configuration of the ORACLE WebLogic Application server.

A similar way could be applied for the deployment of the Resources applications (refer also to Annex B Readme.txt v).

## 5.2.2 Verification

The deployment process of a Web Application was successful if at the end of the procedure described in section 5.2.1, the application specific URL when requested from a valid Web browser opens the login/main page of:

- EIS Send Notifications console URL: `http://[eisConsoleServer:7001]/ssn-send-notification-console/`
- EIS Find Information console URL: `http://[eisConsoleServer:7001]/ssn-find-notification-console/`
- SSN Application Management console URL: `http://[eisConsoleServer:7001]/ssn-application-management-console/`
- SSN Reports and Statistics console URL: `http://[eisConsoleServer:7001]/ssn-reports-statistics-console/`

The XML Application provides



- the EIS Web Services and on URL: [http://\[eisServer:7001\]/ssn-xmlprotocol-ws/ssnmessageservice](http://[eisServer:7001]/ssn-xmlprotocol-ws/ssnmessageservice); the EIS WSDL file may be checked via [http://\[eisServer:7001\]/sn-xmlprotocol-ws/ssnmessageservice/message.wsdl](http://[eisServer:7001]/sn-xmlprotocol-ws/ssnmessageservice/message.wsdl)
- a servlet to submit the EIS messages in XML format; the XML protocol functionality on URL: [http://\[ssn\\_server:7001\]/ssn-xmlprotocol-v3-web/ssn.do](http://[ssn_server:7001]/ssn-xmlprotocol-v3-web/ssn.do)

A similar way could be used for the verification of the Resources applications (refer also to Annex B Readme.txt v).

## 6 Installation Media

---

This section provides an overview of the SSN deployment files and database scripts.

⇒ SSN and SSN-REF schemas on the Team Forge >File Releases > DB Trans >DB Trans EIS v4.x contains the folders (zipped):

- eis\_admin: contains the scripts listed in section 5 for the EIS\_ADMIN schema upgrade.
- eis\_user: contains the scripts listed in section 5 for the EIS\_USER schema upgrade.
- ref\_user: contains the scripts listed in section 5 for the REF\_ADMIN schema upgrade.

⇒ SSN Applications are generated from the delivered sources (maven projects built using the mvn command on root directory); the next artifacts produced:

- ssn-core-app.ear: this ear provides the eis core functionality;
- ssn-seg-ws.war: this war provides the Voyage and Enrichment services.
- the SSN web console group of applications, which is comprised of:
  - the ssn-web-common.war which includes libraries shared among the SSN web consoles listed below;
  - the ssn-send-notification-console.war which provides the Send Notifications web application on /ssn-send-notification-console url;
  - the ssn-find-notification-console.war which provides the Find Notifications web application on /ssn-find-notification-console url;
  - the ssn-application-management-console.war which provides the Application Management Console web application on /ssn-application-management-console url.
  - the ssn-reports-statistics-console.war which provides the Reports and Statistics web application on /ssn-reports-statistics-console url
- ssn-xmlprotocol-app.ear: this ear provides
  - the XML protocol functionality on /ssn-xmlprotocol- web/ssn.do url;
  - the Web Services functionality on /ssn-xmlprotocol- ws/ssnmessageservice url;



