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DIGIT Connecting Europe Facility

Service Metadata Publisher

Administration Guide

SMP 3.0.0

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1. INTRODUCTION

This Administration Guide is intended for Administrators who are in charge of installing, managing and troubleshooting an eDelivery SMP (Service Metadata Publisher).

1.1. Purpose

The purpose of this guide is to provide detailed information on how to deploy and configure an SMP 3.0.0 on either a WebLogic or Tomcat Application Server with either MySQL or Oracle database.

It also provides detailed descriptions of the related Security Configurations (Certificates).

There is also a section on the use of Soap UI to create, update and delete SMP Service Groups and Metadata.

Another section describes an alternative method to perform the creation, update and deletions using Swagger UI.

2. CONVENTION

The Commands and Configuration files listed in this document usually contain a mix of reserved words (commands, instructions and system related special words) and user defined words (chosen by the user) as well as comments and preferred values for certain variables. The conventions used in this document, to distinguish between them, are the followings:

- **Bold** is used for "reserved" words and commands
- Normal italic together with a short description of the argument, is used for user-defined names (chosen by yourself to designate items like users, passwords, database etc..). Normally contains at least 2 words separated by "_".
- **Bold and Italic** is used for advisable values which can be changed by the user depending on their infrastructure.
- Comments are sometimes added to describe the purpose of the commands, usually enclosed in brackets ().
- By default, non-OS specific paths will be described using Linux patterns.

Example 1: Sample Oracle Statement:

create user smp_user identified by smp_password;

grant all privileges to smp_user;

(Where *smp_user* and *smp_password* are names chosen by the user)

Example 2: Sample Configuration File:

jdbc.driver = com.mysql.jdbc.Driver

jdbc.url = jdbc:mysql://localhost:3306/smp_database

jdbc.user = smp_user

jdbc.password = smp_password

target-database = MySQL

(Where: *smp_user, smp_database* and *smp_password* are names chosen by the user.

localhost:3306 represents hostname:port parameters of the MySQL database.)

3. PREREQUISITES

Please install the following software on the target system. For further information and installation details, please refer to the software owner's documentation.

- Java runtime environnement (JRE), version 7 or 8: <u>http://www.oracle.com/technetwork/java/javase/downloads/index.html</u>
- One of the supported Database Management Systems :
 - MySQL 5,6 or above
 - Oracle 10g+
- **One** of the supported Application Server:
 - WebLogic 12c
 - Tomcat 8

3.1. Binaries repository

All the CEF SMP artefacts can be directly downloaded from the Nexus repository of CEF¹.

← → C û Secure https://ec.europa.eu/cefdigital/artifact/content/repositories/eDelivery/eu/europa/ec/cipa/cipa-smp-full-webapp/3.0.0/								
Index of /repositories/eDelivery/eu/europa/ec/cipa/cipa-smp-full-webapp/3.0.0								
Name	Last Modified	Size	Description					
Parent Directory								
cipa-smp-full-webapp-3.0.0.pom	Fri Jun 16 12:18:09 CEST 2017	6143						
cipa-smp-full-webapp-3.0.0.pom.md5	Fri Jun 16 12:18:09 CEST 2017	32						
cipa-smp-full-webapp-3.0.0.pom.sha1	Fri Jun 16 12:18:09 CEST 2017	40						
cipa-smp-full-webapp-3.0.0.war	Fri Jun 16 12:18:03 CEST 2017	57327325						
cipa-smp-full-webapp-3.0.0.war.md5	Fri Jun 16 12:18:09 CEST 2017	32						
cipa-smp-full-webapp-3.0.0.war.sha1	Fri Jun 16 12:18:09 CEST 2017	40						

3.2. Source Code Repository

The source code of CEF SMP is available in the **GIT** repository at the following location:

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse

¹ <u>https://ec.europa.eu/cefdigital/artifact/content/repositories/eDelivery/eu/europa/ec/cipa-smp-full-webapp/3.0.0/</u>

() A https://ec.europa.eu/cefdigital/	code/projects/EDELIVERY/repos/smp/browse
Most Visited in Getting Started in Error	500Internal Ser 📀 http://localhost:6550/
Bitbucket Projects Repositorie	¦S ≁
EDELIVERY SMP PUBLIC ACTIONS	EDELIVERY / SMP Source It master - ···· SMP /
⊥ Clone	🖿 smp-api
	smp-parent-pom
Create pull request	smp-server-library
-C Fork	smp-soapui-tests
NAVIGATION	smp-webapp
Source	.gitignore
¢ Commits	LICENCE-EUPL-v1.1.pdf
🐓 Branches	pom.xml
Pull requests	E README.md

3.3. Database Scripts

The scripts to create (or migrate) the Oracle or MySQL databases can be found at:

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse/smp-server-library/database

(🗋 🖴 https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse/smp-server- 🛛 🧲 🛛
Most	: Visited 🥏 Getting Started 🛞 Error 500Internal Ser 🛞 http://localhost:6550/
😨 Bi	tbucket Projects Repositories -
1	EDELIVERY / SMP
	Source
0	Image: master - •••• SMP / smp-server-library / database /
□	t
i.	migration from 2.5.0 to 3.0.0
۴ ch	create-Mysql.sql
Ŀ	Create-Oracle.sql
	integration_tests_initial_data.sql

4. DEPLOYMENT

4.1. Deployment overview

As mentioned in the prerequisites, the deployment of the CEF SMP is only supported on Tomcat and WebLogic application servers.

The deployment of the CEF SMP on both platforms is almost identical and only minor platform specific changes will be documented in a dedicated section of this manual.

The deployment of the CEF SMP can be summarized in the following mandatory steps:

- Database Configuration
- Application Server Preparation
- SMP Initial Configuration
- SMP .WAR file Deployment

Remark:

The environment variable, cef_edelivery_path, refers to the name of the folder where the SMP package is installed and will be used in the remainder of this document. For Tomcat, Its refers to 'CATALINA_HOME' For Oracle WebLogic, it refers to 'DOMAIN HOME'

4.2. Database Configuration

This section describes the steps necessary to create the database, tables and the SMP database user (**dbuser** used for database connection purpose).

It also includes the creation of an initial SMP user account that will be used by REST clients to connect to the SMP.

The SMP uses a direct connection to the database, which removes the need to configure a data source within WebLogic.

For this step you need to use one or more of the following resources, in the CEF SMP GIT source code repository (see section §3.2 for the download location):

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse/smp-server-library/database

(https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse/smp-server-
Most	t Visited 🥹 Getting Started Error 500Internal Ser 🕙 http://localhost:6550/
😨 Bi	tbucket Projects Repositories -
3	EDELIVERY / SMP
•••	Source
	Image: master - •••• SMP / smp-server-library / database /
\$	🗙
12	migration from 2.5.0 to 3.0.0
đ.	create-Mysql.sql
	Create-Oracle.sql
	integration_tests_initial_data.sql

4.2.1. MySQL configuration

- 1. Download and copy the create-Mysql.sql script to cef_edelivery_path/sql-scripts
- 2. Open a command prompt and navigate to the cef_edelivery_path/sql-scripts folder.
- 3. Execute the following MySQL commands:

```
mysql -h localhost -u root_user --password=root_password -e "drop schema if
exists smp_schema;create schema smp_schema;alter database smp_schema
charset=utf8; create user smp_dbuser@localhost identified by
'smp_password';grant all on smp_schema.* to smp_dbuser@localhost;"
```

This creates a *smp_schema* and an *smp_dbuser* with (all) privileges to the smp_schema.

