

**CleanSeaNet**  
**Data Centre [CSNDC]**  
**Installation Manual (INS)**

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# 1. Introduction

This is a guide describing the installation for the CSN-DC Release 1.0.

## 1.1 Document Organization

The document is organised as follows.

Section	Description
Introduction	This section.
Environments	Context diagrams for pre-production and production environments
Installation	Installation steps for each machine
PDS Configuration	Post installation steps for PDS

## 1.2 Reference documents

Document Title	Identifier	Internal Reference
Invitation to Tender concerning the development of “EMSA CleanSeaNet Data Centre”	EMSA/OP/06/2009	[ITT]
Tender Specifications	Enclosure I	[E-I]
Draft Framework Contract	Enclosure II	[E-II]
Price Grid	Enclosure III	[E-III]
Compliance Matrix	Enclosure IV	[E-IV]
ICT Architecture, System and application Technical Landscape	Enclosure V	[E-V]
Project delivery	Enclosure VI	[E-VI]
Working procedures and service requirements	Enclosure VII	[E-VII]
Functional Design Document, issue 2.0 8/01/2010	CSNDC-DD-ACS-EMSA-0101	[FDD]
Technical Design Document, issue 2.0 8/01/2010	CSNDC-DD-ACS-EMSA-0102	[TDD]
POR User Guide, issue 1.0 26/02/2010	xxx	[PUG]
External Interface Control Document, issue 1.0 09/01/2010	CSNDC-ID-ACS-EMSA-0104	[EICD]
User Guide, issue 1.0 Vol2 Product Ordering, issue 1.0, 26/02/2010	CSNDC-ID-ACS-EMSA-0105	[SUM-2]
User Guide, issue 1.0 Vol3 WUP Core, issue 1.0, 28/02/2010	CSNDC-ID-ACS-EMSA-0105	[SUM-3]
ACS Quality Guidelines for HMI Design, issue 3.2 17/07/2009	SW-PA-ACS-QA-0103	[HMI-GL]

### 1.3 Abbreviations and acronyms

Table 1-1 - Abbreviations and Acronyms

Abbreviation	Definition
CSN-DC	CleanSeaNet Data Centre
DBMS	DataBase Management System
DNS	Domain Name Server
EO	Earth Observation
GUI	Graphical User Interface
HMI	Human Machine Interface
ICT	Information and Communication Technology
IP	Internet Protocol
IPADDR	IP Address
JDK	Java Development Kit
JMS	Java Messaging Service
JNDI	Java Naming and Directory Interface
PDS	Payload Data Segments
QA	Quality Assurance
RPM	RedHat Package Manager
SID	System Identifier
SSH	Secure Shell
TAR	Tape Archive
TBD	To Be Defined
WAR	Web Archive

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## 2. Installation

### 2.1 [x]ORA (or RAC)

#### 2.1.1 Introduction

The [x]ORA (ORACLE Server) machine hosts the Oracle DBRMS. It is a single node installation in the test environment and a RAC installation in the pre-production and production environments.

**Exposed Ports and protocols:**

- Port 1535, ORACLE DBRMS Protocol.

**This server access to:**

- N/A

**Pre-requisites:** check if the Multimedia extension (that contains the Oracle locator) is present in the database. If not, install Oracle Multimedia with the dbca console.

User's schemas on Oracle 11.2:

User	Facility
COM	Communication System
FINSYS	Financial System
JOUWS	Journaling System
PDSUSR	PDS
GEOSEVER	Geoserver database
OASUSR	Alerting and users
PORUSR	POR
WUPUSR	WUP
DGRBRMUSR	Deegree ebRim Catalogue (CSW)
DGRFTRUSR	Deegree Feature (WFS)

#### 2.1.2 Creation of users, tablespaces and schemas

1. Login in as "root" user
2. Mount the CDROM

```
# mkdir -p /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom
```

3. Login as "oracle" user and set the oracle shell environment answering the correct <ORACLE\_SID> for the deployment environment under installation:

Production	Pre-Production	Test
CSN	CSNQ	TINST1

```
# su - oracle
$ . oraenv
ORACLE_SID = [oracle] ? <ORACLE_SID>
$
```

**Note:** alternatively the wrapper script **oenv** built from EMSA to setup Oracle environments can be used (e.g.: `oenv -l TINST1`)

4. Copy the directory “ora” found in the distribution in /tmp/dist

```
$ cp -r /mnt/cdrom/ora /tmp/dist/
```

**Note:** if the distribution directory is not created in /tmp/dist, remember to change the `create_all_schema.sh` script in the `pdsusr` import section.

5. Unpack SQL scripts and set permissions

```
$ cd /tmp/dist/ora
$ tar -xvf emsa_csn_db.tar
$ chmod 755 *.sh
```

6. Modify scripts according the environment.

In order to create the database users, tablespaces and schemas you can run the provided sql scripts by means of an SQL client tool (such as SQLDeveloper or sqlplus) or use the provided shell script. If the SQL client will be used, the `dist/ora` directory contains, for each database, the scripts to create from scratch the database structure. The following table lists the structure of the sql scripts and the order for the execution:

Database user	Script	Note
system	<user>_clean.sql	Optional
system	<user>_drop.sql	Optional
system	<user>_tablespaces.sql	
system	<user>_user.sql	
<user>	<user>_schema.sql	
<user>	<user>_init.sql	
<user>	sib_test.sql	Only <user> = porusr, oasusr, wupusr
pdsusr	pdsusr_init2.sql	Only pdsusr

7. Customize the SQL scripts.

For releases before or equal to 1.8.1 RC02: in the `dist/ora/pdsusr/pdsusr_init2.sql` file, edit the `PARAMETER` value: change the `ServerUrl` tag value to the address of the [X]MS host (e.g: `tms02`, `qms02` or `pms01` (default))

For releases after 1.8.1 RC02: modify the environment variables on the file `dist/ora/pdsusr/create_pds_schema.env`

8. Run the database scripts.

If the shell script will be used, first customize it before proceed according to the specific environment (*test*, *preprod* or *prod*).

```
$ sh create_all_schema.sh >& db.log
```

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## 2.2 [x]CSNNFS Server

The release 1.4 included the porting from the previous ISM module to the new ISM-Light module. The procedure for the migration included access to a NFS share

Initially EMSA provided a NFS server providing the share, [x]csnnfs exposing /export\_dir1.

This is considered part of the leverage infrastructure, that in the future, will be replaced by a NFS appliance. The NFS content ownership and permissions (subdirectories within) are managed by the clients with read-write access ([x]PMAS[yy] and [x]WLS[yy]). It has been agreed to have the oinstall group with guid=115 and opemsa user with uid=800.

The migration from ISM to ISM light, [x]MS[yy] also implied access to the NFS share in read-write mode. This can be revoked after the migration.

It's up to EMSA the installation details of the NFS server.

## 2.3 [x]PMAS installation

### 2.3.1 Introduction

The [x]PMAS02 (Process Management Server) machine is in charge to ingest new products and triggers the various processors used to modify or create new data. It is the facility responsible for feeding the Web Catalogues.

#### Exposed Ports and protocols:

- http 80, for the management GUI

#### Must access to:

- Oracle machine [x]RAC1
- [x]CSNNFS Server
- [x]IIF machines
- [x]WLS09, [x]WLS10, port 7021
- BUSINESS LOAD BALANCER

### 2.3.2 Installation

**Pre-requisites:** HP Agents. The HP agents must be installed before performing the following commands.

#### On the [x]PMAS host:

1. Login as “root” user on the [X]PMAS host.
2. Mount the installation media and copy the distribution:

```
# mkdir -p /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom

# cp -r /mnt/cdrom/ /tmp/dist/
# cd /tmp/dist/
# chown -R root: *
# find . -name "*.sh" -exec chmod 755 {} \;
```

3. Create a data dir (e.g. /data1)

```
# mkdir -p /data1
```

4. Launch the installation script

```
# cd /tmp/dist/
# ./install-ems.sh
```

The installation script will prompt for:

- Mounting point for PDS data storage (default is /data1): be sure that the provided directory exists on the filesystem.
- The DB connection parameters: use the following table depending on the target environment

Field	Production	Pre-Production	Test
DB port	1535	1535	1535
DB hostname	prac1	qrac1	tora10

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Field	Production	Pre-Production	Test
DB name	CSN	CSNQ	TINST1
DB server	prac1	qrac1	tora10

**Note:** as PDS is a COTS it is normal that for this installation the following steps (Shutting down vsftpd and Stopping snmpd) will be marked as FAILED.

Moreover, ignore the following errors/warnings:

- warning: /usr/lib/security/classpath.security saved as /usr/lib/security/classpath.security.rpm.save
- warning: /usr/lib64/security/classpath.security saved as /usr/lib64/security/classpath.security.rpm.save
- /var/tmp/rpm-tmp.1419: line 7: gij: command not found
- /usr/share/java/libgcj-.jar has not been configured as an alternative for jaxp\_parser\_impl

- Finalise the installation, launching the following command, specifying the Site (*emsa* or *acs*) and the Environment (*test*, *preprod* or *prod*):

**Note:** before proceed checks the PDSUSR database parameters (DAM\_PDS\_\*) in the following file: /var/www/html/acs\_global\_config\_emsa/<Site>/acs\_global\_config.ini.<Environment>

```
# cd /tmp/dist
# sh ./pmas/pmas_setup.sh <Site> <Environment>
```

- Configure the JMS sender daemon

```
# vi /usr/acs/conf/csndc-jms.properties
```

with the following parameters:

```
EMSA_JMS_PROVIDER_URL=t3://[x]wls09:7021,[x]wls10:7021
EMSA_JMS_QUEUE=csndc.queues.JOUWSQueue
dir.processed=/data1/raid0/opemsa/jmsfiles/processed/
dir.inbox=/data1/raid0/opemsa/jmsfiles
polling.frequency=5000
file.pattern=*.jms
```

where in EMSA\_JMS\_PROVIDER\_URL the correct machines must be set, depending on the environment (e.g: EMSA\_JMS\_PROVIDER\_URL=t3://twls10:7021)

- Check/Edit the fstab file:

```
# vi /etc/fstab
```

substituting the NFS Server machine name according to the environment if needed:

```
# CSN NFS
[x]csnnfs:/data1 /shared_nfs nfs soft,intr,nolock,rsz=32768,wsz=32768,timeo=600,tcp 0
```

- Lastly, reboot the machine

```
# reboot
```

### 2.3.3 PDS configuration

The following steps must be performed via the PDS configuration web interface accessible at the following address:

<b>Production</b>	<b>Pre-Production</b>	<b>Test</b>
<a href="http://ppmas01">http://ppmas01</a>	<a href="http://qpmas02">http://qpmas02</a>	<a href="http://tpmas02">http://tpmas02</a>

1. Open the above URL
2. Login as “su” user (default password: mcfmcf)
3. Click on “Configuration” link
4. Select the “IO Repositories” tab
5. Hit the “Search results” button. A grid with all the repositories will show up.
6. Perform for each Repository item the following modifications by clicking on the edit icon (the icon in the middle, with the pencil) and eventually hitting the Save button:
  - On all repository item set the “User” field to **opemsa**
  - On all repository item set the “Password” field to **12qwas**
  - Host name in the field “Remote URL” must be changed for every repository according to the following table:

<b>Production</b>	<b>Pre-Production</b>	<b>Test</b>
ppmas01	qpmas02	tpmas02

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## 2.4 [x]PMAW02/03/xx installation

### 2.4.1 Introduction

The [x]PMAWxx (Process MAnagement Workstation) machines are the nodes hosting the CSN-DC internal scientific processors, like the SAR radiometric normalization processor. The various nodes polls the database in order to retrieve the available processing orders and execute them. It could exist more than one Thin Layer, in order to balance the load.

#### Exposed Ports and protocols:

- NONE

#### Must access to:

- Oracle machine [x]RAC1
- [x]PMAS

### 2.4.2 Installation

**Pre-requisites:** HP Agents. The HP agents must be installed before performing the following commands.

#### On the [x]PMAW hosts:

1. Login as “root” user on the [X]PMAW hosts
2. Mount the installation media and copy the distribution:

```
# mkdir -p /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom

# cp -r /mnt/cdrom/ /tmp/dist/
# cd /tmp/dist/
# chown -R root: *
# find . -name "*.sh" -exec chmod 755 {} \;
```

3. Launch the installation script

```
# cd /tmp/dist/
# ./install-emsas.sh
```

The installation script will prompt for:

- The DB connection parameters: use the following table depending on the target environment

Field	Production	Pre-Production	Test
<b>DB port</b>	1535	1535	1535
<b>DB hostname</b>	prac1	qrac1	tora10
<b>DB name</b>	CSN	CSNQ	TINST1
<b>DB server</b>	prac1	qrac1	tora10

**Note:** as PDS is a COTS it is normal that for this installation the following steps (Install net-snmp and Stopping snmpd) will be marked as FAILED.

The install ACS\_Emsa\_Radiometric\_Normalization rpm will be marked as FAILED. Ignore this message since the database configuration file contains incorrect information that will be fixed in later steps.

4. Copy init configuration files:

- Copy the init files pmaw\_usr\_acs.tar on /usr/acs directory
- Unzip it and change permissions:

```
# cp /tmp/dist/pmaw/pmaw_usr_acs.tar /usr/acs/
# cd /usr/acs/
# chown root: pmaw_usr_acs.tar

# tar -xvf pmaw_usr_acs.tar
# chown root: /usr/acs/*
# chmod 777 conf processors
```

5. Finalise the installation, launching the following command, specifying the Site (*emsa* or *acs*) and the Environment (*test*, *preprod* or *prod*):

**Note:** before proceed checks the PDSUSR database parameters (DAM\_PDS\_\*) in the following file: /var/www/html/acs\_global\_config\_emsa/<Site>/acs\_global\_config.ini.<Environment>

```
# cd /tmp/dist
# sh ./pmaw/pmaw_setup.sh <Site> <Environment>
```

6. Lastly, reboot the machine

```
# reboot
```

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## 2.5 [X]LOADB1/[X]LOADB2 (Load balancer)

The following installation is to be done **only on production and pre-production** environments.