---

## Annex B Readme.txt v4.2.0

---

```
# EISv4.2.0
- 20.03.2019
- Environments: Prod, Test, preProd

- Purpose of release:

- SC#10
artf51879
artf51880
artf54242
artf54244
artf51881
artf51882
artf52592
artf52593
artf52594
artf51884
artf51885
artf51883
artf51886
artf54247
artf48713: web applications logout URL is /*context-root*/logout.html
artf54248
artf54250
- Bug fix
artf56759

BUILD Instructions
---
Prerequisites:
- maven version 3.6.0
- JDK version 1.8

run the maven (version 3.6.0) command below from the root directory of the delivered sources on
[GitLab](https://gitlab.com/emsa/SSN/sources/tree/feature-v4.2.0).

(artifactory to be updated with ojdbc8.jar [Certified with JDK
8](http://www.oracle.com/technetwork/database/features/jdbc/jdbc-ucp-122-3110062.html)
`mvn install:install-file -Dfile=<path-to-file> -DgroupId=com.oracle -DartifactId=ojdbc8 -Dversion=12.2.0.1.0
-Dpackaging=jar`
)

`mvn clean install`

Then, for the generation of the Vessels Operational Console
ssn-vessel-operational-console run from the ssn-vessel-console/ directory
`mvn -P ssn-vessel-operational-console package`

## 1) UPDATE DATABASE SCHEMAS
```

```
---
Prerequisites:
  - DB Trans EIS v4.1.0.2
  - DB Trans REF v4.1.0.0

a. EIS_ADMIN (package: DB Trans EIS v4.2.0)
Connect as user EIS_ADMIN using sqlplus or an alternative IDE.
The values of APPLICATION_PARAMETERS Database table for the CCD WS configuration with codes
  - `country_information_service_url`
  - `country_information_service_user`
  - `country_information_service_password`
should be edited to define the corresponding values of CCD URL and account.
Execute the scripts:
  - 01-eis_admin_tbl.sql
  - 02-eis_admin_pkg.sql
  - 03-eis_admin_data.sql
  - 04-eis_admin_views.sql

Execute the script for SSO objects cleanup:
  - 05-eis_admin_sso_clean.sql

Execute the script for Initial Data upload to EIS_ADMIN schema PARTIES database tables using CSV
file:
  - 06-eis-admin-idm-upload.sql
Then, copy the CSV file name with IDM data on SSN_IMP_DIR Oracle Directory and
edit the next sql statement (block) to define the CSV file name (e.g. idmexport.csv) and execute it
',
    DECLARE
      P_FILENAME_IN VARCHAR2(200);
    BEGIN
      P_FILENAME_IN := 'idmexport.csv'; -- the CSV file name with IDM data; it should be
located on SSN_IMP_DIR Oracle Directory;
      EIS_IDM_DATA_UPLOAD_PKG.UPLOAD_IDM_DATA_SP(P_FILENAME_IN          =>
P_FILENAME_IN);
    END;
  /
',

b. EIS_USER (package: DB Trans EIS v4.2.0)
Connect as user EIS_USER using sqlplus or an alternative IDE.
Execute the script:
  - 01-eis_user_synonyms.sql
Execute the script for SSO synonyms cleanup:
  - 02-eis_user_sso_clean.sql

c. REF_ADMIN (package: DB Trans REF v4.2.0)
Connect as user REF_ADMIN using sqlplus or an alternative IDE.
Execute the script:
  - 01-ref_admin_pkg.sql
Execute the script for SSO objects cleanup:
  - 02-ref_admin_sso_clean.sql

## 2) SSN-EIS Applications (package: WEB EIS v4.2.0)
```

```
---

Deploy the artifacts on EIS domain Oracle WebLogic Server 12c (12.1.3) running JDK 1.8.
#### Configuration (domain level):
- Set 'GMT' timezone in Weblogic - set the Java option -Duser.timezone=GMT (e.g. bin/setDomainEnv.sh);
- Configuring Oracle WebLogic Server to Disable Authentication (domain level [Disabling Oracle WebLogic
Server's
authentication](https://docs.oracle.com/cd/E58500_01/pt854pbh1/eng/pt/tfee/task_ConfiguringOracleWebLog
icServertoDisableAuthentication-ad7e32.html#topofpage) allows authentication to be passed through and
handled by EIS applications for REST services)

- [Enable JPA 2.1 in WebLogic Server
12.1.3](http://www.oracle.com/webfolder/technetwork/tutorials/obe/fmw/wls/12c/01-06-004-
JavaEE7andWebLogicServer/javaee7.html).
Create a PRE_CLASSPATH variable that prepends JPA 2.1 JAR files to the classpath (e.g. add on
bin/setUserOverrides.sh the next two lines)

>PRE_CLASSPATH=${MW_HOME}/oracle_common/modules/javax.persistence_2.1.jar:${WL_HOME}/mod
ules/com.oracle.weblogic.jpa21support_1.0.0.0_2-1.jar
>export PRE_CLASSPATH

- For Cluster environment, a new APPLICATION_PARAMETER named SSN_EIS_CLUSTER_SERVER_NAMES
is added to provide the comma separated names of servers members of cluster.