Execute the following command to create the required objects (tables etc.) in the database

mysql -h localhost -u root_user -proot_password smp_schema < create-Mysql.sql</pre>

4.2.2. Oracle Database configuration

- 1. Download and copy the create-Oracle.sql script to cef_edelivery_path/sql-scripts
- 2. Navigate to *cef_edelivery_path*/sql-scripts directory
- 3. Execute the following commands :

<pre>sqlplus sys as sysdba (password should be the one assigned during the Oracle installation)</pre>
Once logged in Oracle: create user smp_dbuser identified by smp_dbpassword;
grant all privileges to smp_dbuser;
connect smp_dbuser
<pre>show user; (should return : smp_dbuser)</pre>
<pre>@create-Oracle.sql (run the scripts with the @ sign from the location of the scripts)</pre>
exit

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4.2.3. Application Server Preparation

This section describes the changes that are applied to the host application server and consist of:

- For Tomcat & WebLogic: Creating and adding a directory in the java CLASSPATH where the CEF SMP configuration files are located
- For Weblogic only: Disabling the application Server default Authentication

4.2.4. Oracle WebLogic

This section does not include the installation of a WebLogic application server. It is assumed that the WebLogic Server is installed and a WebLogic domain is created with an administration server and a managed server on which the CEF SMP will be deployed.

Hereafter the domain location will be referred as DOMAIN_HOME (user defined name).

In the examples, below, we will use the following Domain and Server names:

- Domain Name : SMPDOMAIN
- Administration Server : AdminServer
- SMP Managed Server : SMP_ManagedServer

As shown below:

(i) http://localhost:7001/conso	ole/cor	nsole.portal?_nfpb=true&	L_pageLabel=C	CoreServerServerT	abl 🔻 🛛 Cʻ	Q , Search		5	1 â	• 🏠	Ξ
🤌 Most Visited 🧶 Getting Started 🖪	Erro	r 500Internal Ser 🛞	http://localho	ost:6550/							
	r Admir	nistration Console 12c									õ
Change Center		🟦 Home Log Out Preferer	nces 📐 Record	Help	Q		Welcon	ne, weblogic	Connected	to: SMP_DC	OMAIN
View changes and restarts		Home >Summary of Servers	>Summary of En	vironment >Summa	ry of Servers						
Click the Lock & Edit button to modify, add	S	Summary of Servers									
or delete items in this domain.		Configuration Control									
Lock & Edit											
Release Configuration	Release Configuration A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.										
Domain Structure	51	This page summarizes each	server that has l	been configured in t	he current Webl	Logic Server doma	in.				
SMP_DOMAIN											
Environment		C5									
Clusters		Customize this table									
Coherence Clusters											
Machines Virtual Hosts	=	Servers (Filtered - More Columns Exist)									
Work Managers		Cick the Lock & Luit but	ton in the chang	je Center to activate	all the buttons o	in uns page.					
Startup and Shutdown Classes		New Clone Dele	ete					Showing 1	to 2 of 2 P	revious Ne	xt
-Services -Security Realms		Name 🗞		Туре	Cluster	Machine	State	Health	Listen	Port	
Interoperability	-	AdminServer(admin)	Configured			RUNNING	al ox	7001		-
-Diannostics	-		/	Configured			NUMBER	V OK	7001		-
How do I	3	SMP_managedServe	21	Configurea			KUNNING	✓ OK	7003		
Create Managed Servers		New Clone Dele	ete					Showing 1	to 2 of 2 P	revious Ne	xt
Clone servers											
Delete Managed Servers	15										
Delete the Administration Server Start and dop convert											
 Start and stop servers 											

In order to deploy the SMP on the WebLogic Application Server platform, two preliminary steps need to be completed:

Disabling the Authentication on the Weblogic Server and Configuring the Extra CLASSPATH for WebLogic, as described in the following 2 sections:

4.2.4.1. Disabling the Authentication on the WebLogic

The CEF SMP has its own authentication mechanism which makes the WebLogic authentication redundant. Therefore the WebLogic Authentication has to be disabled to stop it interfering with the SMP authentication:

Edit the config.xml file by adding the following tag before the closing the </security-configuration> tag:

<enforce-valid-basic-auth-credentials>false</enforce-valid-basic-auth-credentials>

As shown below:



4.2.4.2. Configuring the Extra CLASSPATH for WebLogic

In this Oracle WebLogic example, a directory called '**smp**' will be created in the root path of the WebLogic installation (DOMAIN_HOME) and the CLASSPATH modified to include this new directory.

Create an smp directory in the DOMAIN_HOME directory

Within the cef_edelivery_path/smp directory, create the following sub-directories:

- conf
- keystores
- temp
- logs

Edit the WebLogic DOMAIN_HOME/bin/setDomainEnv.sh

Add the 'EXPORT CLASSPATH=\${CLASSPATH}:\${DOMAIN_HOME}/smp/conf' statement at the end of the CLASSPATH definition as shown below:

```
../
if [ "${PRE_CLASSPATH}" != "" ] ; then
        CLASSPATH="${PRE_CLASSPATH}${CLASSPATHSEP}${CLASSPATH}"
        export CLASSPATH
fi
        CLASSPATH=${CLASSPATH}:${DOMAIN_HOME}/smp/conf
        export CLASSPATH
```

/..

TO windows example

```
../
If NOT "%PRE_CLASSPATH%"=="" (
    set CLASSPATH=%PRE_CLASSPATH%;%CLASSPATH%
)
set CLASSPATH=%CLASSPATH%;%DOMAIN_HOME%\smp\conf
/..
```

4.2.5. Configuring Tomcat

In order to deploy the SMP on Tomcat, the following step needs to be completed:

4.2.5.1. Configuring the Extra CLASSPATH for Tomcat

In this Tomcat example, a directory called '**smp**' will be created in the root path of the Tomcat installation (CATALINA_HOME) and the CLASSPATH modified to include this new directory using an existing Tomcat batch file (CATALINA_HOME/bin/setenv.[sh|bat]).

Create a 'smp' directory in the \$CATALINA_HOME directory

Within the cef_edelivery_path/smp directory, create two new sub-directories:

- conf
- keystores

For Linux:

Edit the \$CATALINA_HOME/bin/setenv.sh file



For Windows

Edit the %CATALINA_HOME%/bin/setenv.bat file

```
REM Set CLASSPATH to include $CATALINA_HOME/smp/conf
REM where the 'smp.config.properties' is located
set classpath=%classpath%;%catalina_home%\smp\conf
```

4.2.5.2. JDBC Driver

The JDBC driver need to be downloaded from the manufacturer website .

- For Oracle Database : <u>http://www.oracle.com/technetwork/apps-tech/jdbc-112010-090769.html</u>
- For Mysql : <u>https://www.mysql.com/products/connector/</u>

The JDBC driver (.jar file) must be copied to the following directory: cef_edelivery_path/lib

4.3. SMP Initial Configuration

4.3.1. SMP ID Configuration

Configure the SMP ID as explained in section §5.25.4 of this document

4.3.2. Database configuration

Configure the database connectivity properties as explained in section §5.35.4 of this document

4.3.3. Keystore configuration

Configure the Keystore as explained in section §5.4 of this document

4.4. SMP .WAR file Deployment

The CEF SMP is deployed following the steps listed below:

4.4.1. <u>Tomcat</u>

Copy the cef_edelivery/smp/temp/cipa-smp-full-webapp-3.0.0.war file to the Tomcat '**webapps**' directory (cef_edelivery/webapps)

4.4.2. Oracle WebLogic

Deploy the 'war' file within WebLogic using the Oracle Weblogic deployer or using the Weblogic Administration Console.