### On the [x]LOADB hosts:

1. Login as “root” user on the [X]LOADB hosts
2. Mount the installation media and copy the distribution:

```
# mkdir -p /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom

# cp -r /mnt/cdrom/ /tmp/dist/
# cd /tmp/dist/
# chown -R root: *
# find . -name "*.sh" -exec chmod 755 {} \;
```

3. Launch the installation script

```
# cd /tmp/dist
# ./install-emsa.sh
```

4. Finalise the installation, launching the following command, specifying the Site (*emsa* or *acs*) and the Environment (*preprod* or *prod*):

```
# sh ../lb/lb setup.sh <Site> <Environment>
```

5. Check/Update the Apache configuration file according to your environment:

The server uses multiple apache servicing multiple project clusters, follow the instructions provided by EMSA wiki (installation of Web Logic Apache Proxy) but update the CSN load balancer apache configuration to be the following:

```
# Apache load balancer for Weblogic [minimum] configuration file per domain
# See man httpd for more information (follow urls) and
# http://download.oracle.com/docs/cd/E15523_01/web.1111/e14395/plugin_params.htm
# init.d script is based on installed one heavily customized
#
# History:
# Oct 2010: initial version, VCL
# Apr 2011: specific Apache only mod_proxy for CSN, VCL
# -----
# Look for the DOMAIN section below, remaining sections should not be changed.
# -----

# GLOBAL environment directives
# Only show minimum
ServerTokens Prod
ServerSignature Off
HostnameLookups Off
# Owner and group that runs httpd
User apache
Group apache
# Timeout value recommended
Timeout 120
# Allow unlimited persistent connections (advisable for WLS)
KeepAlive off
MaxKeepAliveRequests 0
# Update or define defaults
ServerAdmin root@localhost
DocumentRoot "/var/www/html"
AddDefaultCharset UTF-8
```

```
# Debug, in case of need
#LogLevel debug

# Specific load balancing for Apache's (non-WLS) of CSN
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_http_module modules/mod_proxy_http.so
LoadModule proxy_balancer_module modules/mod_proxy_balancer.so

# -----
# DOMAIN specific environment directives (and Virtual hosts)
# One or more listen ports (one per line)
Listen 7021

# Location of config files, error, etc. files: /etc/httpd/conf.`<domain>
ServerRoot "/etc/httpd/conf.csn"

# Unique per project PID file: run/httpd.<domain>.pid
PidFile run/httpd.csn.pid

# You must define a servername, so use the <domain>
ServerName csn

# Virtual hosts mapped to apache servers, listen port must exist above
<VirtualHost *:7021>
<Proxy balancer://mycluster>
    BalancerMember http://xwls09:81
    BalancerMember http://xwls10:81
</Proxy>
</VirtualHost>
```

Only **BalancerMembers** directive has to be changed in this configuration file, according to the installation environment:

Environment	BalancerMembers
Production	<a href="http://pwls09:81">http://pwls09:81</a> <a href="http://pwls10:81">http://pwls10:81</a>
Pre-Production	<a href="http://qwls09:81">http://qwls09:81</a> <a href="http://qwls10:81">http://qwls10:81</a>

Follow the EMSA wiki again to apply the change.

#### 6. Lastly, reboot the machine

```
# reboot
```

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## 2.6 GEO1/GEO2

Where not explicitly written, the following instructions shall be executed on both GEO1 (tgeo01) and GEO2 (tgeo02).

Five different macro-steps can summarize the entire procedure:

- Creation of users and groups on involved hosts (GEO1/GEO2)
- Creation of a data shared directory for Geoserver
- Tomcat configuration
- Geoserver installation

### 2.6.1 Creation of users and groups on involved hosts (GEO1/GEO2)

1. Create (if not existing) a group named **oinstall** (guid=115)
2. Add the **tomcat** user to the **oinstall** group, and set oinstall as primary group for tomcat and consequently change the ownership of the /tomcat and tomcat home directory.

### 2.6.2 Creation of a data shared directory for Geoserver

1. The /shared\_nfs directory must be accessible to both GEO0x servers, like in the WLS servers. When this is mounted, create, as root, the /geoserver\_data -> /shared\_nfs/geoserver\_data.
2. Stop the geoserver deployment on the WLS server, and in one of the GEO servers, as root, rename the /shared\_nfs/geoserver\_data as /shared\_nfs/geoserver\_data.wls.
3. Copy it and change its permissions, by running as root:

```
# cp -rp /shared_nfs/geoserver_data.wls /shared_nfs/geoserver_data
# chown -R tomcat:oinstall /shared_nfs/geoserver_data
```

### 2.6.3 Tomcat configuration

1. On both **GEO1** and **GEO2**: update `$CATALINA_HOME/conf/tomcat.conf` as tomcat user with a "umask 0007" line at bottom so that tomcat|geoserver files are 770|660 and with the following values:

```
JAVA_HOME=/tomcat/jdk
export JAVA_HOME
PATH=$PATH:$JAVA_HOME/bin
export PATH
# Extras (specific)
DATADIR="/geoserver_data"
CGEOLOG="$DATADIR/logs/geoserver_$(hostname|cut -f1 -d".").log" # local host unique log
CATALINA_OPTS="-server -Xms2048m -Xmx2048m -XX:SoftRefLRUPolicyMSPerMB=36000 -
XX:MaxPermSize=128m -XX:+UseParallelGC -Djava.awt.headless=true -
DGEOSERVER_DATA_DIR=$DATADIR -DmaxCachedEntries=50000 -DevictionTime=20 -
DGEOSERVER_LOG_LOCATION=$CGEOLOG -DENABLE_MAP_WRAPPING=False -
DGWC_DISKQUOTA_DISABLED=true -DDISABLE_WORKSPACE_VALIDATION=true"
export CATALINA_OPTS
umask 0007
```

**Note:** values -Xms2048m -Xmx2048m shall be set on the basis of the machine RAM. Suggested values are equal to the total RAM available – 2GB and not less than 2GB. On PP use -Xms2048m -Xmx2536m; on PROD use -Xms4048m -Xmx4608m

## 2.6.4 Geoserver installation

1. On both **GEO1** and **GEO2** install Geoserver as tomcat user:
  - a. Download the file **GEO\_2.6** into /tomcat/deployments
  - b. Deploy /tomcat/deployments/geoserver-2.6.x-acs-latest.war through GUI using context /geoserver.  
The deployment is copied as geoserver into \$CATALINA\_HOME/customapps/  
(hereafter \$GEOSERVER\_WAR)
2. Stop all Tomcat instances.
3. Configure the **JDBC config** plugin on GEO01:
  - a. Update the connection parameters in the jdbcconfig.properties file in the /geoserver\_data/jdbcconfig folder and set the following parameters to true:

```
enabled=true  
initdb=true  
import=true
```

For example:

```
enabled=true  
initdb=true  
import=true  
initScript=/geoserver_data/jdbcconfig/scripts/initdb.oracle.sql  
jdbcUrl=jdbc:oracle:thin:@tora10:1535/TINST1  
driverClassName=oracle.jdbc.OracleDriver  
username=GEOSEVER  
password=<password>  
pool.minIdle=4  
pool.maxActive=10  
pool.poolPreparedStatements=true  
pool.maxOpenPreparedStatements=50  
pool.testOnBorrow=true  
pool.validationQuery=select 1 from dual
```

- c. Start the Tomcat instance in GEO01 to load the Geoserver configuration and directory of data on the database. This step will take some time.  
If this step is successful the parameters in the file:  
/geoserver\_data/jdbcconfig/jdbcconfig.properties will be changed by Geoserver in this way:

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```
enabled=true  
initdb=false  
import=false
```

- d. Stop all Tomcat instances and do a chmod 600 on the jdbcconfig.properties file.

4. Configure the **control flow** plugin on GEO01:

- a. Create inside /geoserver\_data folder a file named controlflow.properties which includes the following:

```
# don't allow more than 8 GetMap in parallel  
ows.wms.getmap=8
```

5. Install the **clustering** plugin (on both GEO0x servers):

- a. Unzip **GEO\_CLU** and copy all contained jar files in the \$GEOSERVER\_WAR/WEB-INF/lib folder
- b. Substitute the \$GEOSERVER\_WAR/WEB-INF /web.xml with **GEO\_WEB\_XML** file
- c. Restart one of the tomcat instance to generate cluster folder
- d. Stop the tomcat instance and then edit cluster.properties file in cluster folder to set the parameter sync\_method=event (comment the existing and uncomment this new one)
- e. Install the ImagePyramid Plugin:  
Unzip **PYRAMID\_PLUG** and copy all contained jar files in the \$GEOSERVER\_WAR/WEB-INF/lib folder
- f. Start all tomcat instances

6. Tuning of Geoserver parameters (This is not strictly mandatory, are just best practices):

- a. Open the browser and connect to the URL: <load\_balancer\_address>/geoserver to access to Geoserver GUI:
- b. Login as admin/geoserver (EMSA to decide how change default admin password). Pre-production admin/csn78lb.csn78lb
- c. Choose Global from Settings menu and set log level to QUIET\_LOGGING.properties
- d. On same menu disable log on StdOut to avoid double logging also on the catalina.out
- e. Choose JAI from Settings menu and enable all native accelerations
- g. Choose WMS from Services menu and set WMS Resource consumption limits/Max rendering memory (KB) to 65535 (this allows to control amount of memory used for each single request)
- h. On same menu set WMS Resource consumption limits/Max rendering errors (count) to 100
- i. On same menu set WMS Limited SRS list to the following values: 4326,3395 (this reduces the getCapabilities response length)
- j. Choose WFS from Services menu and disable WFS (at least until this is not used)
- k. **Recommended:** Choose Caching Defaults from Tile Caching menu and uncheck 'Automatically configure a GeoWebCache layer for each new layer or layer group'

7. Create the Oracle Auxiliary layers (see chapter 2.6.5 for details):

- a. Check if the following Styles exist (depends on whether step 10 or a data migration have been executed or not):

ACS\_VesselTrack  
 ACS\_AlertOilspill  
 ACS\_AlertRegions  
 ACS\_Footprint  
 and create them if not.

- b. Create the following layers:

emsa\_oracle\_oas:OAS\_ALERTS  
 emsa\_oracle\_oas:OAS\_ALERT\_REGION  
 emsa\_oracle\_ftr:DETECTEDSHIPS  
 emsa\_oracle\_ftr:FTR\_TMP\_GENERIC\_GEOM\_LAYER  
 emsa\_oracle\_por:ORDER\_DETAILS

when creating the stores make sure that 'expose primary keys' is checked and 'Estimated extents' and 'Loose bbox' are unchecked.

8. Update global config parameters on PMAS and WLS0x:

- a. EMSA has to change the following acs\_global\_config parameters on all hosts, with the new host:port of the load balancer (i.e: tgeo01:7022, PP: qcsn:7022, PROD: pcsn:7022):

WCS\_SERVER  
 BL\_CUSTOM\_WMS\_SERVER\_URL  
 RL\_WMS\_SERVICE\_REST\_URL

9. Mirroring on presentation layer (WGT, the end point URL to /geoserver):

- a. EMSA has to implement a system configuration directive in order to remap the external WMS URL addressed by the GIS Viewer and defined in the acs\_global\_config:

CUSTOM\_WMS\_SERVER\_URL

to the new geoserver (e.g. the tgeo01 load balancer), defined in the following parameter of the acs\_global\_config:

BL\_CUSTOM\_WMS\_SERVER\_URL

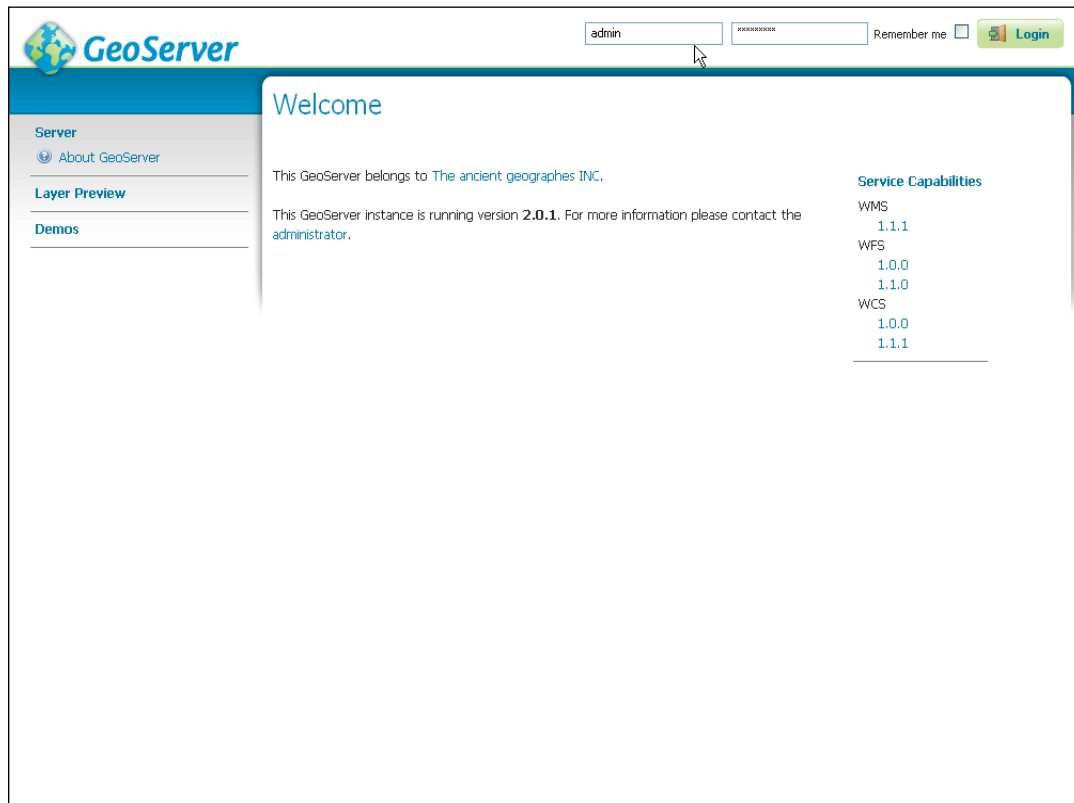
### 2.6.5 Geoserver configuration (to be updated)

In order to configure Geoserver follow these steps:

1. Open a web browser and connect to Geoserver's URL according to the specific environment:

Environment	WebLogicCluster
Production	<a href="http://pwls09:7021/geoserver">http://pwls09:7021/geoserver</a>
Pre-Production	<a href="http://qwls09:7021/geoserver">http://qwls09:7021/geoserver</a>
Test	<a href="http://twls10:7021/geoserver">http://twls10:7021/geoserver</a>

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2. Login as “admin” with password “csn78lb” (default credentials)
3. Configure the Geoserver additional **STYLES**:

With a file editor open the file **geoserver\_styles.info** located in the wls directory of the installation media of one of the [x]wls machines (e.g.: /mnt/cdrom/wls/geoserver\_styles.info).

This file contains the list of all the **Styles** that must be created with the name of the style followed by the XML definition. Each style is separated by a line of hash characters.

Hence, the following instructions must be repeated for all the styles via the GeoServer web console:

- a. Select the **Styles** link on the menu on the left
  - b. Click on the **Add new style** link on top of the Styles page
  - c. Type in the **Name** as reported in the **geoserver\_styles.info** file
  - d. Paste the XML definition as reported in the **geoserver\_styles.info** file in the editor box
  - e. Click **Submit**
4. Create the Geoserver's **STORES**:

With a file editor open the file **/tmp/GeoServer\_DS.info** on the [x]wls machine.

This file contains the list of all the **Data Stores** that must be created with all the parameters.

Hence, the following instructions must be repeated for all the data-sources:

- a. Select the **Stores** link on the menu on the left
- b. Click on the **Add new store** link on top of the Stores page
- c. In the **New data source** page select the “**Oracle NG – Oracle Database**” data source type from the **Vector Data Sources** list.
- d. Type in the information as reported in the **GeoServer\_DS.info** file
- e. Click **Save**

- f. In the **New Layer chooser** page select the **Publish** link of each layer listed in the **GeoServer\_DS.info** file and fill in only the specified information for both **Data** and **Publishing** tabs (see NOTE 1)
  - g. Click **Save**
  - h. Repeat the Layer publishing steps clicking **Add new resource** from the **Layer** page, choose the appropriate data store (e.g: acs:emsa\_oracle) from the **New Layer chooser** page, then goto to f. step
5. Logout from Geoserver console when done
6. Put Geoserver in single node mode

In order to put geoserver in single node mode, the following procedure shall be carried out on one of the 2 machine of the business layer (e.g. [x]WLS[yy]):

- a. Log as root on the machine that shall be stopped
- b. Stop the apache service, by running the command `service httpd stop`
- c. Access the Weblogic console and stop the node corresponding to the machine that shall be stopped

**Note:**

1. If changing the tab (Data->Publishing) the error message "Field 'latLonBoundingBox' is required." appear, click on "[Compute from data](#)" and "[Compute from native bounds](#)" in the Bounding Box section before to switch tab

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## 2.7 [x]WLS09/[x]WLS10 (Business Layer)

Install Weblogic following the Weblogic Installation Document and refer to the following table depending on the targeted environment.

Field	Production	Pre-Production	Test
Domain Name	csn	csn	csn
Domain home	/wl_domains/csn	/wl_domains/csn	/wl_domains/csn
Administration Server	AdminServer	AdminServer	AdminServer
Admin listening address	pwls09.emsa.local	qwls09.emsa.local	twls10.emsa.local
Admin listening port	7202	7202	7202
Managed Server	csnServer	csnServer	csnServer
Managed listening address	pwls09.emsa.local pwls10.emsa.local	qwls09.emsa.local qwls10.emsa.local	twls10.emsa.local
Managed listening port	7021	7021	7021
User	weblogic	weblogic	weblogic
Weblogic Admin URL	<a href="http://pwls09:7202/console">http://pwls09:7202/console</a>	<a href="http://qwls09:7202/console">http://qwls09:7202/console</a>	<a href="http://twls10:7202/console">http://twls10:7202/console</a>

### 2.7.1 Installation

**On the [x]WLS hosts:**

1. Login as “root” user on the [X]WLS hosts
2. Mount the installation media and copy the distribution:

```
# mkdir -p /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom

# cp -r /mnt/cdrom/ /tmp/dist/
# cd /tmp/dist/
# chown -R root: *
# find . -name "*.sh" -exec chmod 755 {} \;
```

3. Launch the installation script

**Note:** for cluster configuration, the following modifications have to be performed on ALL nodes, unless stated differently

```
# cd /tmp/dist
# ./install-emsa.sh
```

**Note:** it is normal that for this installation the following step (Install net-snmp) will be marked as FAILED.

Moreover, depending on the previously installed software, the installation of oracle-instantclient11.2-basic could be skip because already in the system.

4. **Only for the primary node**, finalise the installation launching the following command, specifying the Site (*emsa* or *acs*) and the Environment (*test*, *preprod* or *prod*):

```
# sh ./wls/wls_setup_main_node.sh <Site> <Environment>
```

This command will install all JARs that WebLogic will propagate to the other nodes.

5. **For all the nodes**, finalise the installation launching the following command, specifying the Site (*emsa* or *acs*) and the Environment (*test*, *preprod* or *prod*):

```
# sh ./wls/wls_setup.sh <Site> <Environment>
```

**Note:** it is normal that for this installation the following step (Stopping httpd) will be marked as **FAILED**.

6. **For all the nodes**, run the following script in order to update the configuration files:

```
# sh /var/www/html/emsa_support_files/installation/wls/emsa_apache_customizations.sh
```

**Note:** this script needs to be run every time the file :  
/var/www/html/acs\_global\_config\_emsa/emsa/acs\_global\_config.ini.<env> is modified.

7. If you are running geoserver in single node mode, on the child node (e.g.: qwls10) stop the httpd service:

```
# service httpd stop
```

8. **For all the nodes**, copy the JOU/COM/FinSys configuration files:  
substitute <env> with the appropriate environment (*test*, *preprod* or *prod*):

```
# cp /var/www/html/emsa_csndc_jou_com_finsys_conf/emsa/<env>/business/*  
/wl_domains/csn/deployments/csnhome/config
```

Answer 'y' to overwrite the existing files

```
# chown oracle: /wl_domains/csn/deployments/csnhome/config/*
```

## Next steps must be performed via the WebLogic Administration interface ([http://\[x\]wls\[yy\]:7202/console](http://[x]wls[yy]:7202/console))

**Note:** Configuration [Lock & Edit] and [Activate Changes] are only available in cluster configurations (**only for Production and Pre-Production environment**).

1. Open a web browser and connect to Weblogic Admin URL according to the specific environment (see initial table at 2.6)
2. Login as admin user (e.g.: weblogic/weblogic1)

### 2.7.2 JAI libraries configuration

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Since JAI uses a graphic context for image generation, check and, if needed modify (from Weblogic Console):

For each cluster node: **Environment -> Servers -> csnServer[n]**

1. On "Setting for csnServer[n]" tab select "Server Start" tab
2. Click on [Lock & Edit] button to set "Arguments" field with

```
-Djava.awt.headless=true -Xms3072m -Xmx3072m -Duser.timezone=GMT
```

3. Click on **[Save]** and **[Activate Changes]** buttons

Restart the CSN nodes: **Environment -> Servers -> Control**

1. Select "csnServer[n]" check box
2. Click "Shutdown" -> "Force Shutdown Now" (wait until task is completed)
3. Select "csnServer[n]" check box
4. Click "Start" (wait until task is completed)

### 2.7.3 JMS Queues creation

1. Create the directory for the queue persistence (as oracle user)

```
$ mkdir /wl_domains/csn/JmsQueueStore
```

2. Create Migratable Targets (***preproduction and production only***)

If the environment is clustered, a migratable target must be created before performing the other steps. From the **Business** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

**Environments -> Clusters**, then select **csn-cluster**

Click on **Migration** tab, and check that **Migration Basis** variable is set to **Consensus**.

[Save]

[Activate Changes]

then:

[Lock & Edit]

**Environment -> Servers -> Migratable Targets -> New**

Name: *jmsServer*

Use Preferred Server: *choose one of the nodes*

Service Migration Policy: *Auto-Migrate Exactly-Once Services*

[Activate Changes]

**Restart both Weblogic nodes (via Weblogic Console) and Weblogic AdminServer**

(via `/wl_domains/csn/bin/weblogic.sh stop` and `start` shell command as Oracle user).

Next steps are the same for both clustered and non-clustered environment. Take into consideration that for clustered environment the Target will be **jmsServer**.

3. Create FileStore

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[Lock & Edit]

**Services -> Persistent Stores -> New -> Create FileStore**

Name: *csndc-jms-filestore*

Target: *csnServer (or jmsServer for cluster)*

Directory: */wl\_domains/csn/JmsQueueStore*

[OK]

[Activate Changes]

#### 4. Create JMS Server

[Lock & Edit]

**Services -> Messaging -> JMS Servers -> New**

Name: *csndc-jmsserver*

Persistent Store: *csndc-jms-filestore*

[Next]

Target: *csnServer (or jmsServer for cluster)*

[Finish]

[Activate Changes]

#### 5. Create JMS Module

[Lock & Edit]

**Services -> Messaging -> JMS Modules -> New**

Name: *csndc-jms-module*

[Next]

Target: *csnServer*

[Next]

[Finish]

[Activate Changes]

#### 6. Create JMS Module Resources

[Lock & Edit]

**Services -> Messaging -> JMS Modules**

Click on the *csndc-jms-module* link

[New]

Resource type: *Queue*

[Next]

Name: *ReportGeneratorQueue*

JNDI name: *csndc.queues.ReportGeneratorQueue*

[Next]

Create a new subdeployment named **csndcSubDeployment**  
assign it as target to **csndc-jmsserver** jms server

[Finish]

[Activate Changes]

[Lock & Edit]

**Services -> Messaging -> JMS Modules -> csndc-jms-module -> New Queue**

[Next]

Name: *jouws-jms-queue*

JNDI name: *csndc.queues.JOUWSQueue*

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[Next]  
Subdeployment: *csndcSubDeployment*  
[Finish]  
[Activate Changes]

[Lock & Edit]  
**Services -> Messaging -> JMS Modules -> csndc-jms-module -> New -> Queue**  
[Next]  
Name: *finsysws-jms-queue*  
JNDI name: *csndc.queues.FINSYSWSQueue*  
[Next]  
Subdeployment: *csndcSubDeployment*  
[Finish]  
[Activate Changes]

[Lock & Edit]  
**Services -> Messaging -> JMS Modules -> csndc-jms-module -> New -> Queue**  
[Next]  
Name: *ReportGeneratorErrorQueue*  
JNDI name: *csndc.queues.ReportGeneratorErrorQueue*  
[Next]  
Subdeployment: *csndcSubDeployment*  
[Finish]  
[Activate Changes]

[Lock & Edit]  
**Edit ReportGeneratorQueue -> Delivery Failure**  
Redelivery Limit: *0*  
Expiration Policy: *Redirect*  
Error Destination: *ReportGeneratorErrorQueue*  
[Save]  
[Activate Changes]

[Lock & Edit]  
**Services -> Messaging -> JMS Modules -> csndc-jms-module -> New -> Connection Factory**  
[Next]  
Name: *jouws-connection-factory*  
JNDI name: *JOUWSConnectionFactory*  
[Next]  
Target: *csnServer*  
[Finish]  
[Activate Changes]

[Lock & Edit]  
**Services -> Messaging -> JMS Modules -> csndc-jms-module -> New -> Connection Factory**  
[Next]

Name: *RepGenCF*  
JNDI name: *csndc.ReportGeneratorCF*  
 [Next]  
Target: *csnServer*  
 [Finish]  
 [Activate Changes]

#### 2.7.4 Weblogic Back-end/Portal Users creation

1. Enable **Password Digests** in the **DefaultAuthenticator** with the following steps.

From the **Business** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

**Security Realms -> myrealm -> Providers -> DefaultAuthenticator -> Provider Specific**

Check that “Enable Password Digests” option is enabled

[Save]

[Activate Changes]

[Lock & Edit]

**Security Realms -> myrealm -> Providers -> DefaultIdentityAsserter**

In **Active types**, move “wsse:PasswordDigest” to the **Chosen** list (list on the right)

[Save]

[Activate Changes]

Restart both Weblogic nodes (via Weblogic Console) and Weblogic AdminServer (via */wl\_domains/csn/bin/weblogic.sh stop* and *start* shell command as Oracle user).

2. Create user **jouws**

This user is used by the JOU portlet (on the presentation layer) to authenticate itself on the JOU webservice (backend).

After restarting Weblogic, return to the “myrealm” configuration page (**Security Realms -> myrealm**).

**Users and Groups -> Users -> New**

**Name:** jouws

**Description:** Used by the JOWS WSSecurity

**Provider:** DefaultAuthenticator

**Password:** cleansea2010

**Confirm Password:** cleansea2010

[OK]

3. Create user **finsysws**

This user is used by the Financial System portlet (presentation) and JOW web service (backend) to authenticate themselves on the Financial System webservice (backend):

**Users and Groups -> Users -> New**

**Name:** finsysws

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**Description:** Used by the FinSysWS WSSecurity

**Provider:** DefaultAuthenticator

**Password:** cleansea2010

**Confirm Password:** cleansea2010

[OK]

4. Create user **csndcjndi**

**Users and Groups -> Users -> New**

**Name:** csndcjndi

**Description:** User for JNDI access for CSNDC applications

**Provider:** DefaultAuthenticator

**Password:** csndcjndi1

**Confirm Password:** csndcjndi1

[OK]

5. Create group **CSNDC Group**

This group will contain the user JOU (portlet and web service) will use to access resources through Weblogic:

**Users and Groups -> Groups -> New**

**Name:** CSNDC Group

**Description:** Group for JNDI access of CSNDC applications

**Provider:** DefaultAuthenticator

[OK]

6. Assign the user **csndcjndi** to the **CSNDC Group**:

**Users and Groups -> Users -> csndcjndi -> Groups**

Select the "CSNDC Group" on the list to the left. Click the > button to transfer it to the list on the right.

[Save]

### 2.7.5 JOU Back-end Data Source creation

The JOWS Data Source needs to be created on the **business** tier cluster.

From the **Business** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

**Services -> JDBC -> Data Sources -> New**

**Name:** JOWSDS

**JNDI Name:** jdbc/JOWSDS

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; Versions:9.0.1,9.2.0,10,11

[Next]

[Next]

Fill in all fields regarding the database: the values can be found in the file **/tmp/jouds.info** on this machine.

[Next]

Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration

[Next]

As target for this data source, check **csnCluster** and select the "All servers in the cluster" option (if enabled)

[Finish]

[Activate Changes]

## 2.7.6 JOU Back-end Deployment

Deploy the (new) war with the **Business** Weblogic Administration Console.

a) Remove the old deployment if present (e.g: csndc-jou\_ws\_1\_1):

1. Click **Deployments** on the **Domain Structure** panel
2. Select the "csndc-jou\_ws\_1\_1" from the **Deployments** panel
3. Stop this deployment:
  - a. Click on button "Stop -> Force stop now"
  - b. Click button "Yes" in the confirmation dialog
4. Delete the deployment:
  - a. Click the "Lock & Edit" button from **Change Center** panel
  - b. Select the "csndc-jou\_ws\_1\_1" deployment
  - c. Click on **Delete button**
  - d. Click Yes in the confirmation dialog
5. When done, click the "Activate Changes" from **Change Center** panel

b) Install the new deployment (e.g: csndc-jou\_ws\_1\_2):

1. Click the "Lock & Edit" button from Change Center panel
2. Click the **"Install" button**
3. Navigate to URL: /wl\_domains/csn/deployments/applications/csndc-jou\_ws\_1\_2.war
4. Select "csndc-jou\_ws\_1\_2.war"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"
16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

c) To test if the deployment was successful, with a browser open the following URL:

Environment	URLs
Production	<a href="http://pwls09:7021/csndc-jou-ws/csndc-jou-ws?WSDL">http://pwls09:7021/csndc-jou-ws/csndc-jou-ws?WSDL</a> <a href="http://pwls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL">http://pwls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL</a>

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Pre-Production	<a href="http://qwls09:7021/csndc-jou-ws/csndc-jou-ws?WSDL">http://qwls09:7021/csndc-jou-ws/csndc-jou-ws?WSDL</a> <a href="http://qwls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL">http://qwls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL</a>
Test	<a href="http://twls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL">http://twls10:7021/csndc-jou-ws/csndc-jou-ws?WSDL</a>

The WSDL for the web service should appear.

### 2.7.7 Financial System Back-end Data Source creation

The Financial System (FINSYS) Data Source needs to be created on the **business** tier cluster. From the **Business** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

**Services -> JDBC -> Data Sources -> New**

**Name:** FinSysWSDS

**JNDI Name:** jdbc/FinSysWSDS

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; Versions:9.0.1,9.2.0,10,11

[Next]

[Next]

Fill in all fields regarding the database: the values can be found in the file **/tmp/finsysds.info** on this machine.

[Next]

Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration

[Next]

As target for this data source, check **csnCluster** and select the "All servers in the cluster" option (if enabled)

[Finish]

[Activate Changes]

### 2.7.8 Financial System Back-end Deployment

Deploy the (new) war with the **Business** Weblogic Administration Console.

a) Remove the old deployment if present (e.g: csndc-finsys\_ws\_1\_1):

1. Click **Deployments** on the **Domain Structure** panel
2. Select the "csndc-finsys\_ws\_1\_1" from the **Deployments** panel
3. Stop this deployment:
  - a. Click on button "Stop -> Force stop now"
  - b. Click button "Yes" in the confirmation dialog
4. Delete the deployment:
  - a. Click the "Lock & Edit" button from **Change Center** panel
  - b. Select the "csndc-finsys\_ws\_1\_1" deployment
  - c. Click on **Delete** button
  - d. Click Yes in the confirmation dialog
5. When done, click the "Activate Changes" from **Change Center** panel

b) Install the new deployment (e.g: csndc-finsys\_ws\_1\_2):

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to URL: /wl\_domains/csn/deployments/applications/csndc-finsys\_ws\_1\_2.war
4. Select "csndc-finsys\_ws\_1\_2.war"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"
16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

c) To test if the deployment was successful, with a browser open the following URL:

Environment	URLs
Production	<a href="http://pwls09:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL">http://pwls09:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL</a> <a href="http://pwls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL">http://pwls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL</a>
Pre-Production	<a href="http://qwls09:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL">http://qwls09:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL</a> <a href="http://qwls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL">http://qwls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL</a>
Test	<a href="http://twls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL">http://twls10:7021/csndc-finsys-ws/csndc-finsys-ws?WSDL</a>

The WSDL for the web service should appear.

### 2.7.9 GeoServer Deployment

Deploy with the **Business** Weblogic Administration Console.

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to Path: /wl\_domains/csn/deployments/geoserver/geoserver-2.0.1
4. Select "geoserver (open directory)"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"

INS

16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

**Note:** if the following message appears on WebLogic console after geoserver deployment:

#### Messages

- X An error occurred during activation of changes, please see the log for details.
- X weblogic.application.ModuleException:
- X java.lang.NullPointerException:
- V The deployment has been successfully installed.

apply the following steps:

1. Login as root user on [X]TWLS host
2. Mount the following filesystems:

```
# mount /geoserver_data
# mount /ism_vfs
# mount /mnt/shared tmp
```

3. Redeploy the geoserver application in WebLogic.

### 2.7.10 Deegree-WFS Deployment

Deploy with the **Business** Weblogic Administration Console.

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to Path: /wl\_domains/csn/deployments/deegreewfs/deegreewfs2.3
4. Select "degree-wfs (open directory)"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"
16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

### 2.7.11 Deegree-CSW Deployment

Deploy with the **Business** Weblogic Administration Console.

INS

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to Path: /wl\_domains/csn/deployments/vcatcsw
4. Select "vcat-csw (open directory)"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"
16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

## 2.7.12 csndc-report Deployment

Deploy the (new) war with the **Business** Weblogic Administration Console.

a) Remove the old deployment if present (e.g: csndc-report):

1. Click **Deployments** on the **Domain Structure** panel
2. Select the "csndc-report" from the **Deployments** panel
3. Stop this deployment:
  - a. Click on button "Stop -> Force stop now"
  - b. Click button "Yes" in the confirmation dialog
4. Delete the deployment:
  - a. Click the "Lock & Edit" button from **Change Center** panel
  - b. Select the "csndc-report" deployment
  - c. Click on Delete button
  - d. Click Yes in the confirmation dialog
5. When done, click the "Activate Changes" from **Change Center** panel

b) Install the new deployment (e.g: csndc-report):

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to URL: /wl\_domains/csn/deployments/csndc-report
4. Select "csndc-report (open directory)"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"

INS

16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

c) Configure the property file:

1. On main node (e.g.: twls10) change the external Map Server (able to serve projection EPSG:3395) url and querystring property value on the following file according to your needs:

/wl\_domains/csn/deployments/csndc-report/csndc-report/WEB-INF/resources/configuration.properties

Example values are:

```
csndc.report.mapserver.external.url=http://pcmap20/CMAFWMS/wmssync.ashx?

csndc.report.mapserver.external.url.querystring=LAYERS=S52%20Standard&FORMAT=image%2Fpng
&TRANSPARENT=FALSE

csndc.report.mapserver.internal.url=http://twls10:7021
```

### 2.7.13 Queue Bridge Deployment

Deploy with the **Business** Weblogic Administration Console.

1. Click the "Lock & Edit" button from Change Center panel
2. Click the "Install" button
3. Navigate to Path: /wl\_domains/csn/deployments
4. Select "qbridge.war"
5. Click "Next"
6. Choose targeting style: "Install this deployment as an application"
7. Click "Next"
8. Select deployment targets: "All servers in the cluster"
9. Click "Next"
10. General: Keep default
11. Security: Keep default
12. Source accessibility: "Copy this application onto every target for me"
13. Click "Next"
14. Additional configuration: "No, I will review the configuration later."
15. Click "Finish"
16. When done, click the "Activate Changes" from **Change Center** panel
17. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
18. Click Yes in the confirmation dialog

### 2.7.14 Apache Reverse Proxy configuration

Each business node hosts both the Weblogic server and the apache server. The former is used for all java components, such as Geoserver, Deegree, Jou and finsys back-end, etc., while the latter is used for all PHP-based components (GIS Viewer, POR, Alerting, etc).

PHP-based calls are easily identified because they start either with `/javabridge` or `/sibilla-static`.

Hence, that there is logic in this apache in order to:

- route non-php-based calls to weblogic
- act as a weblogic load balancer

These two tasks are handled by the `mod_wl` apache module together with the following directive:

```
<Location ~ "^/(csndc-finsys-ws|csndc-jou-ws|report|deegree-wfs|geoserver|qbridge|vcat-csw)/.*" >
    SetHandler weblogic-handler
    WebLogicCluster xwls09.emsa.local:7021,xwls10.emsa.local:7021
</Location>
```

The regular expression in the Location directive is such that all calls beginning with `csndc-finsys-ws`, `csndc-jou-ws`, `report`, `deegree-wfs`, `geoserver`, `qbridge`, `vcat-csw` are matched and hence, routed to one of the available nodes of the Weblogic cluster.

To properly configure the Apache server, execute the following steps:

1. Login as root user on [X]TWLS host
2. Stop the apache server

```
# service httpd stop
```

3. Backup the original configuration file

```
# cp /etc/httpd/conf/httpd.conf /etc/httpd/conf/httpd.conf.orig
```

4. Edit or overwrite the `/etc/httpd/conf/httpd.conf` like the following (below is for production servers):

```
# Apache load balancer for Weblogic [minimum] configuration file per domain
# See man httpd for more information (follow urls) and
# http://download.oracle.com/docs/cd/E15523_01/web.1111/e14395/plugin_params.htm
# init.d script is based on installed one heavily customized
#
# History:
# Apr 2011: initial version specific for CSN, VCL
# -----
# Look for the DOMAIN section below, remaining sections should not be changed.
# -----

# GLOBAL environment directives
# Only show minimum
ServerTokens Prod
ServerSignature Off
HostnameLookups Off
# Owner and group that runs httpd
User apache
Group apache
# Timeout value recommended
Timeout 120
```

## INS

```
# Allow unlimited persistent connections?
KeepAlive off
MaxKeepAliveRequests 0
# Update or define defaults
ServerAdmin root@localhost
DocumentRoot "/var/www/html"
AddDefaultCharset UTF-8
# Debug, in case of need
# LogLevel debug

# Load WLS load-balancing module, copied from the most recent version of WLS
# /oracle/*/wls/server/plugin/linux/x86_64/modl_wl_<ApacheVersion>.so
# OR BETTER use latest x86-64 v1.1 version, downloaded from metalink
LoadModule weblogic_module modules/mod_wl.so

# -----
# DOMAIN specific environment directives
Listen 81

# Modules/directives needed by php.conf
LoadModule authz_host_module modules/mod_authz_host.so
LoadModule mime_module modules/mod_mime.so
LoadModule dir_module modules/mod_dir.so
LoadModule log_config_module modules/mod_log_config.so
LoadModule setenvif_module modules/mod_setenvif.so
TypesConfig /etc/mime.types
# Modules/directives needed by CSN .conf files
LoadModule alias_module modules/mod_alias.so
# Modules/directives needed by other conf.d
LoadModule proxy_module modules/mod_proxy.so

Include conf.d/*.conf

# Location of config files, error, etc. files: standard
ServerRoot "/etc/httpd"

# Unique per project PID file: standard
PidFile run/httpd.pid

# You must define a servername, so use the <domain>
ServerName csn

# Everything NOT /javabridge is redirected to Weblogic
<Location ~ "^/(csndc-finsys-ws|csndc-jou-ws|report|deegree-wfs|geoserver|qbridge|vcat-
csw)/.*" >
    SetHandler weblogic-handler
    WebLogicCluster xwls09.emsa.local:7021,xwls10.emsa.local:7021
</Location>
```

There's only one directive that has to be changed in this configuration file, according to the installation environment, and this is WebLogicCluster.

Environment	WebLogicCluster
Production	<code>pwls09.emsa.local:7021,pwls10.emsa.local:7021</code>
Pre-Production	<code>qwls09.emsa.local:7021,qwls10.emsa.local:7021</code>
Test	<code>twls10.emsa.local:7021</code>

5. Copy mod\_wl.so plugin from the most recent version of WLS (e.g.: /oracle/\*\*/wlserver\*/server/plugin/linux/x86\_64/modl\_wl\_<ApacheVersion>.so) OR BETTER use latest x86-64 v1.1 version, downloaded from Oracle metalink (or from [x]loadb1 or [x]loadb2)

```
# cp /oracle/wls/10.3.2/wlserver_10.3/server/plugin/linux/x86_64/mod_wl_22.so
/usr/lib64/httpd/modules/
# chmod 755 /usr/lib64/httpd/modules/mod_wl_22.so
```

6. Restart the apache service

```
# service httpd restart
```

INS

## 2.8 [x]WGT1 (Presentation Layer)

Install Weblogic following the Weblogic Installation Document and refer to the following table depending on the targeted environment.

Field	Production	Pre-Production	Test
Domain Name	portal	portal	portal
Domain home	/wl_domains/portal	/wl_domains/portal	/wl_domains/portal
Administration Server	AdminServer	AdminServer	AdminServer
Admin. Listening Address	pwls11.emsa.local	qwls11.emsa.local	twls11.emsa.local
Admin. Listening port	7209	7209	7209
Managed Server	csnServer	csnServer	csnServer
Manag. Listening Address	pwls11.emsa.local	qwls11.emsa.local	twls11.emsa.local
Manag. Listening Port	7091	7091	7091
User	weblogic	weblogic	weblogic
Pwd	weblogic1	weblogic1	weblogic1

### 2.8.1 Installation

On the [x]WLS11 hosts:

1. Login as “oracle” user on the [X]WLS11 hosts
2. Mount the installation media and copy the distribution:  
copy the distribution “wgt” directory to /tmp/dist
3. Launch the installation script specifying the Site (*emsa* or *acs*) and the Environment (*test*, *preprod* or *prod*):

**Note:** for cluster configuration, the following modifications have to be performed on ALL nodes, unless stated differently

```
$ cd /tmp/dist/wgt
$ sh ./wgt_setup.sh <Site> <Environment>
```

**Next steps must be performed via the WebLogic Administration interface ([http://\[x\]wgt\[yy\]:7209/console](http://[x]wgt[yy]:7209/console))**

**Note:** Configuration [Lock & Edit] and [Activate Changes] are only available in cluster configurations (only for Production and Pre-Production environment).

1. Open a web browser and connect to Weblogic Admin URL according to the specific environment (see initial table at 2.8)
2. Login as admin user (e.g.: weblogic/weblogic1)

### 2.8.2 JOU Portal Data Source creation

The **presentation** tier needs to have the JOU back-end data source configured to enable reporting.

[Lock & Edit]

**Services -> JDBC -> Data Sources -> New**

**Name:** JOUWSDS

**JNDI Name:** jdbc/JOUWSDS

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; Versions:9.0.1,9.2.0,10,11

[Next]

[Next]

Fill in all fields regarding the database: the values can be found in the file **/tmp/jouds.info** on this machine.

[Next]

Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration

[Next]

As target for this data source, check **csnCluster** (**portalServer** for *test* environment) and select the "All servers in the cluster" option (if enabled)

[Finish]

[Activate Changes]

### 2.8.3 COM Portal Data Source creation

The COM Data Source needs to be created on the **presentation** tier only.

From the **Portal** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

**Services -> JDBC -> Data Sources -> New**

**Name:** COMPortletDS

**JNDI Name:** jdbc/COMPortletDS

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; Versions:9.0.1,9.2.0,10,11

[Next]

[Next]

Fill in all fields regarding the database: the values can be found in the file **/tmp/comds.info** on this machine.

[Next]

Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration

[Next]

As target for this data source, check **csnCluster** (**portalServer** for *test* environment) and select the "All servers in the cluster" option (if enabled)

[Finish]

[Activate Changes]

### 2.8.4 Financial System Portal Data Source creation

The **presentation** tier needs to have the Financial System backend data source configured.

From the **Portal** Weblogic Console in the **Domain Structure** tree:

[Lock & Edit]

INS

**Services -> JDBC -> Data Sources -> New**

**Name:** FinSysDS

**JNDI Name:** jdbc/FinSysDS

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; Versions:9.0.1,9.2.0,10,11

[Next]

[Next]

Fill in all fields regarding the database: the values can be found in the file **/tmp/finsysds.info** on this machine.

[Next]

Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration

[Next]

As target for this data source, check **csnCluster** (**portalServer** for *test* environment) and select the "All servers in the cluster" option (if enabled)

[Finish]

[Activate Changes]

### 2.8.5 Presentation Layer Users creation

The following procedure must be done also in **Presentation** Weblogic Console:

1. Create user **csndcjndi**

**Users and Groups -> Users -> New**

**Name:** csndcjndi

**Description:** User for JNDI access for CSNDC applications

**Provider:** DefaultAuthenticator

**Password:** csndcjndi1

**Confirm Password:** csndcjndi1

[OK]

2. Create group **CSNDC Group**

This group will contain the user JOU (portlet and web service) will use to access resources through Weblogic:

**Users and Groups -> Groups -> New**

**Name:** CSNDC Group

**Description:** Group for JNDI access of CSNDC applications

**Provider:** DefaultAuthenticator

[OK]

3. Assign the user **csndcjndi** to the **CSNDC Group**:

**Users and Groups -> Users -> csndcjndi -> Groups**

Select the "CSNDC Group" on the list to the left. Click the > button to transfer it to the list on the right.

[Save]

### 2.8.6 Portal Preliminary Configuration

The Liferay Portal is installed and managed by EMSA personnel. Anyway before installing the portlets the Portal itself must be configured to support their functionalities.

#### On [x]TWLS11 host

##### Liferay settings:

The specific Liferay's properties are configured on the following file:  
**/wl\_domains/portal-ext.properties**

As user Oracle add the following lines:

```
com.liferay.portal.upload.UploadServletRequestImpl.max.size=5242880
dl.file.max.size=5242880
dl.file.extensions=*
mail.session.jndi.name=mail/LiferayMail
```

##### Apache settings:

In the file **/etc/httpd/conf/httpd.conf** add the following lines:

```
# Load WLS load-balancing module, copied from the most recent version of WLS
# /oracle/*/wlserver*/server/plugin/linux/x86_64/modl_wl_<ApacheVersion>.so
# OR BETTER use latest x86-64 v1.1 version, downloaded from metalink
LoadModule weblogic_module modules/mod_wl.so

<Location /emsa-csn-theme>
    SetHandler weblogic-handler
    Debug ON
    WLTmpDir /tmp
    WLLogFile /tmp/mod_wl.log
</Location>
<Location /csndc-com-dlibrary-portlet>
    SetHandler weblogic-handler
    Debug ON
    WLTmpDir /tmp
    WLLogFile /tmp/mod_wl.log
</Location>
<Location /csndc-com-wiki-portlet>
    SetHandler weblogic-handler
    Debug ON
    WLTmpDir /tmp
    WLLogFile /tmp/mod_wl.log
</Location>
<Location /csndc-com-forum-portlet>
    SetHandler weblogic-handler
```

## INS

```
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>
    <Location /csndc-com-calendar-portlet>
        SetHandler weblogic-handler
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>
    <Location /csndc-jou-ws>
        SetHandler weblogic-handler
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>
    <Location /csndc-jou-portlet>
        SetHandler weblogic-handler
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>
    <Location /csndcjou>
        SetHandler weblogic-handler
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>
    <Location /csndc-finsys-portlet>
        SetHandler weblogic-handler
        Debug ON
        WLTempDir /tmp
        WLLogFile /tmp/mod_wl.log
    </Location>

    <LocationMatch "/emsa-csn-theme/*">
        AuthType Oblix
        require valid-user
    </LocationMatch>
    <LocationMatch "/csndc-com-dlibrary-portlet/*">
        AuthType Oblix
        require valid-user
    </LocationMatch>
    <LocationMatch "/csndc-com-wiki-portlet/*">
        AuthType Oblix
        require valid-user
    </LocationMatch>
    <LocationMatch "/csndc-com-forum-portlet/*">
        AuthType Oblix
        require valid-user
    </LocationMatch>
    <LocationMatch "/csndc-com-calendar-portlet/*">
```

```

        AuthType Oblix
        require valid-user
</LocationMatch>
<LocationMatch "/csndc-jou-portlet/*">
        AuthType Oblix
        require valid-user
</LocationMatch>
<LocationMatch "/csndc-jou-ws/*">
        AuthType Oblix
        require valid-user
</LocationMatch>
<LocationMatch "/csndcjou/*">
        AuthType Oblix
        require valid-user
</LocationMatch>
<LocationMatch "/csndc-finsys-portlet/*">
        AuthType Oblix
        require valid-user
</LocationMatch>

```

Add (or configure) a further file in **/etc/httpd/conf.d** such as **emsa-test.conf**, **emsa-preprod.conf**, **emsa-prod.conf** like the following example where used in the emsa-test environment:

```

#
# Configuration for EMSA TEST portal
#
#
#
# ServerName gives the name and port that the server uses to identify itself.
#
ServerName twls11
#
# Proxy Server directives.
#
<IfModule mod_proxy.c>

ProxyRequests On

ProxyPass          /sibilla-static/ http://twls10:81/sibilla-static/
ProxyPassReverse    /sibilla-static/ http://twls10:81/sibilla-static/
ProxyPass          /javabridge/acs/ http://twls10:81/sibilla-dynamic/
ProxyPassReverse    /javabridge/acs/ http://twls10:81/sibilla-dynamic/
ProxyPass          /geoserver/wms http://twls10:7021/geoserver/wms
ProxyPassReverse    /geoserver/wms http://twls10:7021/geoserver/wms
ProxyPass          /geoserver/wcs http://twls10:7021/geoserver/wcs
ProxyPassReverse    /geoserver/wcs http://twls10:7021/geoserver/wcs

</IfModule>
# End of proxy directives.

```

## INS

```
# Everything NOT /javabridge is redirected to Weblogic
<Location ~ "^/.*" >
    SetHandler weblogic-handler
    WebLogicCluster twls11:7091
</Location>
```

Where the values to be used are the following:

	prod	preprod	test
<b>ServerName</b>	pportal	qportal	twls11
<b>/sibilla-static/</b>	http://pbusiness:7021/sibilla-static/	http://qbusiness:7021/sibilla-static/	http://twls10:81/sibilla-static/
<b>/javabridge/acs/</b>	http://pbusiness:7021/sibilla-dynamic/	http://qbusiness:7021/sibilla-dynamic/	http://twls10:81/sibilla-dynamic/
<b>/geoserver/wms</b>	http://pbusiness:7021/geoserver/wms	http://qbusiness:7021/geoserver/wms	http://twls10:7021/geoserver/wms
<b>/geoserver/wcs</b>	http://pbusiness:7021/geoserver/wcs	http://qbusiness:7021/geoserver/wcs	http://twls10:7021/geoserver/wcs
<b>WebLogicCluster</b>	pwgt1:7091,pwgt2:7091	qwgt1:7091,qwgt2:7091	twls11:7091

Once properly configured, create a link for the mod\_wl.so object.  
Depending on the operating system, it should be something like

```
# ln -s /oracle/wls/10.3.2/wlserver_10.3/server/plugin/linux/x86_64/mod_wl_22.so
/usr/lib64/httpd/modules/mod_wl.so
```

Finally, reload the configuration using:

```
# service httpd graceful
```

**Note:** If you experience the following error

*"Starting httpd: /usr/sbin/httpd: error while loading shared libraries: libpq.so.4: cannot open shared object file: No such file or directory"*  
, maybe that the following rpm

**compat-postgresql-libs-4-1PGDG.rhel5.x86\_64.rpm**

is not installed in your system.

To install it, you can find it in the WLS installation directory.

## 2.8.7 Portlets deployment guidelines

In the following sections, some portlets will have to be deployed and some pages will have to be created.

Since the procedure is in most cases identical, this section will explain the how to deploy a portlet and how to create a new page inside Liferay.

First of all, the deployment process for Liferay is the following:

- first the war package has to be copied in the Liferay deployment directory
- then Liferay will automatically take this war, add some information, repackage it and put in the deployment directory of WebLogic
- finally, the new war will be manually deployed in WebLogic

To enable this process, some configuration has to be done on Liferay.

The following aliases will be used through the next sections:

Alias	Value
<LIFERAY DEPLOY DIR>	/wl_domains/portal/deploy
<LIFERAY REPACKAGED DIR>	/wl_domains/portal/deployments/portlet_repackage

On the host where Liferay is installed (e.g: [x]WLS11):

As **oracle** user, create <LIFERAY DEPLOY DIR> and <LIFERAY REPACKAGED DIR> with the following commands:

```
$ mkdir -p /wl_domains/portal/deploy
$ mkdir -p /wl_domains/portal/deployments/portlet_repackage
```

Set (Check) in Liferay the deploy and destination directories:

1. Login as Liferay's admin user on the portal web page: **http://[x]wgt1.emsa.local/web/csn**
2. Go to the **Control Panel** and select the **Plugins Installation** (Server section). Click on the button **Install More Portlets**, select the **Configuration** tab
  - Set the **deploy directory** to <LIFERAY DEPLOY DIR>
  - Set the **destination directory** to <LIFERAY REPACKAGED DIR> , if not set it default to /wl\_domains/portal/deployments/portlet\_repackage
3. Hit the **Save** button

Once properly configured, Liferay is ready to receive the portlets.

Thus, to load a new portlet, the steps to follow are:

- a) Copy the **portlet war** file to the Liferay autodeploy directory <LIFERAY DEPLOY DIR>
- b) Check the owner of the file and in case change to **oracle** user
- c) Liferay will repackage this war in order to prepare it for WebLogic. To follow the repackaging, look at the WebLogic log file, something like:

```
$ tail -f
/wl_domains/portal/servers/portalServer/logs/{portalServer.log,portalServer.out}
```

- d) After the Liferay repackaging is finished, the repackaged war will appear in <LIFERAY REPACKAGED DIR>.
- e) If a previous version of portlet is already deployed, it should first removed with the following procedure:

## INS

1. Login as administrator (weblogic) to the Weblogic Console
  2. Click **Deployments** on the **Domain Structure** panel
  3. Select the "**your-portlet.war**" from the **Deployments** panel
  4. Stop this deployment:
    - a. Click on button "Stop -> Force stop now"
    - b. Click button "Yes" in the confirmation dialog
  5. Delete the deployment:
    - a. Click the "Lock & Edit" button from **Change Center** panel
    - b. Select the "**your-portlet.war**" deployment
    - c. Click on Delete button
    - d. Click Yes in the confirmation dialog
  6. When done, click the "Activate Changes" from **Change Center** panel
- f) Hence, deploy it manually via the WebLogic console with the following procedure:
1. Login as administrator (weblogic) to the Weblogic Console
  2. Click **Deployments** on the **Domain Structure** panel
  3. Install the deployment:
    - a. Click the "Lock & Edit" button from Change Center panel
    - b. Click the "Install" button
    - c. Navigate to URL: **<LIFERAY REPACKAGED DIR>/your-portlet.war**
    - d. Select "**your-portlet.war**"
    - e. Click "Next"
    - f. Choose targeting style: "Install this deployment as an application"
    - g. Click "Next"
    - h. Select deployment targets: "All servers in the cluster"
    - i. Click "Next"
    - j. General: Keep default
    - k. Security: Keep default
    - l. Source accessibility: "Copy this application onto every target for me"
    - m. Click "Next"
    - n. Additional configuration: "No, I will review the configuration later."
    - o. Click "Finish"
  4. When done, click the "Activate Changes" from **Change Center** panel
  5. If the deployment is marked as prepared, select it and press the button "start -> start servicing all requests"
  6. Click Yes in the confirmation dialog
- g) Create the following Liferay's pages on the **CleanSeaNet** community:

### CleanSeaNet

- Home
- GIS Viewer
- Planning
- Alerting
  - Admin
  - Matrix
- Communication
  - Wiki
  - Calendar
  - Forum
  - Document Library
- Journaling
- Financial

```

Help
  GIS Viewer User Manual
    Online
    Download CHM
    Download PDF
  GIS Viewer Reference Manual
  Planning Admin Manual
  Planning User Manual
  Alerting Admin Manual
  Alerting User Manual
  COM User Manual
  JOU Admin Manual
  JOU SP Manual
  JOU SO Manual
  Financial System User Manual
  Authorising Officer User Manual

```

To accomplish this:

1. Login as Administrator in Liferay
2. From Liferay menu, navigate to the CleanSeaNet community pages
3. Click on the “Add Page” button in the Liferay menu, add the page name (as detailed in the following sections) and hit Save.
4. Select the newly created page
5. If the page already exists, remove the old portlet first (if any) clicking on the remove window icon (“x”)
6. Click on the “Add Application” button in the Liferay menu
7. Select the application from the “Add Application” popup window (as detailed in the following sections) and hit Add
8. Select the “Layout Template” from the Liferay menu
9. On the “Layout” window select the “1 Column” template and click “Save”
10. Click the settings button (...) and select “Configuration”.
11. Apply the configuration parameter as detailed in the following sections

h) In some cases, sub menus will have to be created. To do so:

1. click on “Manage Pages” on the Liferay menu, the “Manage Pages” interface will open up
2. select the parent page on the list
3. click on the “Children” tab
4. type in the submenu name and hit “Add Page”
5. repeat these instructions for all submenus

i) The following procedure can be done in order to optimize the usage of space in the interface:

1. From Liferay menu, navigate to the CleanSeaNet community pages
2. open “Manage Pages” in the right menu
3. on the top there is “Look and Feel” tab, click on “CSS”.
4. insert following text into textbox:

```

#content-wrapper {
    width: 98%;
}

```

5. and hit “Save”

INS

**These procedures must to be applied for all the portlets detailed in the next sections.**

### 2.8.8 Portlets installation

All the portlets can be found under the WGT directory in the installation media.  
Some of the portlets are contained in zip files and need to be extracted.

**On the [x]WLS11 hosts:**

1. Login as “oracle” user on the [X]WLS11 hosts
2. Unzip the csndc-com\_jou\_fs-portal.zip in the /tmp/dist/wgt directory

```
$ cd /tmp/dist/wgt
$ unzip csndc-com_jou_fs-portal.zip
```

3. Unzip the csndc-com-jou-fs-portal-configuration.tar.gz in the /tmp/dist/wgt directory

```
$ tar xvf csndc-com-jou-fs-portal-configuration.tar.gz
```

4. Create the config directories (if not existing):  
substitute <env> with the appropriate environment (i.e.: prod, preprod or test)

```
$ mkdir -p /wl_domains/portal/deployments/csnhome/config
/wl_domains/portal/deployments/csnhome/logs /wl_domains/portal/deployments/csnhome/tmp
```

5. Copy the configuration files:

```
$ cp /tmp/dist/wgt/emsa/<env>/portal/* /wl_domains/portal/deployments/csnhome/config
```

Answer ‘y’ to overwrite the existing files

```
# chown oracle: /wl_domains/portal/deployments/csnhome/config/*
```

Next sections will regard the installation of every single portlet of the portal.

Each section highlights the name of the portlet to be installed according to the aforementioned procedure, the details of the page to be added in the portal and, where applicable, extra procedures.

### 2.8.9 GIS Viewer Portlet Installation

<b>Portlet Path</b>	WGT directory on installation media
<b>Portlet Name</b>	csndc-sibilla-jsp-portlet.war
<b>Page Name</b>	GIS Viewer
<b>Application Path</b>	CSN
<b>Application Name</b>	CSNDC Sibilla JSP

Copy the WAR to the deployment directory:

```
$ cp csndc-sibilla-jsp-portlet.war /wl_domains/portal/deploy
```

as described before, follow the repackaging phase by looking at the log file:

```
$ tail -f /wl_domains/portal/servers/portalServer/logs/{portalServer.log,portalServer.out}
```

if successful, deploy the WAR as described previously.

Before to set the Sibilla portlet parameters, you can test the portal-business communication checking that no errors are retrieved at the following URLs:

Environment	Sibilla URLs
Production	<a href="http://pwgt1/javabridge/acs/ACSAmfPhp/gateway.php">http://pwgt1/javabridge/acs/ACSAmfPhp/gateway.php</a> <a href="http://pwgt1/sibilla-static/swf/sibilla.swf">http://pwgt1/sibilla-static/swf/sibilla.swf</a>
Pre-Production	<a href="http://qwgt1/javabridge/acs/ACSAmfPhp/gateway.php">http://qwgt1/javabridge/acs/ACSAmfPhp/gateway.php</a> <a href="http://qwgt1/sibilla-static/swf/sibilla.swf">http://qwgt1/sibilla-static/swf/sibilla.swf</a>
Test	<a href="http://twgt1/javabridge/acs/ACSAmfPhp/gateway.php">http://twgt1/javabridge/acs/ACSAmfPhp/gateway.php</a> <a href="http://twgt1/sibilla-static/swf/sibilla.swf">http://twgt1/sibilla-static/swf/sibilla.swf</a>

Then, some additional operations need to be performed:

Minimize the portlet and then click settings button (...) and select Configuration.  
Fill in the form with the following parameters, modifying the Business LB value accordingly.

Parameter	Value
Endpoint	/javabridge/acs/ACSAmfPhp/gateway.php
ClassName	csndc
Main Interface	Catalogue
Business LB	[x]wgt1
Extra Params	sinbad=oilspill&useInitializeReported=true
Protocol	http

Once configured as Liferay's admin user, an error shown

#### Notes:

1. If Sibilla doesn't start, check log file /var/log/httpd/error\_log on [x]WLS[yy] (business layer). If an error like the following is logged:

```
[Tue Jan 17 11:04:03 2012] [error] [client 172.16.120.72] PHP Fatal error:  Uncaught exception 'VerboseException' with message 'session_start(): open(/var/lib/phpsession//sess_irtp8nkq538sm17na4iga64oh1, O_RDWR) failed: No such file or directory'
```

it means that a previous installation was performed as oracle user. Then apply the following commands (as root):

```
# service httpd stop
# rm -rf /var/lib/phpsession/
# mkdir -p /var/lib/phpsession/
```

INS

```
# chown apache: /var/lib/phpsession/
```

- the “Business LB” parameter should match the FQDN (Full Qualified Domain Name) of Liferay’s URL.  
Example: if the browser URL indicate <http://twgt1.emsa.local> then the value twgt1.emsa.local should be set.  
If this is not done a pop-up message “Error #2048 /sibilla-static/sinbad\_csn\_dc\_config/getFeatureInfoFilter.xml The file can’t be loaded” appear.

### 2.8.10 Planning Portlet Installation

<b>Portlet Path</b>	Already installed for the GIS Viewer
<b>Portlet Name</b>	csndc-sibilla-jsp-portlet.war
<b>Page Name</b>	Planning
<b>Application Path</b>	CSN
<b>Application Name</b>	CSNDC Sibilla JSP

Some additional operations need to be performed:

Minimize the portlet and then click settings button (...) and select Configuration.  
Fill in the form with the following parameters, modifying the Business LB value accordingly.

Parameter	Value
Endpoint	/javabridge/acs/ACSAmfPhp/gateway.php
ClassName	emsa_por
Main Interface	POR
Business LB	[x]wgt1
Extra Params	useInitializeReported=true
Protocol	http

### 2.8.11 Alerting Portlet Installation

<b>Portlet Path</b>	Already installed for the GIS Viewer
<b>Portlet Name</b>	csndc-sibilla-jsp-portlet.war
<b>Page Name</b>	Alerting
<b>Sub Menu</b>	Admin
<b>Application Path</b>	CSN
<b>Application Name</b>	CSNDC Sibilla JSP

Some additional operations need to be performed:

Minimize the portlet and then click settings button (...) and select Configuration.  
Fill in the form with the following parameters, modifying the Business LB value accordingly.

Parameter	Value
Endpoint	/javabridge/acs/ACSAmfPhp/gateway.php
ClassName	emsa_oas
Main Interface	Catalogue
Business LB	[x]wgt1
Extra Params	useInitializeReported=true
Protocol	http

<b>Portlet Path</b>	Already installed for the GIS Viewer
<b>Portlet Name</b>	csndc-sibilla-jsp-portlet.war
<b>Page Name</b>	Alerting
<b>Sub Menu</b>	Matrix
<b>Application Path</b>	CSN
<b>Application Name</b>	CSNDC Sibilla JSP

Some additional operations need to be performed:

Minimize the portlet and then click settings button (...) and select Configuration.  
Fill in the form with the following parameters, modifying the Business LB value accordingly.

Parameter	Value
Endpoint	/javabridge/acs/ACSAmfPhp/gateway.php
ClassName	oas_admin
Main Interface	oas_admin
Business LB	[x]wgt1
Extra Params	useInitializeReported=true
Protocol	http

## 2.8.12 Communication Portlets Installation

### 2.8.12.1 Wiki

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-com-wiki_portlet_X_Y.war
<b>Page Name</b>	Communication
<b>Sub Menu</b>	Wiki

## INS

<b>Application Path</b>	CleanSeaNet Data Centre/Communication
<b>Application Name</b>	CleanSeaNet Wiki

Copy the WAR to the deployment directory:

```
$ cp /tmp/com_jou_fs/wars/csndc-com-wiki_portlet_1_1.war /wl domains/portal/deploy
```

### 2.8.12.2 Calendar

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-com-calendar_portlet_X_Y.war
<b>Page Name</b>	Communication
<b>Sub Menu</b>	Calendar
<b>Application Path</b>	CleanSeaNet Data Centre/Communication
<b>Application Name</b>	CleanSeaNet Calendar

### 2.8.12.3 Forum

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-com-forum_portlet_X_Y.war
<b>Page Name</b>	Communication
<b>Sub Menu</b>	Forum
<b>Application Path</b>	CleanSeaNet Data Centre/Communication
<b>Application Name</b>	CleanSeaNet Forum

### 2.8.12.4 Digital Library

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-com-dlibrary_portlet_X_Y.war
<b>Page Name</b>	Communication
<b>Sub Menu</b>	Document Library
<b>Application Path</b>	CleanSeaNet Data Centre/Communication
<b>Application Name</b>	CleanSeaNet Document Library

## 2.8.13 JOU Portlet Installation

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-jou_portlet_*.war

<b>Page Name</b>	Journaling
<b>Application Path</b>	CleanSeaNet Data Centre/Journaling
<b>Application Name</b>	CleanSeaNet Journaling

**Note:** If an error appears stating “ClassNotFoundException” for “MailEngineException” restart the liferay managed server and redo the deployment process (copying again the war files into the liferay autodeploy directory).

#### 2.8.14 Financial System Portlet Installation

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-finsys_portlet_*.war
<b>Page Name</b>	Financial
<b>Application Path</b>	CleanSeaNet Data Centre/Financial System
<b>Application Name</b>	CleanSeaNet Financial System

#### 2.8.15 Login Check Portlet Installation

<b>Portlet Path</b>	/tmp/com_jou_fs/wars/
<b>Portlet Name</b>	csndc-redirect_portlet_*.war (ex csndc-logincheck-portlet_*.war)
<b>Page Name</b>	Home
<b>Application Path</b>	CleanSeaNet Data Centre
<b>Application Name</b>	CleanSeaNet Login

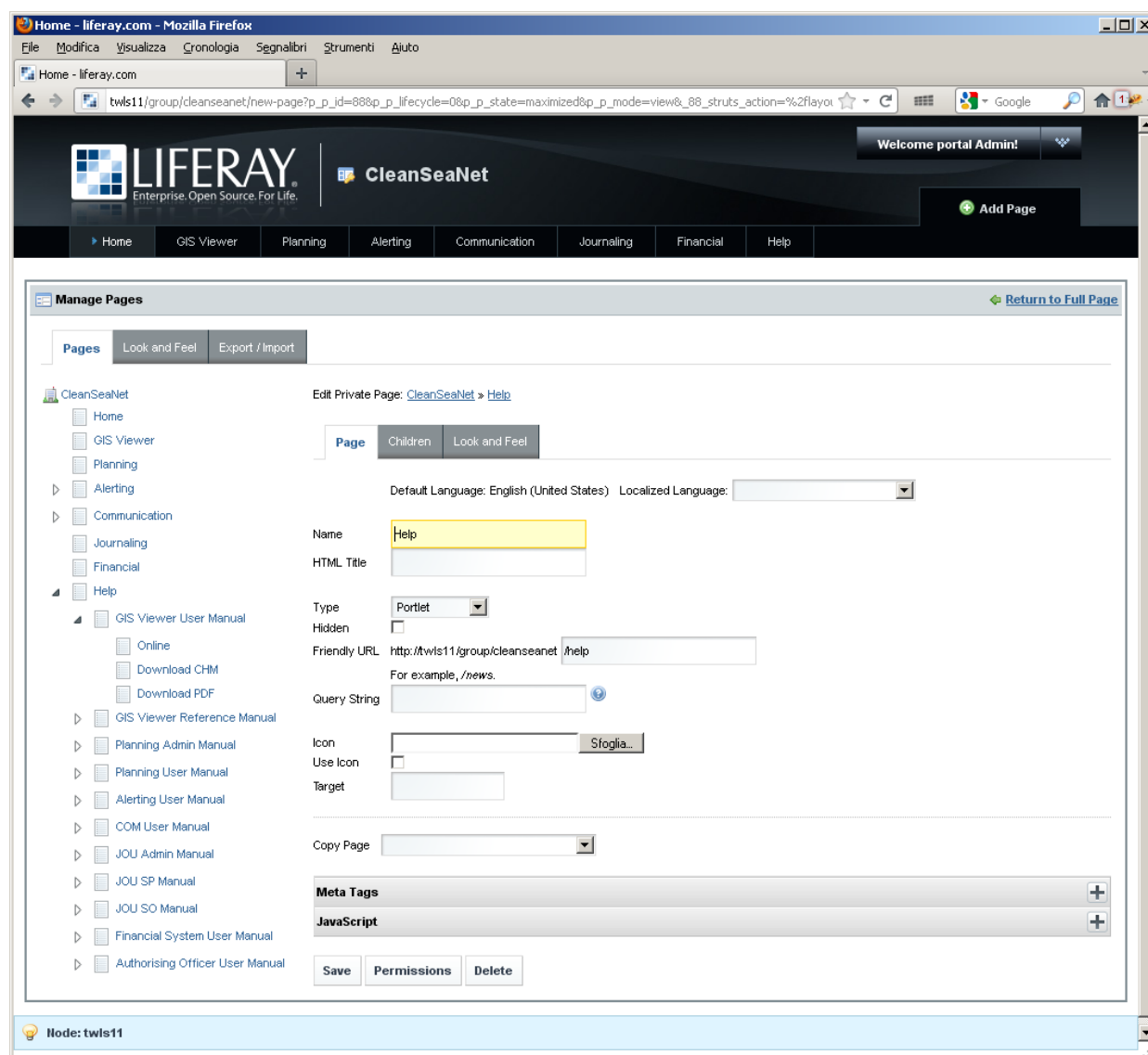
INS

## 2.8.16 Help buttons configuration

This section is about how to create the help buttons hierarchy and to assign the visibility to the various users according to their privileges. Please note that the screen-shots are taken from the ACS installation and therefore can have a slightly different look and feel with respect to the EMSA ones.

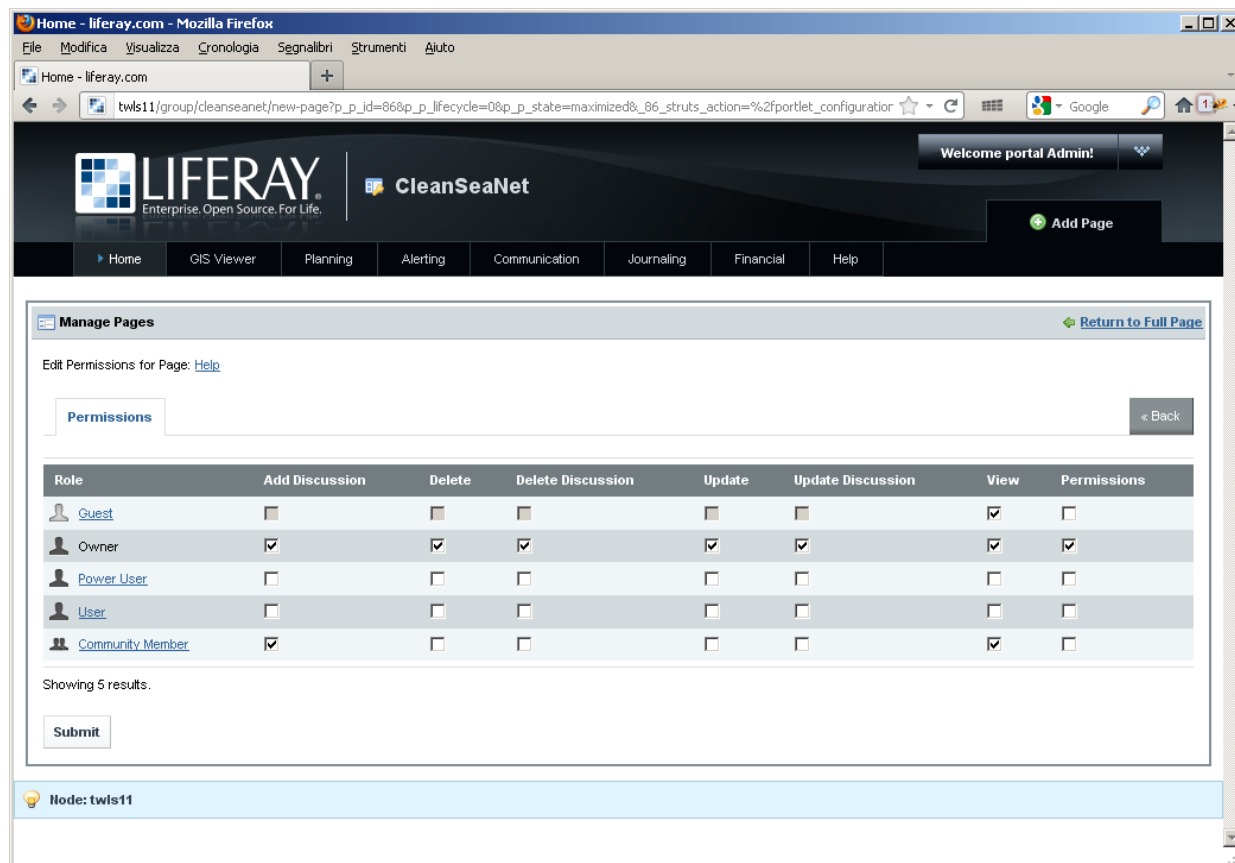
Here is the procedure:

1. Log into the Liferay portal as **admin** user
2. From Liferay menu, navigate to the CleanSeaNet community pages
3. Click on the item "Manage pages" in the Liferay menu



4. Select the root of the hierarchy (CleanSeaNet) and click on the *New page* tab on the right side panel
5. Enter the name of the page: Help and click on the Add Page button: as a result of this the page is created and appears at the bottom of the pages hierarchy
6. The page must be of type *Portlet*
7. Select the page by clicking on the page icon that appears in the page hierarchy to the left

8. Click on the *Page* tab in the right side panel and then on the *Permissions* button at the bottom of the panel: the Permission panel will appear



9. On the permission panel check/uncheck the permission check boxes according to the setting specified in the table below
10. Click on submit: the permission will be set for that tab
11. Click on the help page to create children
12. Click on the Children tab on the right side panel
13. Create a page of type Portlet, with the name *GIS Viewer User Manual*: the page appears at the bottom of the hierarchy, having the *Help* page as parent
14. Repeat steps 8, 9 and 10 above to set the permissions for this page
15. Click on the page GIS Viewer User Manual
16. On the right panel click on the Children button to add a child
17. Create a child page of type URL, with name *Online*: the page is created and appears at the bottom of the hierarchy in the left side
18. Select the *Online* page from the pages hierarchy and click on the *Page* tab on the right side panel
19. Enter the following values:
  - URL: see table
  - Target: `_blank` (this will cause the help page to be opened in a new tab in the browser, alternatively the option `_new` can be used to open the link in a new window)
20. Repeat steps 8, 9 and 10 above to set the permissions for this page
21. Repeat steps 15, 16, 17, 18, 19, 20, changing the following values:
  - Page name: download CHM
  - URL: see table
22. Repeat steps 15, 16, 17, 18, 19, 20, changing the following values:
  - Page name: download PDF
  - URL: see table

## INS

The steps indicated above will produce the following initial branch of the Help hierarchy:

- Help
  - GIS Viewer User Manual
    - Online
    - Download CHM
    - Download PDF

The steps shall be repeated in order to create the following complete tree (including the ones above):

- Help
  - GIS Viewer User Manual
    - Online
    - Download CHM
    - Download PDF
  - GIS Viewer Reference Manual
    - Online
    - Download CHM
    - Download PDF
  - Planning Admin Manual
    - Online
    - Download CHM
    - Download PDF
  - Planning User Manual
    - Online
    - Download CHM
    - Download PDF
  - Alerting Admin Manual
    - Online
    - Download CHM
    - Download PDF
  - Alerting User Manual
    - Online
    - Download CHM
    - Download PDF
  - COM User Manual
    - Online
    - Download CHM
    - Download PDF
  - JOU Admin Manual
    - Online
    - Download CHM
    - Download PDF
  - JOU SP Manual
    - Online
    - Download CHM
    - Download PDF

**INS**

- JOU SO Manual
  - Online
  - Download CHM
  - Download PDF
- Financial System User Manual
  - Online
  - Download CHM
  - Download PDF
- Authorising Officer User Manual
  - Online
  - Download CHM
  - Download PDF

The following table reports the permissions to be used for the various buttons in the above hierarchy

[illegible]

In the CleanSeaNet community pages, go to:

- [CSN](#) » [Help](#) » [GIS Viewer User Manual](#) » [Online](#)

Set the following values:

- Type: URL
- Friendly URL: /gis-viewer-user-manual/online
- URL: /sibilla-static/GISViewerUserManual/html/application.htm
- [CSN](#) » [Help](#) » [GIS Viewer User Manual](#) » Download CHM
- Type: URL
- Friendly URL: /gis-viewer-user-manual/download-chm
- URL: /sibilla-static/GISViewerUserManual/GISViewerUserManual.chm.gz
- [CSN](#) » [Help](#) » [GIS Viewer User Manual](#) » Download PDF
- Type: URL
- Friendly URL: /gis-viewer-user-manual/download-pdf
- URL: /sibilla-static/GISViewerUserManual/GISViewerUserManual.pdf

Then repeat the above steps according to the following files:

```

/sibilla-static/AlertingUserManual/AlertingUserManual.chm.gz
/sibilla-static/AlertingUserManual/AlertingUserManual.pdf
/sibilla-static/AlertingUserManual/html/application.htm
/sibilla-static/AlertingUserManual_CS/AlertingUserManual_CS.chm.gz
/sibilla-static/AlertingUserManual_CS/AlertingUserManual_CS.pdf
/sibilla-static/AlertingUserManual_CS/html/application.htm

/sibilla-static/AuthOffUserManual/html/application.htm

/sibilla-static/COMUserManual/application.htm
/sibilla-static/COMUserManual/COMUserManual.chm.gz
/sibilla-static/COMUserManual/COMUserManual.pdf

/sibilla-static/FinSysUserManual/FinSysUserManual.chm.gz
/sibilla-static/FinSysUserManual/FinSysUserManual.pdf
/sibilla-static/FinSysUserManual/html/application.htm

/sibilla-static/GISViewerReferenceManual/GISViewerReferenceManual.chm.gz
/sibilla-static/GISViewerReferenceManual/GISViewerReferenceManual.pdf
/sibilla-static/GISViewerReferenceManual/html/application.htm

/sibilla-static/GISViewerUserManual/GISViewerUserManual.chm.gz
/sibilla-static/GISViewerUserManual/GISViewerUserManual.pdf
/sibilla-static/GISViewerUserManual/html/application.htm

/sibilla-static/JOUUserManual/html/application.htm
/sibilla-static/JOUUserManual/JOUUserManual.chm.gz
/sibilla-static/JOUUserManual/JOUUserManual.pdf
/sibilla-static/JOUUserManual_LP/html/application.htm

```

**INS**

/sibilla-static/JOUUserManual\_LP/JOUUserManual\_LP.chm.gz  
/sibilla-static/JOUUserManual\_LP/JOUUserManual\_LP.pdf  
/sibilla-static/JOUUserManual\_SP/html/application.htm  
/sibilla-static/JOUUserManual\_SP/JOUUserManual\_SP.chm.gz  
/sibilla-static/JOUUserManual\_SP/JOUUserManual\_SP.pdf

/sibilla-static/PORUserManual\_EMSA/html/application.htm  
/sibilla-static/PORUserManual\_EMSA/PORUserManual\_EMSA.chm.gz  
/sibilla-static/PORUserManual\_EMSA/PORUserManual\_EMSA.pdf  
/sibilla-static/PORUserManual\_EU/html/application.htm  
/sibilla-static/PORUserManual\_EU/PORUserManual\_EU.chm.gz  
/sibilla-static/PORUserManual\_EU/PORUserManual\_EU.pdf

/sibilla-static/ReleaseNotes/html/application.htm  
/sibilla-static/ReleaseNotes/ReleaseNotes.chm.gz  
[/sibilla-static/ReleaseNotes/ReleaseNotes.pdf](#)

## 2.9 Oracle Identity Manager Installation

Oracle Identity Manager (OIM) is the oracle tool used for managing the user accesses to the CSN-DC system in conjunction with the Oracle Access Manager which implements the Single Sign On (SSO) paradigm. OIM is installed and managed by EMSA as it is used for all EMSA projects. The specific configuration of the OIM for the purposes of the CSN-DC is in charge of ACS.

This section will describe how to deploy and configure the items that will create the specific configuration of the OIM. This deployment also involves the configuration of Liferay and the correct connection with the LDAP.

The CSN-DC OIM configuration consists of the following steps:

- Deployment of the ACS SW, which consists of configuration files and java tasks
- Execution of the java tasks according to the instructions provided hereafter
- Configuration of Liferay according to the specifications provided hereafter
- Configuration of web services and corresponding Weblogic data sources

At the end of this procedure the OIM system is configured according to the CSN-DC specifications and is ready to accept creation of users.

The instructions are split in 3 macro-sections:

- OIM configuration
- Liferay configuration
- Web services and data sources configuration

## 2.10 OIM Configuration

The following items are delivered as part of the CSN-DC configuration package:

- jar-files:
  - *acs-import-task.jar*: this is used in the installation procedure, as described below
  - *csndc-oim-prov.jar*: this is used during the provisioning
- xml-export:
  - *AcsExport.xml*: this implements the configuration of all groups, organisations, hierarchies, permissions, forms, etc. as specified by EMSA
- Web service war-files:
  - *wup.war*
  - *oas.war*
  - *por.war*
  - *com.war*

- *fin.war*
- *jou.war*

The web service war applications are needed in order to receive the provisioning calls from OIM side.

These are the installation instructions for reconfiguring the OIM in order to address the CSN-DC requirements (it is required some knowledge of the OIM to perform this):

- put the jar files into the *JavaTasks* directory of the OIM machine
- put the xml file into the */tmp* directory of that machine
- using the OIM design console, create a task named *ACS Import* (see below)
- using the OIM administration console, launch the task *ACS Import* created in the previous step

The task shall have the following characteristics (see figure below):

- Scheduled task: ACS Import
- Class name: *it.acsys.csndc.task.AcsImportTask*
- Disabled: checked
- Status: INACTIVE
- Path: */tmp/AcsExport.xml*

Oracle Identity Manager Design Console : connected to jdbc:oracle:thin:@emsaoim:1521:orcloim

File Edit Tool Bar Help

Oracle Identity Manager Design Console

- User Management
- Resource Management
- Process Management
- Administration
  - Form Information
  - Lookup Definition
  - User Defined Field Definition
  - System Configuration
  - Remote Manager
  - Password Policies
  - Task Scheduler**
- Development Tools

**Task Definition**

Scheduled Task: ACS Import ☒ Disabled

Class Name: it.acsys.csndc.task.AcsImportTask ☐ Stop Execution

Status: INACTIVE Max Retries:

**Start**

Start time: 11/23/10 7:58:32 PM

Last Start Time: 11/23/10 7:58:32 PM

Last Stop Time: 11/23/10 7:58:57 PM

Next Start Time:

**Interval**

☐ Daily ☐ Monthly

☐ Weekly ☐ Yearly

☐ Recurring Intervals ☒ Once

Minute(s):

**Task Attributes**

	Attribute Name	Attribute Value
1	path	/tmp/AcsExport.xml

Add Delete

Figure 5-1 Configuration of the *ACS Import* task

The *acs-import-task.jar* is a java task which automates the deployment of the OIM CSN-DC configuration. In addition to the standard XML configuration deployment performed using the deployment tools of the OIM, this task also prepares the ground for the web services developed in order to synchronise the OIM configuration with the CSN-DC local database. In particular defines the following items:

- password
- url
- username

for the IT resources (which are deployed from the XML file import)

Username and password shall not be changed as they are the ones used by the CSN-DC synchronisation web services, whereas the URL may need to be changed in case the machine name are different from the ones currently defined (e.g. *qwgt1.emsa.local*).

In order to do this, please use the OIM web console and choose Resource Management-> Manage IT Resource and choose the web service to edit, click on edit and access to a window like the one in the following figure. The following IT resources are of type *CSNDC Web Service*.

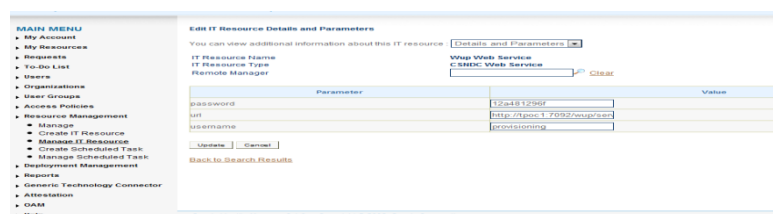


Figure 5-2 Editing the URL of a IT resource

Check on the OIM console that the task is successfully running. The whole procedure takes few minutes. The effect of this procedure is that the OIM will be ready with all groups, organisations, permissions, hierarchy and forms for creating all necessary users.

## 2.11 OIM Liferay configuration

In order to have the link between the OIM users and the Liferay users, the following conditions shall hold true:

1. Liferay shall contains the groups with the same naming as the ones defined in OIM
2. The *liferay\_users* role must be present in the *WebLogic* deployment (this is an assumption, since this is a role used by all the projects)
3. The Liferay groups shall be associated to the *liferay\_users* role

The following groups must be present in Liferay:

Group name	Note
UP01 CSN DC ADMIN	
UP02 CSN Service Desk	
UP03 MSS Operator	
UP04 CSN Financial Officer	

UP05 CSN Authorising Officer	
UP06 CS NCA Representative	
UP08 CS User Group Representative	Currently not used
UP09 CS Operational User	
UP10 CS Planning Representative	
UP11 Service Provider System User	
UP12 Satellite Operator System User	
UP13 Service Provider Representative	
UP14 Satellite Operator Representative	
UP15 Guest	
UP16 General Public	

In order to create the groups, log in Liferay with administrator privileges and click on the User Groups menu to verify if the above groups are already there (see figure below).

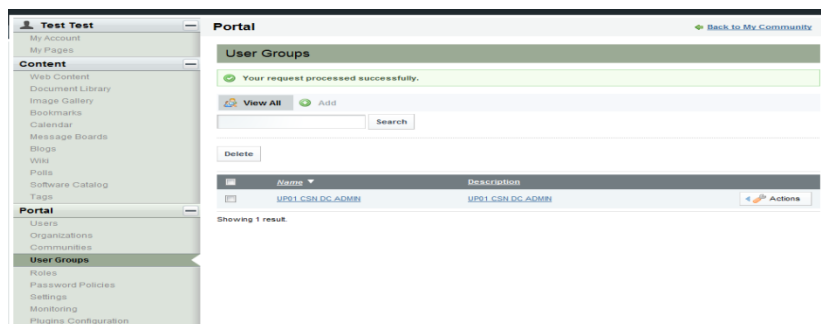


Figure 5-3 User group creation step 1

In case all or some of the groups are missing, perform the following steps:

- Click on the Add button
- On the window that pops-up (see figure below), enter the group name and (possibly) a description
- Click on save button

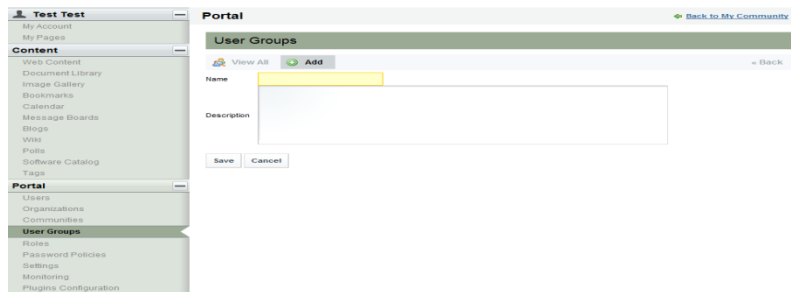


Figure 5-4 User group creation step 2

Check if the liferay\_users role is configured in WebLogic, as described below:

- Login in the weblogic console
- Select security realms
- Select my real
- Select LDAP provider
- Select Provider specific
- Check Additional role

The role shall appear, as in the following figure.

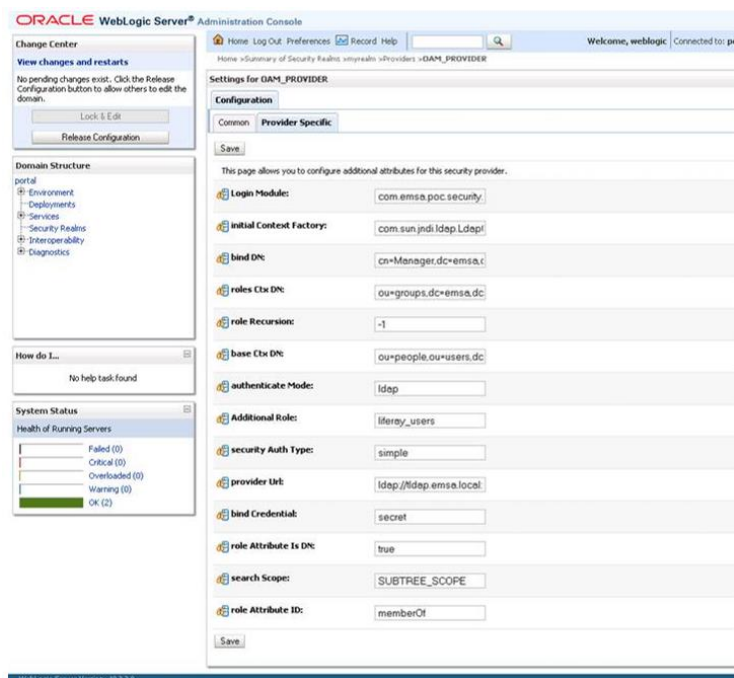
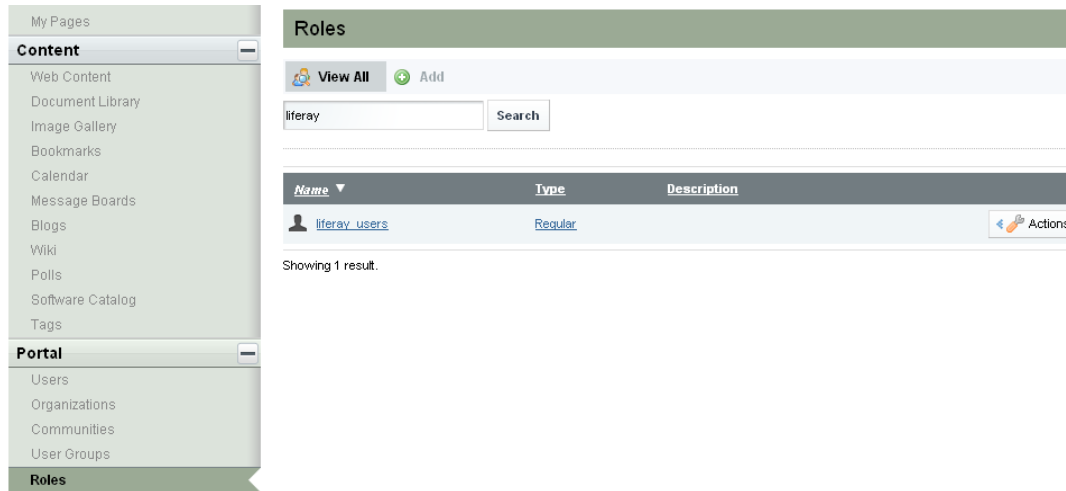


Figure 5-5 Liferay\_users role in WebLogic



Associate liferay\_users to User Groups, according to the following procedure

In Liferay Control Panel, select “Roles” and select “liferay\_users” role.



**Roles**

[View All](#) [Add](#)

Name	Type	Description	Actions
 <a href="#">liferay_users</a>	<a href="#">Regular</a>		

Showing 1 result.

Figure 5-6 liferay\_users role selection

- In Actions, select “Assign Members”
- Select “User Group” tab
- Add the THETIS User Groups

**Roles**

[View All](#) [Add](#) [« Back](#)

[Roles](#) > [liferay\\_users](#) > [Assign Members](#)

[Edit](#) [Define Permissions](#) [Assign Members](#)

[Users](#) [Communities](#) [Organizations](#) [User Groups](#)

[Current](#) [Available](#)

[Search](#)

[Update Associations](#)

Showing 14 results.

<input checked="" type="checkbox"/>	Name ▼	Description
<input checked="" type="checkbox"/>	stcwadministrators	STCWAdministrators
<input checked="" type="checkbox"/>	stcwassistants	STCWAssistants
<input checked="" type="checkbox"/>	stcwinspectors	STCWInspectors
<input checked="" type="checkbox"/>	stcwreaders	STCWReaders
<input checked="" type="checkbox"/>	stcwsupervisors	STCWSupervisors
<input checked="" type="checkbox"/>	thetisallocators	THETISAllocators
<input checked="" type="checkbox"/>	thetisinspectors	THETISInspectors
<input checked="" type="checkbox"/>	thetisnationaladministrators	THETISNationalAdministrators
<input checked="" type="checkbox"/>	thetisnationalstatisticanalysers	THETISNationalStatisticAnalysers
<input checked="" type="checkbox"/>	thetisprocessors	THETISProcessors
<input checked="" type="checkbox"/>	thetisreaders	THETISReaders
<input checked="" type="checkbox"/>	thetisstatisticanalysers	THETISStatisticAnalysers
<input checked="" type="checkbox"/>	thetissupervisors	THETISSupervisors
<input checked="" type="checkbox"/>	thetissystemadministrators	THETISSystemAdministrators

Showing 14 results.

Figure 5-7 Association of groups to roles (example taken by THETIS)

## 2.12 OIM Web Services Installation

In order to deploy the web service war applications, the correspondent Weblogic data sources have to be created on the presentation tier. Since the COMPortletDS data source, the FinSysDS data source, and the JOWSDS data source have been created in section 3.7, only the creation of WUP data source, OAS data source and POR data source are required.

### 2.12.1 WUP Web Service Data Source creation

The presentation tier needs to have the WUP back-end data source configured to enable reporting.

On the Portal Weblogic Administration console:

- Services -> JDBC -> Data Sources -> New

**Name:** wupDataSource

**JNDI Name:** jdbc/wupDataSource

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; **Versions:** 9.0.1, 9.2.0, 10, 11

- Then hit Next -> Next
- Fill in all fields regarding the WUPUSR database.
- Then hit Next and then Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration.
- As target for this data source, check csnCluster and select the "All servers in the cluster" option and then hit Finish.

### 2.12.2 OAS Web Service Data Source creation

The presentation tier needs to have the OAS back-end data source configured to enable reporting.

On the Portal Weblogic Administration console:

- Services -> JDBC -> Data Sources -> New

**Name:** oasDataSource

**JNDI Name:** jdbc/oasDataSource

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; **Versions:**9.0.1,9.2.0,10,11

- Then hit Next -> Next
- Fill in all fields regarding the OASUSR database.
- Then hit Next and then Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration.
- As target for this data source, check csncCluster and select the "All servers in the cluster" option and then hit Finish.

### 2.12.3 POR Web Service Data Source creation

The presentation tier needs to have the OAS back-end data source configured to enable reporting.

On the Portal Weblogic Administration console:

- Services -> JDBC -> Data Sources -> New

**Name:** porDataSource

**JNDI Name:** jdbc/porDataSource

**Database Type:** Oracle

**Database Driver:** Oracle's Driver (Thin XA) for Instance connections; **Versions:**9.0.1,9.2.0,10,11

- Then hit Next -> Next
- Fill in all fields regarding the PORUSR database.
- Then hit Next and then Test Configuration to test if the information entered is correct. If so, then hit Next, if not, go back and correct the configuration.

- As target for this data source, check csCluster and select the “All servers in the cluster” option and then hit Finish.

#### 2.12.4 Web Services deployment

The task is the same for all six delivered web service .war files, in order to deploy them on the presentation tier:

- *wup.war*
- *oas.war*
- *por.war*
- *com.war*
- *fin.war*
- *jou.war*

The .war file needs to be copied into the Weblogic deployment directory.

- Under Weblogic Console -> Deployments -> Install
- Deploy the war from the destination directory
- Please be aware that the application must be deployed to all cluster nodes
- Check the log file for this kind of output:

```
Apr 6, 2011 3:31:19 PM it.acsys.provisioning.util.DatabaseManager initializeFor
INFO: Ok, using data-source 'jdbc/wupDataSource'
Apr 6, 2011 3:31:19 PM it.acsys.provisioning.util.OrganizationsManager initiali
INFO: Organizations:
-----
CYPRUS
DENMARK
GERMANY
IRELAND
NETHERLANDS
SPAIN
UK
GREECE
FRANCE
```

The organizations list printed on the log file proves that the deployed application can successfully communicate with the correspondent data source.

## 3. Building the environment

This guide describes how the software developed for the CSN-DC Release 1.1 can be rebuilt and repackaged.

To simplify this process, a virtual machine (*emsa-int2*) containing all the software source code has been provided with all the tools necessary to rebuild the components. Thus, the following steps are all to be performed on this machine.

### 3.1 C++ Code (PDS, ISM)

**Important:** if the software has already been built, it's better to clean up the environment before the new rebuild. This can be accomplished with the following commands:

```
[builder@emsa-int2 emsa]$ make cleanall  
[builder@emsa-int2 emsa]$ lsrpm.py clean
```

The following steps are necessary to rebuild the PDS packages:

- Login as "builder" on the CSN build Environment server (current password is "qwerty")

**Note: the following step is fundamental!**

- At the shell prompt type in:

```
[builder@emsa-int2 ~]$ emsa
```

The system will change directory to `"/raid0/emsa"`.

- Launch the "make" command to build up all the PDS software:

```
[builder@emsa-int2 emsa]$ make
```

The system will start building up the software, displaying a long list of statements.

This will take roughly 20 minutes.

Ignore all compilation warnings.

- At the end of this procedure, the compiled software can be packaged for installation with the following commands:

```
[builder@emsa-int2 emsa]$ lsrpm.py build
```

These commands will produce a long list of statements on the console: ignore all warnings.

## 3.2 PHP & Java Code (WUP, POR, Alerting, WebCat-Feeder, Jou, Com and Financial System)

The following steps are necessary to rebuild the PDS packages:

- Login as "builder" on the CSN build Environment server (current password is "qwerty")
- At the shell prompt type in:

```
[builder@emsa-int2 ~]$ emsa
```

The system will change directory to "/raid0/emsa".

- Now change directory to rpm\_installer:

```
[builder@emsa-int2 emsa]$ cd rpm_installer
```

- Launch the build command to build up all the software:

```
[builder@emsa-int2 emsa]$ ./build_emsa_from_srcrpm.sh
```

The system will start building up the RPMs, displaying a long list of statements.  
This will take roughly 10 minutes.

## 3.3 OIM java software

The following steps are necessary to rebuild the OIM components:

- Login as "builder" on the CSN build Environment server (current password is "qwerty")

- At the shell prompt type in:

```
[builder@emsa-int2 ~]$ emsa
```

The system will change directory to "/raid0/emsa".

- Now change to the appropriate directory:

```
[builder@emsa-int2 emsa]$ cd csn-java-software
```

- This is the content of the directory (each directory, except the “libraries” folder, is a component to build):

```
[builder@emsa-int2 ~]$ emsa
[builder@emsa-int2 emsa]$ cd oim-java-software/
[builder@emsa-int2 oim-java-software]$ ll
total 80
drwxr-xr-x 3 builder integrator 4096 Feb 22 16:35 csn-oim-adapter
drwxr-xr-x 4 builder integrator 4096 Feb 22 16:36 csn-oim-portlet
drwxr-xr-x 4 builder integrator 4096 Apr  6 18:22 csn-queue-bridge
drwxr-xr-x 2 builder integrator 4096 Feb 22 12:34 libraries
drwxr-xr-x 4 builder integrator 4096 Feb 22 16:37 provisioning-webservice-com
drwxr-xr-x 4 builder integrator 4096 Feb 22 16:38 provisioning-webservice-fin
drwxr-xr-x 4 builder integrator 4096 Feb 22 16:39 provisioning-webservice-jou
drwxr-xr-x 4 builder integrator 4096 Apr  6 18:22 provisioning-webservice-oes
drwxr-xr-x 4 builder integrator 4096 Feb 23 16:57 provisioning-webservice-por
drwxr-xr-x 4 builder integrator 4096 Feb 22 16:40 provisioning-webservice-wup
[builder@emsa-int2 oim-java-software]$
```

- Enter the component folder (for example, “cd csn-oim-portlet”)
- Type “./ant” (is a symbolic link pointing to Apache Ant Software)
- The binaries will be into the “dist” sub-folder
  - If necessary, type “./ant clean” in order to return to the initial situation

### 3.4 Final Distribution

The following steps are necessary to create the final distribution for the CSN-DC Release 1.1

- Login as "builder" on the CSN build Environment server (current password is "qwerty")
- At the shell prompt type in:

```
[builder@emsa-int2 emsa]$ lsrpm.py mkdvd
```

These commands will produce a long list of statements on the console: ignore all warnings.

Moreover, the "*lsrpm.py mkdvd*" will issue the following fake errors:

```
/raid0/emsa/tools/auxiliary_installation_scripts/functions: line 135: 339000+*1: syntax error: operand expected (error token is "**1")
/raid0/emsa/tools/update_repository.sh: line 129: [: -eq: unary operator expected
```

Ignore these errors as they don't have any impact on the software packaging procedure.

- At the end of this procedure, the software is built and available at the following location "/raid0/emsa/dist" and ready to be installed.
- Important: if the distribution has already been done, it's better to clean up the deployment before the new rebuilt. This can be accomplished with the following command:

```
[builder@emsa-int2 emsa]$ rm -rf /raid0/emsa/dist
```

## 3.5 Updating the building Environment

The emsa-int2 machine is shipped with the latest release of every single component.

Sooner or later, the necessity to update it with new releases will become necessary.

Depending on the software that is to be updated, there will be two possibilities:

- PDS/ISM update: in this case a tarball will be provided with some instructions on which source files must be updated.
- All other components: SRC-RPMs will be provided and, in some cases, also some tarballs with instructions. These SRC-RPMs will have to be installed onto the emsa-int2 machine (as user "builder") so that it will be possible, at any time, to rebuild the new software.





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