#### eisCoreServer
**Configuration**:
- The library Jersey 2.5.1 [(JAX-RS 2.0 Reference
Implementation](https://docs.oracle.com/middleware/1213/wls/RESTF/use-jersey20-ri.htm#RESTF290))
should be registered;
used by ssn-seg-ws-4.2.0.war
- a new JMS Queue was created (jndi name ssn/jms/MRSPropagationQueue) on version 3.4.0.4
- JMS Topic VoyageNotificationTopic ((jndi name topic/VoyageNotificationTopic) not used on v4.0

**Deployments**:

1. ssn-core-app-4.2.0.ear with deployment-order 90 ; this ear provides
a. the core functionality via ssn-core-ejb ;
b. ssn-message-web on /ssn-message-web url, providing a REST-based,
HTTP interface to EIS, currently used by SSN-GI (no change)
A properties file named **configuration.properties** is required in weblogic's classpath. This file includes the
mapping of IdM roles to EIS tasks.

2. ssn-xmlprotocol-app-4.2.0.ear; this ear provides
a. the XML protocol functionality on /ssn-xmlprotocol-web/ssn.do url
b. the Web Services functionality on /ssn-xmlprotocol-ws/ssnmessageservice url
this application provides
the SSN MessageService WSDL file on
/ssn-xmlprotocol-ws/ssnmessageservice/message.wsdl
the SSN xsd version 4.0 file on
/ssn-xmlprotocol-ws/ssnmessageservice/ssn_4_0.xsd
A properties file named **star.properties** is required in weblogic's classpath for MRS push functionality.

3. ssn-seg-ws-4.2.0.war; this war provides
a. Enrichment query Service on /ssn-seg-ws/enrichment/ for paths
- "voyages"
```

```
- "incidents"
- "MRS"
- "exemptions"
b. the segservice.WSDL file on /ssn-seg-ws/segservice/segservice.wsdl and the
corresponding
    seg_4_0.xsd on /ssn-seg-ws/segservice/seg_4_0.xsd
    ssn_4_0.xsd on /ssn-seg-ws/segservice/ssn_4_0.xsd
A properties file named **imdate.properties** is required in weblogic's classpath.
This file includes the properties named proxy_host, proxy_port and proxy_transformation_url for Reverse
Proxy definition.

##### eisConsoleServer

**Resources**:
- The JDBC Data Source named SSN-JDBC Data Source with JNDI name as ssn/jdbc/ssnDS

Deployments:

    1. Library jsf version 1.2 ( ` $WL_HOME/common/deployable-libraries/jsf-1.2.war ` ) should be
    deployed as library to provide the required JSF functionality.
    2. ssn-web-common-4.2.0.war as a library with name ssn-web-common#4.2@4.2.0; this war
    provides
        java libraries shared among the SSN console applications
    3. ssn-application-management-console-4.2.0.war; this war provides
        the Application Management Console web application on /ssn-application-management-
        console url; logout URL is /ssn-application-management-console/logout.html.
    4. ssn-find-notification-console-4.2.0.war; this war provides
        the Find Information web application on /ssn-find-notification-console url; logout URL is /ssn-
        find-notification-console/logout.html.
    5. ssn-send-notification-console-4.2.0.war; this war provides
        the Send Notifications web application on /ssn-send-notification-console url; logout URL is
        /ssn-send-notification-console/logout.html.
    6. ssn-reports-statistics-console-4.2.0.war; this war provides
        the Reports & Statistics web application on /ssn-reports-statistics-console url; logout URL is
        /ssn-reports-statistics-console/logout.html.

*NOTE*: the aforementioned web applications logout URL is /*context-root*/logout.html.

##### eisResourcesCoreServer

**Configuration**:
- The library Jersey 2.5.1 [(JAX-RS 2.0 Reference
Implementation)](https://docs.oracle.com/middleware/1213/wls/RESTF/use-jersey20-ri.htm#RESTF290)
should be registered;
    used by ssn-ship particulars-ws

**Deployments**:

    1. ssn-resources-core-app-4.2.0.ear; with deployment-order 90
        it requires liferay_roles.properties;
    - this ear provides the CSD, OSD, OOD, OLD core functionality
    2. ssn-ship particulars-ws-4.2.0.war;
    - this war provides
        a. the Web Services functionality on /ssn-ship particulars-ws/ssnvessel service url
            - this application provides
                the SSN VesselService WSDL file on
                /ssn-ship particulars-ws/ssnvessel service/vessel.wsdl
```