An example of using the Oracle the 'weblogicc.deployer' is provided below:

```
java weblogic.Deployer -adminurl
t3://${WebLogicAdminServerListenAddress}:${WebLogicAdminServerPort} \
-username ${WebLogicAdminUserName} \
-password ${WebLogicAdminUserPassword} \
-deploy -name cipa-smp-full-webapp-3.0.0.war \
-targets ${SMP_ManagedServer} \
```

-source \$TEMP_DIR/cipa-smp-full-webapp-3.x.x.war

Verify the installation by navigating, using your browser, to **http://localhost:7003/ cipa-smp-full-webapp-3.0.0**

The following page is only displayed if the deployment is successful.



5. SMP CONFIGURATION

For this step, you will have to use the following resources (see section 3.1 Binaries repository for the download location):

- The SMP Web Application Archive (smp-full-webapp-3.0.0.war)
- An smp config file named 'smp.config.properties located in the CLASSPATH
- A keystore used for XMLDSIG

By default, the file named 'config.properties' is embedded within the SMP .WAR file under the ./WEB-INF/classes directory. In order to offer flexibility and to avoid losing the SMP configuration while deploying a new SMP war file, it is recommended to extract this file from the .WAR archive and store it in a dedicated location located within the CLASSPATH of the application server as explained in the next section.

5.1.1. Downloading and Extracting the war file

- 1. Download the SMP Web Application Archive **smp-full-webapp-3.0.0.war** from the location specified in section §3.1 and save it in the cef_edelivery/smp/temp directory.
- 2. Extract the 'config.properties' file from the 'smp-full-webapp-3.0.0.war' file and place it into the directory 'cef_edelivery/smp/conf' directory created during the Server preparation 4.2.5.1
- 3. Rename config.properties as smp.config.properties

5.2. SMP ID Configuration

This is the name of the SMP.

This name can be choosen freely unless the SMP will be registered to an SML.

It is recommended but not mandatory to use only UPPERCASE characters

The configuration of the SMP ID is achieved by the setting the '**regServiceRegistrationHook.id**' in the 'config.property' file as follow:

```
../
# SMP ID
regServiceRegistrationHook.id=MY_SMP_ID
/..
```

5.3. Database Configuration

As explained earlier, the CEF SMP uses direct connection to the database.

The CEF SMP databbase back-end configuration is performed within the CEF SMP configuration file (smp.config.properties' file).

Depending on the selected database back-end, modify the 'smp.config.properties' files as indicated below

For Oracle Database:

```
../
## JDBC configuration for DB Oracle
jdbc.driver = oracle.jdbc.OracleDriver
jdbc.url = jdbc:oracle:thin:@dbhost:dbport:smp_database
jdbc.user = smp_user
jdbc.password = smp_user_pwd
target-database = Oracle
jdbc.read-connections.max = 10
/..
```

For MySQL:

```
../
## JDBC configuration for DB MySQL
# JDBC configuration for DB MySQL
jdbc.driver = com.mysql.jdbc.Driver
jdbc.url = jdbc:mysql://dbhost:dbport/smp_database
jdbc.user = smp_user
jdbc.password = smp_user_pwd
target-database = MySQL
jdbc.read-connections.max = 10
/..
```

5.4. SMP Keystores

CEF SMP uses two distinct keystores used for different usage:

- One optional keystore is used to identify the SML in combination with HTTPS
- One **MANDATORY** keystore is used for signing the responses to 'GET' requests (XMLDSIG response signing)

5.4.1. XMLDSIG response signing Keystore

This keystore is mandatory and will prevent the CEF SMP from starting if not deployed and/or properly configured.

A sample keystore can be downloaded from the following link:

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-mockservices/browse/signature_keys.jks?at=7831890f43098c67f52c4006388f9135325aa318&raw Details of the sample keystore:

- Keytore name : signature_keys.jks
- Keystore Password : mock
- Key Alias : smp_mock
- Key Passsword : mock

This keystore can be copied to ./smp/keystores/ or any other chosen directory of the SMP server, then configured in the **smp.config.properties** file as shown in the following example:

```
../
## XMLDSIG response signing:
xmldsig.keystore.classpath = ./smp/keystores/signature_keys.jks
xmldsig.keystore.password = mock
xmldsig.keystore.key.alias = smp_mock
xmldsig.keystore.key.password = mock
/..
```

5.4.2. <u>SML Keystore</u>

The SML keystore is optional and need only to be deployed and configured if the SMP will be accessing an SML using HTTPS.

The SML keystore should be deployed in a server location and configured in the **smp.config.properties** using a relative or an absolute location

```
../
# SML URL (incl. the service name)
#regServiceRegistrationHook.regLocatorUrl=https://sml.peppolcentral.org/managepa
rticipantidentifier
#
regServiceRegistrationHook.regLocatorUrl=https://smk.peppolcentral.org/managepar
ticipantidentifier
regServiceRegistrationHook.regLocatorUrl=http://localhost:8080/manageparticipant
identifier
regServiceRegistrationHook.keystore.classpath =
regServiceRegistrationHook.keystore.password =
/..
```

5.5. Configuring the CEF SMP for use with an SML

The SMP can be registered to an SML using two identification mechanisms

- Using HTTP and plain text with metadata embedded into the header of the REST request
- Using HTTPS/TLS and a keystore containing a certificate

5.5.1. Defining the SMP ID

The name of the SMP instance can be freely chosen but it is not currently possible to know whether the name chosen is free for registration or not.

It is also RECOMMENDED but not mandatory to use only uppercase characters.

The configuration of the SMP ID is achieved by the configuring the '**regServiceRegistrationHook.id**' in the '**config.property'** file as follow:



5.5.2. Configuring the Registration Hook

The first step is to configure the SMP so that it could be used with an SML.

This is achieved by configuring the Registration callback (SML client caller) in the 'config.property' file.

The "registrationHook.class" property has to be changed

From : eu.europa.ec.cipa.smp.server.hook.DoNothingRegistrationHook

To : eu.europa.ec.cipa.smp.server.hook.RegistrationServiceRegistrationHook

```
../
## Registration callback (SML client caller)
registrationHook.class=eu.europa.ec.cipa.smp.server.hook.RegistrationServiceRegi
strationHook
#registrationHook.class=eu.europa.ec.cipa.smp.server.hook.DoNothingRegistrationH
ook
/..
```

5.5.3. Configuring the SML URL

The configuration of the SML URL end point is achieved by configuring the '**regServiceRegistrationHook.regLocatorUrl**' property in the '**config.property'** file as follows:

```
../
# SML URL (incl. the service name)
```

#regServiceRegistrationHook.regLocatorUrl=https://sml.peppolcentral.org/managepa
rticipantidentifier

#regServiceRegistrationHook.regLocatorUrl=https://smk.peppolcentral.org/managepa
rticipantidentifier

regServiceRegistrationHook.regLocatorUrl=http://localhost:8080/manageparticipant
identifier

/..

5.5.4. SMP authentication to an SML

Once registered in an SML, the SMP needs to authenticate against the SML during normal operation

This can be achieved by using plain text HTTP or HTTPS/TLS

5.5.4.1. Plain Text HTTP

When using plain text HTTP, as mentioned in the '**regServiceRegistrationHook.regLocatorUrl**' covered earlier, the certificate's metadata will be added to each SML request configured via the configured **Client-Cert** HTTP header.

../

SMP's certificate - needed only when accessing BDMSL directly through HTTP. The configured "Client-Cert" HTTP header will be added to each BDMSL request(bypassing SSL cert verification made normally by SSL terminator)

regServiceRegistrationHook.clientCert=serial=000000000000000000009A195D2DD88C&su
bject=CN=SMP_1000000000,0=DG-DIGIT,C=BE&validFrom=Oct 21 02:00:00 2014
CEST&validTo=Oct 21 01:59:59 2016 CEST&issuer=CN=Issuer Common Name,OU=Issuer
Organization Unit,O=Issuer Organization,C=BE

/..

5.5.4.2. HTTPS/TLS

When using HTTPS/TLS, as mentioned in the 'regServiceRegistrationHook.regLocatorUrl' covered earlier, all information related to the keystore containing the SMP certificate must be configured.

Note that in this case, the 'regServiceRegistrationHook.clientCert', described earlier must be set to Blank.

```
../
regServiceRegistrationHook.clientCert=
regServiceRegistrationHook.keystore.classpath = ../keystores/yourKeystore.jks
regServiceRegistrationHook.keystore.password = youKeystorePassword
/..
```

6. SMP USER MANAGEMENT

Only 'Admin SMP' and 'Admin ServiceGroup' users who connect to the CEF SMP need to be created in the SMP database.

Anonymous users or public users can access the SMP to retrieve only. They do not get registered and therefore are not added to the database.

There are no restrictions on the number of users that can be created to access the CEF SMP.

6.1. User Roles

The CEF SMP users can be of three types as briefly described below:

Actor	UC	Short description	Oper.	Data
Admin SMP	Create or Update Service Group	Create a new ServiceGroup for a new receiver participant. This service stores the Service Group and links it to the specified duplet participantIdentifier + participantIndentifierScheme. Information is store into ServiceGroup table. This same service is used to create and update a ServiceGroup.	PUT	ServiceGroup
Admin SMP	Erase Service Group	Erases the service group definition AND the list of services for the specified receiver participant.	DELETE	ServiceGroup
Admin Service Group	Create or Update Service Metadata	Publish detailed information about one specific document service (multiple processes and endpoints). This same service is used to create and update ServiceMetaData.	PUT	ServiceMetadata
Admin Service Group	Erase Service Metadata	Remove all information about one specific service (i.e. all related processes and endpoints definitions)	DELETE	ServiceMetadata
User	Retrieve Service Group	Obtain the list of services provided by a specific receiver participant (collection of references to the ServiceMetaData's) This service provides the information related to the Service Group according to the input duplet participantIdentifier + participantIndentifierScheme. Returns information from the ServiceMetadata table only (references to actual MetaData).	GET	ServiceGroup

User	Retrieve Service Metadata	Obtain detailed definition about one specific service of a specific participant for all supported transport. This service retrieves the SignedServiceMetadata according to the input quadruplet participantIdentifier+participantIndentifierScheme+	GET	SignedServiceMe tadata
		documentIdentifier+documentIdentifierScheme. Returns information from the Endpoint table.		

Note: For a complete description of the SMP user management, please consult the SMP Interface Control Document (ICD) document available at: <u>https://ec.europa.eu/cefdigital/wiki/x/0wvNAg</u>

6.2. BCRYPT password generation

The SMP v3.0.0 uses the BCRYPT algorithm to hash users' passwords. A BCRYPT-hashing tool is bundled into the SMP WAR file. Toget the hashing code, follow the steps below:

Place a copy of the 'cipa-smp-full-webapp-3.0.0.war' file into a temporary directory of your choice.

Extract the war file using the '**jar**' command:

```
$ jar -xvf cipa-smp-full-webapp-3.0.0.war
```

Obtain one or multiple hashes at once, using the following command:

```
$ java -cp "WEB-INF/lib/*"
eu.europa.ec.cipa.smp.server.security.BCryptPasswordHash
password_to_be_hashed
```

The result will be a BCRYPT hash of the specified password (Listed below in Italic):

```
$ java -cp "WEB-INF/lib/*"
eu.europa.ec.cipa.smp.server.security.BCryptPasswordHash
password_to_be_hashed
```

\$2a\$10\$6nYTSUSh2BQfbOLIyCXn8eUViBcnn.WcjUrWOtJLMNDOdAtI85zMa

The next command shows the hashing of several passwords at once separated by a space in the command.

```
$ java -cp "WEB-INF/lib/*"
eu.europa.ec.cipa.smp.server.security.BCryptPasswordHash
password_to_be_hashed_1 password_to_be_hashed_2
$2a$10$6nYTSUSh2BQfb0LIyCXn8eUViBcnn.WcjUrWOtJLMND0dAt185zMa
$2a$107zNzSeZpxiHeqY2BRKkHE.HknfIe3aiu6XzU.qHHnnPbUHKtfcmDG
```

6.3. SMP Database User Creation

Adding an SMP user is performed by adding a new entry in the SMP database ('SMP_USER' table).

User role is determined by setting the '**isadmin**' field in the SMP_USER table as follow:

User Role	isadmin value
Admin SMP	1
Admin Service Group	0
AnonymousUser	N/A
(Not defined in the SMP User database)	

In the following two examples, an 'Admin SMP' and 'Admin ServiceGroup' users are created.

6.3.1. 'Admin SMP' User creation

Username	: smp_admin
Password (Hashed)	: \$2a\$10\$6n YTSUSh2BQfbOLlyCXn8eUViBcnn.WcjUrWOtJIMNDOdAtl85zMa
IsAdmin	:1

Execute the following database command using the database user/password created in the Database Configuration section of this guide.

SQL> INSERT into SMP_USER (USERNAME, PASSWORD, ISADMIN) values ('smp_user', '\$2a\$10\$6nYTSUSh2BQfb0LIyCXn8eUViBcnn.WcjUrW0tJLMND0dAt185zMa', 1);

6.3.2. 'Admin ServiceGroup' User Creation

Username: smp_user1Password (Hashed): \$2a\$10\$6nYTSUSh2BQfbOLIyCXn8eUViBcnn.WcjUrWOtJIMNDOdAtI85zMaIsAdmin: 0

Execute the following database command.

SQL> INSERT into SMP_USER (USERNAME, PASSWORD, ISADMIN) values ('smp_user1', '\$2a\$10\$6nYTSUSh2BQfb0LIyCXn8eUViBcnn.WcjUrW0tJLMND0dAtI85zMa', 0);

7. LOGGING CONFIGURATION

7.1. Logging properties

The SMP logging property are defined in the './WEBINF/log4j.properties' file embedded in the SMP '.war' file.

It is possible to modify the configuration of the logs by editing the embedded 'log4j properties'.

Name	Date modified	Туре	Size
鷆 internal	20/04/2016 10:38	File folder	
퉬 keystores	25/04/2016 16:13	File folder	
퉬 plugins	20/04/2016 10:38	File folder	
🌗 policies	20/04/2016 10:38	File folder	
퉬 temp	27/04/2016 10:41	File folder	
퉬 work	20/04/2016 16:44	File folder	
domibus-configuration.xml	26/04/2016 10:11	XML File	5 KB
📄 domibus-datasources.xml	20/04/2016 15:31	XML File	6 KB
📄 domibus-plugins.xml	19/04/2016 10:26	XML File	2 KB
domibus-security.xml	19/04/2016 10:26	XML File	5 KB
domibus-transactions.xml	19/04/2016 10:26	XML File	4 KB
📓 log4j.properties	19/04/2016 10:26	PROPERTIES File	2 KB
persistence.xml	19/04/2016 10:26	XML File	2 KB

In the example below, A log4j.properties file is shown:

```
# Direct log messages to stdout
log4j.appender.stdout=org.apache.log4j.ConsoleAppender
log4j.appender.stdout.Target=System.out
log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
log4j.appender.stdout.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n
log4j.appender.file=org.apache.log4j.FileAppender
log4j.appender.file.file=${catalina.home}/logs/domibus.log
log4j.appender.file.layout=org.apache.log4j.PatternLayout
log4j.appender.file.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n
log4j.appender.atomikos=org.apache.log4j.FileAppender
log4j.appender.atomikos.file=${catalina.home}/logs/atomikos.log
log4j.appender.atomikos.layout=org.apache.log4j.PatternLayout
log4j.appender.atomikos.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n
# In order to enable logging of request/responses please change the loglevel to INFO
log4j.logger.org.apache.cxf=WARN
# Root logger option
log4j.rootLogger=INFO, file, stdout
log4j.logger.com.atomikos=WARN, atomikos
```

In red: the parameters can be edited to modify the location of the log file, and the layout.