the SSN Ship\_Particulars xsd file on  
/ssn-shipparticulars-ws/ssnvesselsservice/SSN\_Ship\_Particulars\_Exchange.xsd

b. STAR query Service /ssn-shipparticulars-ws/csd/ for paths "current/" - "history/" - "validate/" - "vessels/"

the STAR\_Ship\_Particulars\_Exchange.xsd xsd file on /ssn-shipparticulars-ws/ssnvesselsservice/STAR\_Ship\_Particulars\_Exchange.xsd

the "current" and "history" methods take CSDID as parameter (mandatory)

the "validate" method takes CSDID any of the next parameters

- "IMO"
- "MMSI"
- "CallSign"
- "IRNumber"
- "ERNumber"
- "XRNumber"

the "vessels" method takes the parameters named offset and limit;

the HTTP Header Range could also be used to define the Content-Range token (default - on absence - items)

c. STAR notify operation (POST) for path "notify/" for the provision of new ship particulars according to STAR\_Ship\_Particulars\_Exchange.xsd (MS2SSN\_ShipParticulars\_Not message)

3. ssn-subscriber-ws-4.2.0.war; this war provides the Web Services functionality on  
/ssn-subscriber-ws/DataSubscriberLocationService url for CLD announcements  
/ssn-subscriber-ws/DataSubscriberOrganisationService url for COD announcements  
/ssn-subscriber-ws/CountryBaseRegistryAnnouncementService url for CCD announcements

A properties file named `*star.properties*` is required in weblogic's classpath.

**\*NOTE\***: Three new application parameters were added on APPLICATION\_PARAMETERS Database table for the CCD WS configuration

country\_information\_service\_url  
country\_information\_service\_user  
country\_information\_service\_password

The new application parameter added on APPLICATION\_PARAMETERS Database table with code `**country_information_service_initial_upload**` is used for the countries data initial upload; its initial value should be `**true**`.

##### eisIdmServer

**\*\*Deployments\*\***:

1: ssn-idm-ws-4.2.0.war;  
- this war provides the IDM Web Services functionality

##### eisResourcesConsoleServer

**\*\*Resources\*\***:

- The JDBC Data Source named SSN-JDBC Data Source with JNDI name as ``ssn/jdbc/ssnDS``

**\*\*Deployments\*\***:

1. Library jsf version 1.2 (``$WL_HOME/common/deployable-libraries/jsf-1.2.war``) should be deployed as library  
to provide the required JSF functionality.

2. ssn-web-common-4.2.0.war; to be deployed as library with `<name>ssn-web-common#4.2@4.2.0</name>`  
- this war provides the common functionality used by the following web console applications

3. ssn-vessel-operational-console-4.2.0.war; to be deployed as application



- this war provides the Vessels Console for Operational Registry web application on /ssn-vessel-operational-console url; logout URL is /ssn-vessel-operational-console/logout.html.

4. ssn-vessel-base-console-4.2.0.war; to be deployed as application

- this war provides the Vessels Console for CSD web application on `/ssn-vessel-base-console url` ; logout URL is /ssn-vessel-base-console/logout.html.

5. ssn-geo-console-4.2.0.war; to be deployed as application

- this war provides the Location/Area/Country Console for Operational Registry web application on /ssn-geo-console url; logout URL is /ssn-geo-console/logout.html.