In green: the parameters can be edited to change the level of logging (3 levels definied: INFO, WARN, and ERROR).

8. SOAPUI TESTING

Soap UI can be used to create, update and delete Service Groups and Metadata.

An SMP MOCK SoapUI project can be freely downloaded to perform these tasks:

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-mock-services/browse

€0	https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-mock-services/browse
🕗 Most V	Visited 🥏 Getting Started 🛞 Error 500Internal Ser 🛞 http://localhost:6550/
😇 Bit	tbucket Projects Repositories -
	EDELIVERY / SMP mock services
	Source
_	SMP mock services /
¢	
v	xsd
	■ README.md
	signature_keys.jks
	SMP-mock-soapui-project.xml

Download the <u>SMP-mock-soapui-project.xml</u> SOAP UI project and open it using SoapUI.

The rest of the procedure will be described in the next steps.

8.1. Creation, update and deletion of Service Groups.

8.1.1. Create a Service Group

IMPORTANT NOTE: As per design of the SMP, Creation, update and deletion of Service Group can ONLY BE ACHIEVED USING BASIC AUTHENTICATION

In the left navigation pane of the SoapUI interface, browse to the REST PUT method as shown below:

\$	SoapUI 5	.3.0											x
<u>F</u> ile	e Proje	ct Suite	Case	Step <u>T</u> e	ools <u>D</u> eskto	op <u>H</u> elp							
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	Empty	SOAP	REST	Import	Save All	Forum	Trial I	references	Proxy				
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			() Comolo	Paguasta									
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			UC07 - G	Gata (/ (Pan GET	licipandacina	ner j/ ser							
		TU 9	UC04 - P	UT									
			UC05 - D	ELETE									
		🗄 🖳 Sen	/iceGrou	p [/{Partici	pantIdentifier)] ⁽²²							
		. GET	UC06 - G	ET									
		<u>р</u>	UC02 - P	TUT									
			ST urn:p	ooland:ncp	b (expected 2	00)							
			ST UM:C	germany:no	pb (expected	500)							
			ST Urn:p	oortugal:nc	pb (expected	400)							
				SAMA-um	noland nonh	(expect							
		+ DEL	UC03 - D	ELETE	polana.nepo	(capeer							
		HashUt	il										
						•							
	Meth	d Properti	es Me	thod Parar	ms								
		Dramar			Value								
	Name	Proper	y	UC02 -	PUT								
	Descrip	tion		0002	101								
	HTTP	1ethod		PUT									
	Prop	erties					SoapUI lo	og http log	jetty log	error log	wsrm log	memory	log

By default, there are four PUT REST method examples. The next example will use the first one: 'urn:Poland:ncpb'.

Open this REST method:

RE ST	urn:poland:ncpb (ex	opected 20	0)									ďØ	×
	Method	Endpoint	t			Re	ource		Pai	rameters			_
	🛛 🏹 РОТ 🕞	http://sr	mp-digit-mock.publisher.ehealth	n.acc.edelivery.tech.ec.europa.	eu	▼ /{	articipantIdentifi	er}				n †	9
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ane	No.		Malaia	Ch. J.			r 😤						Π
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							IML						
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	Required	Sets if n	arameter is required			-							
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	xml version="1</th <th>1.0" enco</th> <th>oding="UTF-8" standalone=</th> <th>"no"?></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	1.0" enco	oding="UTF-8" standalone=	"no"?>									
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8.1.2. Update a Service Group

The REST method to update the 'ServiceGroup' is the same as the one used for creating 'ServiceGroup' described in the previous section.

8.1.3. Delete a 'ServiceGroup'

On the SoapUI interface on the left navigation panel, browse to the REST DELETE method as indicated below:

Empty	ject Suite SOAP	Case हुन्* REST	Step <u>T</u> o	ools <u>D</u> eskto	op <u>H</u> elp						
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	ts		Import	Save All	Forum	Trial Pre	ferences	Proxy			
	ts										Ŀ,
Meth Name Descri HTTP	AS4_test_gu SMP MOCH SMP 3.(SMP 3.(SMP 3.(SMP 3.(Sen Sen Sen Sen Sen Sen Sen Sen Sen Sen	uide Sample F viceMetad UC07 - GE UC04 - PL UC05 - DE viceGroup UC06 - GE UC02 - PL UC03 - DE ST urn:pc ST urn:pc st urn:pc il ocked Imp es Met	Requests lata [/{Part ET JT ELETE [/{Particip ET JT ELETE oland:ncpl ance:ncpb ermany:nc ortugal:ncp ermany:nc ortugal:ncp ermany:nc ortugal:ncp ermany:nc ortugal:ncp ance:ncpb ermany:nc ortugal:ncp olementati	icipantIdentii pantIdentifier p (expected 2 (expected 40 pb (expected pb (expected on Value DELETE	▲ fier}/ser }] 00) (4) 500) 400) ▼						pector
Pro	Method										

8.2. Creation, update and deletion of Service Metadata.

8.2.1. Create a Service Metadata

In the left navigation pane of the SoapUI interface, browse to the REST PUT method as shown below:

SoapUI S	5.3.0											٢.
<u>F</u> ile Proju	ect Suite	Case हुन्* REST	Step <u>T</u> o	ools <u>D</u> eskto III Save All	p <u>H</u> elp C Forum	ج Trial F	Preferences	Se Proxy	earch Forum	n		
Projects	AS4_test_gu SMP MOCK SMP 3.0 SMP 3.0 Serv SMP 3.0 Serv SMP Mo bdmsl-web bdmsl-web submission	ide Sample iceMetac UC07 - G UC04 - PI ST urn:p ST urn:p	Requests lata [/{Part ET UT oland:ncpl ermany:nc ortugal:ncpl reece:ncpl ELETE p[/{Particip plementati	icipantIdenti o (expected 2 pb (expected o (expected 20 oantIdentifier on	fier}/servici 00) 500) 400) 01) }]							Inspector
Weth	Propert			Value								
Name Descrip HTTP I	otion Method	,	UC04 - PUT	PUT								
Prop	erties					SoapUI lo	g http log	jetty log	error log	wsrm log	memory lo	og

The next example will use the following PUT Rest method: 'urn:Poland:ncpb'.

Open this REST method:

NA	End	point		
PUT	▼ htt	p://smp-digit-mock.publis	her.ehealth.acc.edelivery.te	ch.ec.europa.eu
1 V 184 15				
		-		
Name		Value	Style	Level
ParticipantIdentifi	er	ehealth-actorid-qns::urn	TEMPLATE	RESOURCE
DocumentTypeId		ehealth-resid-qns::urn::e	TEMPLATE	RESOURCE
~~				A
Required:	Se	ts if parameter is required		
Туре:				▼
Options:			Add	d
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Media Type applie <pre></pre>	cation/xm Lcipant mentIde assList Process <pro <ser< td=""><td>ml Post Identifier scheme="e entifier scheme="e entifier scheme="ehea > >> >></td><td>QueryString health-actorid-qns"> lth-resid-qns">urn:: e="ehealth-procid-qn rofile="urn:ihe:iti: p://poland.pl/ncp/pa LevelSignature>false cationLevel>urn:epSO onDate>2016-06-06T11 onDate>2026-06-06T11 D7jCCAlegAwIBAgICA+Y ion>This is the epSO tUrl>http://poland.p ationUrl>http://polar</td><td>urn:poland:ncpbepsos##services:ext s">urn:epsosPatient 2013:xcpd"> tient/listS:loa:1:06:02.000+02:00wDQYJKoZIhvcNAQENB(S Patient Service 1 1/contactnd.pl/contact</td></ser<></pro 	ml Post Identifier scheme="e entifier scheme="e entifier scheme="ehea > >> >> >> >> >> >> >> >> >> >> >> >>	QueryString health-actorid-qns"> lth-resid-qns">urn:: e="ehealth-procid-qn rofile="urn:ihe:iti: p://poland.pl/ncp/pa LevelSignature>false cationLevel>urn:epSO onDate>2016-06-06T11 onDate>2026-06-06T11 D7jCCAlegAwIBAgICA+Y ion>This is the epSO tUrl>http://poland.p ationUrl>http://polar	urn:poland:ncpbepsos##services:ext s">urn:epsosPatient 2013:xcpd"> tient/listS:loa:1:06:02.000+02:00wDQYJKoZIhvcNAQENB(S Patient Service 1 1/contactnd.pl/contact

8.2.2. Update Service Metadata

The REST method to update 'ServiceMetadata' is the same as the one use for creating 'ServiceMetadata' as described in the previous section

8.2.3. Delete Service Metadata

In the left navigation pane of the SoapUI interface, browse to the **REST DELETE** method as indicated below:

\$	SoapUI 5.	3.0											x
<u>F</u> ile	Projec	t Suite	Case	Step <u>T</u> o	ools <u>D</u> eskto	op <u>H</u> elp							
	*	50*	RE*	±	ſ	Ç	3	Φ	📑 Se	arch Forum	1		_
	Empty	SOAP	REST	Import	Save All	Forum	Trial P	eferences	Proxy				
l b	=												5
igat	Projects												spec
N N	⊕ ■ A	S4_test_gi	uide										đ
	S		() Camaria	Democrate									
			/ sample /iceMeta	Requests data [/{Part	icinantIdenti	fier}/service							
			UC07 - 0	ieta (/ (i ant	reipandaena	nerg, servici							
		🚛 Р ИТ	UC04 - P	UT									
		DEL	UC05 - D	ELETE									
		·····	ST urn:	oland:ncpl	b (expected 2	00)							
		·····	ST urn:f	rance:ncpb	(expected 40	4)							
			ST UM:	jermany:no	pb (expected	500)							
			st unit viceGrou	o [/{Particir	po (expected pantIdentifier	400) N							
		HashUt	il	p () (i arciei	, and a change								
	_ +	SMP M	ocked Im	plementati	ion								
	🖶 🖿 b	dmsl-web	app-3.0										
	🖶 🛅 b	dmsl-web	app-3.0										
	🗄 📕 SI	ubmission	?wsdl										
	•		333333			Þ							
	Metho	d Properti	es Me	thod Parar	ns								
		Propert	ty		Value								
	Name			UC05 -	DELETE								
	Descript	ion ethod		DELETE									
		calou		DEEEE									
	Drace	rtine					Completion	http://	inth la -	orror la -	urren la -	mana	
	Рюре	lues					Soapulio	j nitip iog	Jetty log	error log	wsrm iog	memory	og

9. THE SWAGGERUI INTERFACE

9.1. Introduction

"Swagger is an API developer tools for the OpenAPI Specification (OAS). It allows anyone (developers or end-users) to interact with the API's resources". Quote from: http://swagger.io/

The SMP Web Client can be tested at: http://130.206.118.4/smp-swagger-ui and, as explained, is a WEB client configured to shoot (PUT, GET or DELETE) at the mocked SMP implementation Metadata.

9.2. Downloading the CEF SMP SwaggerUI web application project

The CEF SMP SwaggerUI web application project can be freely downloaded from the following location:

https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-mock-services/browse

€0	https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-mock-services/brov					
🙆 Most Visited 🥑 Getting Started 🛞 Error 500Internal Ser 🛞 http://localhost:6550/						
Bitbucket Projects Repositories						
	EDELIVERY / SMP mock services					
	Source					
SMP mock services /						
¢	swagger-ui					
Ŀ	xsd					
۰ ه	README.md					
	signature_keys.jks					
	SMP-mock-soapui-project.xml					

Create a new 'swagger_temp' temporary directory

Within the previously created 'swagger_temp' directory, execute the following command

git clone https://ec.europa.eu/cefdigital/code/scm/edelivery/smp-mock-services.git

```
$ git clone https://ec.europa.eu/cefdigital/code/scm/edelivery/smp-mock-
services.git
Cloning into 'smp-mock-services'...
remote: Counting objects: 133, done.
remote: Compressing objects: 100% (130/130), done.
remote: Total 133 (delta 50), reused 0 (delta 0)
Receiving objects: 100% (133/133), 823.54 KiB | 0 bytes/s, done.
Resolving deltas: 100% (50/50), Done.
```

The SMP SwaggerUI project is downloaded and saved the 'smp-mock-services' directory.

\$ ls	
<pre>smp-mock-services</pre>	

9.3. Configuring the SMP SwaggerUI

Navigate to the 'swagger-ui' directory located under the 'smp-mock-services' directory.

The contents is listed below:

```
$ ls
css fonts images index.html lib smp.json swagger-ui.js
```

Edit the 'smp.json' file and modify it to target your SMP:

Replace

```
{
  "swagger": "2.0",
  "info": {
    "description": "This WEB client is configured to shoot at the [mocked SMP]
implementation](http://smp-digit-
mock.publisher.ehealth.acc.edelivery.tech.ec.europa.eu/ehealth-actorid-
qns%3A%3Aurn%3Apoland%3Ancpb). After a few improvements (both on client and
server side) it might be used also for shooting at TEST / PROD environments. You
can find out more about Swagger at [http://swagger.io](http://swagger.io)",
    "version": "1.0.0",
    "title": "SMP 3.0 WEB client (based on Swagger-UI)"
  },
  "host": "smp-digit-mock.publisher.ehealth.acc.edelivery.tech.ec.europa.eu",
  "basePath": "/",
  "externalDocs": {
    "description": "Find out more about SMP 3.0 mock services",
```

By:

```
"url": "https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp-
mock-services"
{
  "swagger": "2.0",
  "info": {
    "description": "This WEB client is configured to shoot at
[http://localhost:7003/cipa-smp-full-webapp-3.0.0](http://localhost:7003/cipa-
smp-full-webapp-3.0.0). After a few improvements (both on client and server
side) it might be used also for shooting at TEST / PROD environments. You can
find out more about Swagger at [http://swagger.io](http://swagger.io)",
    "version": "1.0.0",
    "title": "SMP 3.0 WEB client (based on Swagger-UI)"
  },
  "host": "localhost:7003",
  "basePath": "/cipa-smp-full-webapp-3.0.0",
  "externalDocs": {
  },
```

9.4. Generating the Web Application Archive (.war file)

To generate the CEF SMP SwaggerUI Web Application archive (**.war** file), jus create a zip file of the content of the swagger-ui directory and rename it as '**swagger.war**'.