**\*NOTE\*:** the aforementioned web applications logout URL is /\*context-root\*/logout.html.

## Annex C Sample of configuration.properties file

```
#Note 1: No source or location restrictions apply to children-dependent tasks (i.e.
HAZMAT/WASTE/SECURITY/BUNKERS_NOTIFIER, HAZMAT/WASTE/SECURITY/BUNKERS_REQUESTOR).
#Restrictions apply only to their parent/master task (i.e. PORTPLUS_NOTIFIER, SHIPCALL_REQUESTOR).
#However, if restrictions are assigned, they will not be taken into account. SSN EIS application only checks for
the existence of such tasks in order to notify/request for respective details.
#Note 2: SHIPCALL_REQUESTOR, EXEMPTION_REQUESTOR can also have source restriction (like
ALERT_*_REQUESTOR tasks) - not only location restriction
#Note 3: USER_MANAGER for configuring interfaces, LOCATION_MANAGER/LOCATION_DOWNLOAD for
viewing/editing/downloading operational temporary locations
#as well as respective tasks for OSD/CSD functions (i.e. VESSEL_MANAGER for uploading, validating SHT,
verifying and validate,
#CSD_ADMIN EMSA for uploading/validating MARS, MS vessels, pending CSD Update, CSD configuration) shall
also be mapped/defined (please refer to indicative examples at the end of properties file)
#####
#####
#####
#role,task,source restriction level,source regional agreement code,location restriction level,regional agreement
code/duty code
ROL_PROVIDE_PORT_CALL,PORTPLUS_NOTIFIER,None,,User's country,
ROL_PROVIDE_PORT_CALL,HAZMAT_NOTIFIER,None,,User's country,
ROL_PROVIDE_PORT_CALL,WASTE_NOTIFIER,None,,User's country,
ROL_PROVIDE_PORT_CALL,SECURITY_NOTIFIER,None,,User's country,
ROL_PROVIDE_PORT_CALL,BUNKERS_NOTIFIER,None,,User's country,
ROL_PROVIDE_PORT_CALL_PORT,PORTPLUS_NOTIFIER,None,,Specific locations,SSN Port
ROL_PROVIDE_PORT_CALL_PORT,HAZMAT_NOTIFIER,None,,Specific locations,SSN Port
ROL_PROVIDE_PORT_CALL_PORT,WASTE_NOTIFIER,None,,Specific locations,SSN Port
ROL_PROVIDE_PORT_CALL_PORT,SECURITY_NOTIFIER,None,,Specific locations,SSN Port
ROL_PROVIDE_PORT_CALL_PORT,BUNKER_NOTIFIER,None,,Specific locations,SSN Port
ROL_PROVIDE_PORT_CALL_NOTIF,PORTPLUS_NOTIFIER,None,,User's country,
ROL_PROVIDE_MRS_REPORT,SHIP_MRS_NOTIFIER,None,,None,
ROL_PROVIDE_AIS_SHIP_NOTIFICATION,SHIP_AIS_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_BANNED_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_FAILED_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_INSURANCE_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_LFC_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_PILOT_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_POLREP_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_SITREP_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_VTS_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_WASTE_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT,ALERT_OTHERS_NOTIFIER,None,,None,
ROL_PROVIDE_INCIDENT_REPORT_POLREP,ALERT_POLREP_NOTIFIER,None,,None,
ROL_PROVIDE_EXEMPTION,EXEMPTIONS_NOTIFIER,None,,Specific locations,SSN Port
ROL_VIEW_VOYAGE,SHIPCALL_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_HAZMAT,SHIPCALL_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_HAZMAT,HAZMAT_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_SECURITY,SHIPCALL_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_SECURITY,SECURITY_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_WASTE,SHIPCALL_REQUESTOR,None,,User's country,
ROL_VIEW_VOYAGE_WASTE,WASTE_REQUESTOR,None,,None,
ROL_VIEW_VOYAGE_BUNKERS,SHIPCALL_REQUESTOR,None,,None,
```