This can be performed using any 'zip' utility ('winzip' on windows or 'zip' on Linux)

Example on Linux:

```
# zip -r swagger.war swagger-ui/*
```

9.5. Deploy the SMP SwaggerUI war file

9.5.1. <u>On Tomcat</u>

Copy the **swagger.war** file to *cef_edelivery_path* **/webapps**

9.5.2. <u>On WebLogic:</u>

Deploy the '.war' file within WebLogic:

java weblogic.Deployer -adminurl t3://\${WebLogicAdminServerListenAddress}:\${WebLogicAdminServerPort} \
-username \${WebLogicAdminUserName} \
-password \${WebLogicAdminUserPassword} \
-deploy -name swagger.war \
-targets \${SMP_ManagedServer} \

After starting the application, connect to <u>http://locxalhost:7003/swagger</u>

A successful deployment should display the following page:

() http://localhost:7003/swagger/	C	Q Search	☆自	÷	A	≡
🔊 Most Visited 🧶 Getting Started 🛞 Error 500Internal Ser 🛞 http://localhost:6550/						
⊖ swagger						
SMP 3.0 WEB client (based on Swagger-UI)						
This WEB client is configured to shoot at http://localhost:7003/cipa-smg	-full-webapp-3.0.0. Aft	er a few improvements (both on cli	ent and			
server side) it might be used also for shooting at 15517 PROD environm	ients. You can find out	more about swagger at <u>http://swag</u>	gerio			
ServiceGroup : Manage ServiceGroup		Show/Hide List Operations Expan	nd Operations			
DELETE /{ParticipantID}		Deletes	ServiceGroup			
GET /{ParticipantID}		Find	ServiceGroup			
рит /{ParticipantID}		Creates (or updates)	ServiceGroup			
ServiceMetadata : Everything you might do with Serv	iceMetadata	Show/Hide List Operations Expan	nd Operations			
/{ParticipantID}/services/{DocumentTypeID}		Deletes Ser	viceMetadata			
GET /{ParticipantID}/services/{DocumentTypeID}		Find Se	viceMetadata			
Put /{ParticipantID}/services/{DocumentTypeID}		Creates (or updates) Se	viceMetadata			
[BASE URL: /cipa-smp-full-webapp-3.0.0 , API VERSION: 1.0.0]						

10. SMP COMPILATION

10.1. Compilation prerequisites

10.1.1. Supported Operating System Platform

CEF SMP can be built on the following OS platforms:

- Windows Workstation & Server
- Linux platform

10.1.2. Software Requirements

The following software components on the target system:

- Java Developement Kit environnement (JDK), version 7 or 8: <u>http://www.oracle.com/technetwork/java/javase/downloads/index.html</u>
- Maven 3.0 and avove (https://maven.apache.org/download.cgi)

GIT (Optional: Git is only used to download the project sources but these sources can be downloaded from any system having Git installed and then just copied manually on the compilation platform)

10.2. Downloading the source code

The source code of SMP is freely available and can be downloaded from the following location

https://ec.europa.eu/cefdigital/code/scm/edelivery/smp.git

🗑 Bro	owse EDELIVERY / SMP × +						
(https://ec.europa.eu/cefdigital/code/projects/EDELIVERY/repos/smp/browse						
🔊 Most Visited 🧓 Getting Started 🕙 Error 500Internal Ser 📀 http://localhost:6550/							
😨 Bit	bucket Projects Repositories -						
•	EDELIVERY / SMP						
	Source						
	₽ master - ••• SMP /						
	smp ani						
¢							
$\boldsymbol{\mathcal{V}}$	smp-parent-pom						
击	smp-server-library						
	smp-soapui-tests						
	smp-webapp						
	juitignore						
	pom.xml						
>>	README.md						

10.3. Compilation

Create a new 'comp_dir' temporary directory

Within the previously created 'comp_dir' directory, execute the following command

git clone https://ec.europa.eu/cefdigital/code/scm/edelivery/smp.git

```
# git clone https://ec.europa.eu/cefdigital/code/scm/edelivery/smp.git
Cloning into 'smp'...
remote: Counting objects: 52788, done.
remote: Compressing objects: 100% (15640/15640), done.
remote: Total 52788 (delta 25293), reused 47993 (delta 23387)
Receiving objects: 100% (52788/52788), 637.14 MiB | 2.06 MiB/s, done.
Resolving deltas: 100% (25293/25293), done.
```

Go to the newly created 'smp' directory.

The directory contains the following:

```
# ls
pom.xml README.md smp-api smp-parent-pom smp-server-library smp-soapui-
tests smp-webapp
```

Start the compilation by executing the following command:

mvn clean install -DskipTests

A successful compilation will result with the following:

[INFO]	
[INFO]	BUILD SUCCESS
[INFO]	
[INFO]	Total time: 03:00 min
[INFO]	Finished at: 2017-06-08T11:35:27+02:00
[INFO]	Final Memory: 61M/726M
[INFO]	

The resulting will be a Web application Archive (.war file) named 'cipa-smp-full-webapp.war' located in the 'smp-webapp/target/' directory

```
ls ./smp-webapp/target
cipa-smp-full-webapp.3.0.0 cipa-smp-full-webapp.war classes generated-sources
generated-test-sources maven-status test-classes webapp-classes
```

11. ANNEXES

11.1. The SMP 'config.properties' file

The CEF SMP configuration is performed via the 'config.properties' file.

This file is delivered by default embedded within the SMP war file.

```
# Version: MPL 1.1/EUPL 1.1
# The contents of this file are subject to the Mozilla Public License Version
# 1.1 (the "License"); you may not use this file except in compliance with
# the License. You may obtain a copy of the License at:
# http://www.mozilla.org/MPL/
# Software distributed under the License is distributed on an "AS IS" basis,
# WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License
# for the specific language governing rights and limitations under the
# License.
# The Original Code is Copyright The PEPPOL project (http://www.peppol.eu)
# Alternatively, the contents of this file may be used under the
# terms of the EUPL, Version 1.1 or - as soon they will be approved
# by the European Commission - subsequent versions of the EUPL
# (the "Licence"); You may not use this work except in compliance
# with the Licence.
# You may obtain a copy of the Licence at:
# http://joinup.ec.europa.eu/software/page/eupl/licence-eupl
# Unless required by applicable law or agreed to in writing, software
# distributed under the Licence is distributed on an "AS IS" basis,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the Licence for the specific language governing permissions and
# limitations under the Licence.
# If you wish to allow use of your version of this file only
```

under the terms of the EUPL License and not to allow others to use # your version of this file under the MPL, indicate your decision by # deleting the provisions above and replace them with the notice and # other provisions required by the EUPL License. If you do not delete # the provisions above, a recipient may use your version of this file # under either the MPL or the EUPL License. # Blue Coat reverse-proxy authentication, by default disabled (false) # Be careful with switching it to 'true' - do it only if you know what you are doing. # Authentication with Blue Coat means that all HTTP requests having 'Client-Cert' header will be authenticated # as username placed in the header. # Never expose SMP to the WEB without properly configured reverse-proxy and active blue coat. authentication.blueCoat.enabled=false ## Only set to false in PRODUCTION mode. This variable is used to clear the context path of the SMP contextPath.output=true ## Most Java libraries and J2EE containers block encoded slashes in URL - For security reasons. ## Theoretically there are no restrictions on slash "/" characters in document or participant identifiers, ## but by default we block then as well. ## If slash "/" characters must be supported, than switch this property to "true". ## Remember that in such case the relevant change should be also applied on J2EE level ## I.e. for Tomcat it is handled by property: org.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH=true encodedSlashesAllowedInUrl=false ## DBMS handler dataManager.class=eu.europa.ec.cipa.smp.server.data.dbms.DBMSDataManager eclipselink.ddl-generation.output-mode=sql-script

All Identifiers by default are CASE-INSENSITIVE.

```
## Specifies schemes of participant/document identifiers that must be considered
CASE-SENSITIVE.
```

List values (delimited by pipe character: "|") placed here are checked against runtime (request) schemes in the CASE-INSENSITIVE way

identifiersBehaviour.caseSensitive.ParticipantIdentifierSchemes=casesensitiveparticipant-scheme1|casesensitive-participant-scheme2

identifiersBehaviour.caseSensitive.DocumentIdentifierSchemes=casesensitive-docscheme1|casesensitive-doc-scheme2

Registration callback (SML client caller)

registrationHook.class=eu.europa.ec.cipa.smp.server.hook.RegistrationServiceRegi
strationHook

#registrationHook.class=eu.europa.ec.cipa.smp.server.hook.DoNothingRegistrationH
ook

SMP ID

regServiceRegistrationHook.id=TEST-SMP-ID1

SMP's certificate - needed only when accessing BDMSL directly through HTTP. The configured "Client-Cert" HTTP header will be added to each BDMSL request(bypassing SSL cert verification made normally by SSL terminator)

regServiceRegistrationHook.clientCert=serial=000000000000000000009A195D2DD88C&su bject=CN=SMP_1000000000,0=DG-DIGIT,C=BE&validFrom=Oct 21 02:00:00 2014 CEST&validTo=Oct 21 01:59:59 2016 CEST&issuer=CN=Issuer Common Name,OU=Issuer Organization Unit,O=Issuer Organization,C=BE

SML URL (incl. the service name)

#regServiceRegistrationHook.regLocatorUrl=https://sml.peppolcentral.org/managepa
rticipantidentifier

#

regServiceRegistrationHook.regLocatorUrl=https://smk.peppolcentral.org/managepar ticipantidentifier

regServiceRegistrationHook.regLocatorUrl=http://localhost:8080/manageparticipant
identifier

regServiceRegistrationHook.keystore.classpath =

regServiceRegistrationHook.keystore.password =

XMLDSIG response signing:

xmldsig.keystore.classpath	=	<pre>/keystore/keystore.jks</pre>
xmldsig.keystore.password	=	peppol
xmldsig.keystore.key.alias	=	smp keypair
<pre>xmldsig.keystore.key.password</pre>	=	peppol

JDBC configuration for DB
jdbc.driver = com.mysql.jdbc.Driver
jdbc.url = jdbc:mysql://localhost:3306/smp
jdbc.user = smp
jdbc.password = the_password
target-database = MySQL

11.2. Detailed SMP configuration file (smp.config.properties)

The 'WEB-INF/classes/config.properties' file is used to configure various SMP properties, the following table describes them briefly, detailed excplaination are describes after this table.

Parameter	Default Value	Comment
authentication.blueCoat.enable	false	Authentication with Blue Coat means that all HTTP requests having 'Client-Cert' header will be authenticated as username placed in the header.
		# Never expose an SMP to the WEB without properly configured reverse-proxy and active blue coat.
contextPath.output	true	PRODUCTION mode. This variable is used to clear the context path of the SMP
org.apache.tomcat.util.buf.UDecoder.ALLOW_ ENCODED_SLASH	true	Most Java libraries and J2EE containers block encoded slashes in URL - For security reasons.
encodedSlashesAllowedInUrl	false	Theoretically there are no restrictions on slash "/" characters in document or participant identifiers, but by default we block then as well.
		If slash "/" characters must be supported, than switch this property to "true".
		Remember that in such case the relevant change should be also applied on J2EE level I.e. for Tomcat it is handled by property:
dataManager.class	eu.europa.ec.cipa.smp.server.data.dbms.DBMSDataManager	DBMS handler
eclipselink.ddl-generation.output-mode	sql-script	DBMS handler
identifiersBehaviour.caseSensitive.ParticipantI	casesensitive-participant-scheme1 casesensitive-participant-scheme2	## All Identifiers by default are CASE-

dentifierSchemes		INSENSITIVE.
identifiersBehaviour.caseSensitive.DocumentId entifierSchemes	casesensitive-doc-scheme1 casesensitive-doc-scheme2	## Specifies schemes of participant/document identifiers that must be considered CASE- SENSITIVE.
		## List values (delimited by pipe character: " ") placed here are checked against runtime (request) schemes in the CASE-INSENSITIVE way
registrationHook.class	eu.europa.ec.cipa.smp.server.hook.RegistrationServiceRegistrationHook	Registration callback (SML client caller)
	eu.europa.ec.cipa.smp.server.hook.DoNothingRegistrationHook	
regServiceRegistrationHook.id	TEST-SMP-ID1	SMP ID / SMP Name
regServiceRegistrationHook.clientCert	serial=0000000000000000009A195D2DD88C&subject=CN=SMP_1 00000000,O=DG-DIGIT,C=BE&validFrom=Oct 21 02:00:00 2014 CEST&validTo=Oct 21 01:59:59 2016 CEST&issuer=CN=Issuer Common Name,OU=Issuer Organization Unit,O=Issuer Organization,C=BE	#SMP's certificate - needed only when accessing BDMSL directly through HTTP. The configured "Client-Cert" HTTP header will be added to each BDMSL request(bypassing SSL cert verification made normally by SSL terminator)
regServiceRegistrationHook.regLocatorUrl	<pre>#https://sml.peppolcentral.org/manageparticipantidentifier #https://smk.peppolcentral.org/manageparticipantidentifier</pre>	The URL of the targeted SML (incl. the service name)
	http://localhost:8080/manageparticipantidentifier	
regServiceRegistrationHook.keystore.classpath		Thye location of the keystore
regServiceRegistrationHook.keystore.password		The password of the keystore
xmldsig.keystore.classpath	/keystore/keystore.jks	The location of the xmldsig keystore
xmldsig.keystore.password	peppol	The password of the xmldsig keystore
xmldsig.keystore.key.alias	smp keypair	The alias of the xmldsig key
xmldsig.keystore.key.password =	peppol	The password of the xmldsig key
jdbc.driver	com.mysql.jdbc.Driver	Database Configuration: Driver
		MySQL:

		com.mysql.jdbc.Driver
		Oracle Database:
		oracle.jdbc.OracleDriver
jdbc.url	jdbc:mysql://localhost:3306/smp	Database Configuration: url
		MySQL :
		jdbc:mysql://dbhost:dbport/smp_database
		Oracle Database:
		jdbc:oracle:thin:@dbhost:dbport:smp_database
		jdbc:oracle:thin:@dbhost:dbport/smp_service
jdbc.user	smp	Database User/Password Configuration: User
jdbc.password	The_password	Database User/password Configuration: Password
target-database	MySQL	Target Database Backend type/Brand:
		For MySQL, use:
		MySQL
		For Oracle Database, use:
		Oracle
jdbc.read-connections.max	10	Database Configuration: Max Read Connection

11.2.1. registrationHook.class

The registrationHook.class determines the integration of the SMP with and SML & DNS. Two values are recognised as described below:

eu.europa.ec.cipa.smp.server.hook.DoNothingRegistrationHook'

The SMP will only populate the database and will not forward the GroupParticipantid request to THE SML.

This do not apply to the metadata as they are not distributed to the DNS

eu.europa.ec.cipa.smp.server.hook.RegistrationServiceRegistrationHook

The SMP will store the REST ParticipantId request to the SMP Database and forward these request via 'SOAP' messages to the SML SML. The SML will store these Participand ID request in the SML database and the will update the DNS

This do not apply to the metadata as they are not distributed to the DNS

11.2.2. regServiceRegistrationHook.id

This is the name of the SMP.

11.2.3. <u>regServiceRegistrationHook.clientCert</u>

The SMP's certificate - needed only when accessing BDMSL directly through HTTP. The configured "Client-Cert" HTTP header will be added to each BDMSL request(bypassing SSL cert verification made normally by SSL terminator).

11.2.4. <u>regServiceRegistrationHook.regLocatorUrl</u>

Only used if SML/DNS intgegrationn has been selected.

In case the integration tith the SML/DNS is needed, this value has to be set to the address of the SML or the loadBalancer/proxy tagetting these SML instance(s)

11.2.5. XMLDSIG response signing

xmldsig.keystore.classpath = ../keystore/keystore.jks xmldsig.keystore.password = peppol xmldsig.keystore.key.alias = smp keypair xmldsig.keystore.key.password = peppol