ROL\_VIEW\_VOYAGE\_BUNKERS,BUNKERS\_REQUESTOR,None,,None,  
ROL\_VIEW\_VOYAGE\_HAZMAT\_BUNKERS\_PORT,SHIPCALL\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_HAZMAT\_BUNKERS\_PORT,HAZMAT\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_HAZMAT\_BUNKERS\_PORT,BUNKERS\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_SECURITY\_PORT,SHIPCALL\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_SECURITY\_PORT,SECURITY\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_WASTE\_PORT,SHIPCALL\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_VOYAGE\_WASTE\_PORT,WASTE\_REQUESTOR,None,,Specific locations,SSN Port  
ROL\_VIEW\_MRS\_REPORT,SHIP\_MRS\_REQUESTOR,Countries list,XB,User's country,  
ROL\_VIEW\_AIS\_SHIP\_NOTIFICATION,SHIP\_AIS\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_BANNED\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_FAILED\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_INSURANCE\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_LFC\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_PILOT\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_POLREP\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_SITREP\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_VTS\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_WASTE\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,ALERT\_OTHERS\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT,INCIDENT\_REP\_RECIPIENT,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT\_MONTENEGRO,ALERT\_POLREP\_REQUESTOR,None,,None,  
ROL\_VIEW\_INCIDENT\_REPORT\_POLREP\_BALTIC,ALERT\_POLREP\_REQUESTOR,Countries list,XX,None,  
ROL\_VIEW\_INCIDENT\_REPORT\_POLREP\_BSEA,ALERT\_POLREP\_REQUESTOR,Countries list,XB,None,  
ROL\_VIEW\_INCIDENT\_REPORT\_POLREP\_MED,ALERT\_POLREP\_REQUESTOR,Countries list,XM,None,  
ROL\_VIEW\_EXEMPTION,EXEMPTIONS\_REQUESTOR,Countries list,XH,None,  
ROL\_RECEIVE\_NOT\_SHIP\_PASSING\_THROUGH\_AREAS,SAT\_REQUESTOR,None,,None,  
ROL\_RECEIVE\_INCIDENT\_REPORT\_BY\_EMAIL,INCIDENT\_REP\_RECIPIENT\_EMAIL,None,,None,  
ROL\_RECEIVE\_VESSELS\_STATUS\_BY\_EMAIL,VESSEL\_STATUS\_IND\_RECIPIENT,None,,None,  
ROL\_VIEW\_EIS\_REFERENCE\_DATA,BANNED\_VESSEL\_DOWNLOAD,None,,None,  
ROL\_VIEW\_EIS\_REFERENCE\_DATA,SHT\_VESSEL\_DOWNLOAD,None,,None,  
ROL\_VIEW\_EIS\_REFERENCE\_DATA,DETAINED\_VESSEL\_DOWNLOAD,None,,None,  
ROL\_VIEW\_SSN\_LOGS\_STATS,LOGS\_SEARCH,None,,None,  
ROL\_VIEW\_SSN\_LOGS\_STATS,FREE\_TEXT\_SEARCH,None,,None,  
ROL\_VIEW\_SSN\_LOGS\_STATS,SAT\_REQUESTOR,None,,None,  
ROL\_MONITOR\_CONFIG\_EIS,EIS\_MONITOR\_JMSQUEUE,None,,None,  
ROL\_MONITOR\_CONFIG\_EIS,EIS\_MONITOR\_USERACTIVITY,None,,None,  
ROL\_MONITOR\_CONFIG\_EIS,STIRES\_VIEWER\_GIS\_VIEW\_GEOPICTURE,None,,None,  
ROL\_ADMIN\_EIS,MRS\_MANAGER,None,,None,  
ROL\_ADMIN\_EIS,NOTIFICATION\_PAR\_MANAGER,None,,None,  
ROL\_ADMIN\_EIS,PROXIES\_MANAGER,None,,None,  
ROL\_ADMIN\_EIS,BANNER\_MANAGER,None,,None,  
ROL\_ADMIN\_EIS,APPLICATION\_PAR\_MANAGER,None,,None,  
ROL\_MANAGE\_BANNED\_SHIPS,BANNED\_VESSEL\_MANAGER,None,,None,  
ROL\_CSD\_VIEWER,CSD\_READER,None,,None,  
ROL\_CSD\_VIEWER,SHIPPARTICULARS\_REQUESTOR,None,,None,  
ROL\_CSD\_MANAGER,CSD\_MANAGER,None,,None,  
ROL\_CSD\_MANAGER,SHIPPARTICULARS\_NOTIFIER,None,,None,  
ROL\_CSD\_SUBSCRIBER,SHIPPARTICULARS\_SUBSCRIBER,None,,None,  
#ROL\_USER\_MANAGER,USER\_MANAGER,None,,Specific locations,SSN Port  
#ROL\_LOCATION\_MANAGER,LOCATION\_MANAGER,None,,Specific locations,SSN Port  
#ROL\_LOCATION\_MANAGER,LOCATION\_DOWNLOAD,None,,None,  
#ROL\_MANAGE\_SHIPS,VESSEL\_MANAGER,None,,None,  
#ROL\_CSD\_ADMIN,CSD\_ADMIN EMSA,None,,None,

#ROL_VIEW_SSN_STATISTICS,STATS_REQUESTOR,None,,None,
#ROL_VIEW_STIRES_STATISTICS,STIRES_REPORTS_STATISTICS,None,,None,
#ROL_VIEW_STIRES_STATISTICS,STIRES_REPORTS_REPORTS,None,,None,