



# **eIDAS-Node Installation Quick Start Guide**

Version 2.4

## Document history

| Version                  | Date       | Modification reason   | Modified by |
|--------------------------|------------|---|-------------|
| 1.0                      | 26/11/2015 | Modifications to align with the eIDAS technical specifications.   | DIGIT       |
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## List of abbreviations

The following abbreviations are used within this document.

| Abbreviation | Meaning  |
|--------------|--|
| eIDAS        | electronic Identification and Signature. The <a href="#">Regulation (EU) N°910/2014</a> governs electronic identification and trust services for electronic transactions in the internal market to enable secure and seamless electronic interactions between businesses, citizens and public authorities. |
| IdP          | Identity Provider. An institution that verifies the citizen's identity and issues an electronic ID.  |
| LoA          | Level of Assurance (LoA) is a term used to describe the degree of certainty that an individual is who they say they are at the time they present a digital credential.   |
| MS           | Member State.  |
| SAML         | Security Assertion Markup Language   |
| SP           | Service Provider   |

## List of definitions

The following definitions are used within this document.

| Term                     | Meaning  |
|--------------------------|--|
| eIDAS-Node               | An eIDAS-Node is an application component that can assume two different roles depending on the origin of a received request. See eIDAS-Node Connector and eIDAS-Node Proxy Service.  |
| eIDAS-Node Connector     | The eIDAS-Node assumes this role when it is located in the <b>Service Provider's</b> (i.e. the receiving) Member State. In a scenario with a Service Provider asking for authentication, the eIDAS-Node Connector receives the authentication request from the Service Provider and forwards it to the eIDAS-Node of the citizen's country.  |
| eIDAS-Node Proxy Service | The eIDAS-Node assumes this role when it is located in the <b>citizen's</b> (i.e. the sending) Member State. The eIDAS-Node Proxy Service receives authentication requests from an eIDAS-Node of another MS (their eIDAS-Node Connector). The eIDAS-Node Proxy-Service also has an interface with the national eID infrastructure and triggers the identification and authentication for a citizen at an identity and/or attribute provider. |

## 1. Introduction

This document describes how to quickly install a Service Provider, eIDAS-Node Connector, eIDAS-Node Proxy Service and IdP from the distributions in this release package. The distributions provide preconfigured eIDAS-Node modules for running on each of the supported application servers (Glassfish, Tomcat, WildFly, WebLogic and WebSphere).

Detailed information on the setup and configuration of the sample eIDAS-Nodes, is included in the *eIDAS-Node Installation and Configuration Guide*.

Detailed information on integration of the eIDAS-Node into your national infrastructure is included in the *eIDAS-Node National IdP and SP Integration Guide*.

This document is divided into the following sections:

- Section 1 – *Introduction*: this section;
- Section 2 – *Release content*: lists the files delivered with this release and describes their contents;
- Section 3 – *Overview of the preconfigured demo eIDAS-Node packages*: illustrates the setup of the configurations provided with this distribution;
- Section 4 – *Demo eIDAS-Node set up and configuration*: describes step-by-step how to install the demo configuration;
- Section 5 – *Specific configuration*: provides information on how the setup can be changed to suit your needs;
- Section 6 – *Compiling the modules from the source*: describes how to rebuild the Maven project if necessary;
- Section 7 – *Enabling logging*: describes how to enable audit logging of the communications between eIDAS-Node Proxy Service and Connector.

### 1.1. Document aims

Describes how to quickly install demonstration versions of an eIDAS-Node Connector, eIDAS-Node Proxy Service, Service Provider (SP) and Identity Provider (IdP) from the distributions in this release package to enable familiarity with the CEF eID software.

### 1.2. Other technical reference documentation

We recommend that you also familiarise yourself with the following eID technical reference documents, which are available on **CEF Digital Home > eID > All eID services > eIDAS Node integration package > View latest version**:

- *eIDAS-Node Installation and Configuration Guide* describes the steps involved when implementing a Basic Setup and goes on to provide detailed information required for customisation and deployment.
- *eIDAS-Node National IdP and SP Integration Guide* provides guidance by recommending one way in which eID can be integrated into your national eID infrastructure.

- *eIDAS-Node Demo Tools Installation and Configuration Guide* describes the installation and configuration settings for Demo Tools (SP and IdP) supplied with the package for basic testing.
- *eIDAS-Node and SAML* describes the W3C recommendations and how SAML XML encryption is implemented and integrated in eID. Encryption of the sensitive data carried in SAML 2.0 Requests and Assertions is discussed alongside the use of AEAD algorithms as essential building blocks.
- *eIDAS-Node Error and Event Logging* provides information on the eID implementation of error and event logging as a building block for generating an audit trail of activity on the eIDAS Network. It describes the files that are generated, the file format, the components that are monitored and the events that are recorded.
- *eIDAS-Node Security Considerations* describes the security considerations that should be taken into account when implementing and operating your eIDAS-Node scheme.
- *eIDAS-Node Error Codes* contains tables showing the error codes that could be generated by components along with a description of the error, specific behaviour and, where relevant, possible operator actions to remedy the error.

**Disclaimer:** The users of the eIDAS-Node sample implementation remain fully responsible for its integration with back-end systems (Service Providers and Identity Providers), testing, deployment and operation. The support and maintenance of the sample implementation, as well as any other auxiliary services, are provided by the European Commission according to the terms defined in the European Union Public License (EUPL) at [https://joinup.ec.europa.eu/sites/default/files/custom-page/attachment/eupl\\_v1.2\\_en.pdf](https://joinup.ec.europa.eu/sites/default/files/custom-page/attachment/eupl_v1.2_en.pdf)



## 2. Release content

For information on the changes in this release, please see the current Release Notes.

The deliverable consists of the following zip files:

| Deliverable                        | Description  |
|------------------------------------|--|
| EIDAS-2.4.0.zip                    | Distribution version 2.4.0 of the sample eIDAS-Node  |
| EIDAS-Sources-2.4.0.zip            | Source files (Maven project) of the sample eIDAS-Node including an example of implementation of the eIDAS-Node Specific Connector, the eIDAS-Node Specific Proxy Service, demonstration Service Provider (SP) and IdP (Identity Provider). |
| EIDAS-Binaries-Glassfish-2.4.0.zip | Deployable war files of a preconfigured eIDAS-Node for a Glassfish server (including IdP.war, EidasNode.war, SP.war, SpecificConnector.war, SpecificProxyService.war)  |
| EIDAS-Binaries-Wildfly-2.4.0.zip   | Deployable war files of a preconfigured eIDAS-Node for a WildFly server (including IdP.war, EidasNode.war, SP.war, SpecificConnector.war, SpecificProxyService.war)  |
| EIDAS-Binaries-Tomcat-2.4.0.zip    | Deployable war files of a preconfigured eIDAS-Node for a Tomcat server (including IdP.war, EidasNode.war, SP.war, SpecificConnector.war, SpecificProxyService.war)   |
| EIDAS-Binaries-Was-2.4.0.zip       | Deployable war files of a preconfigured eIDAS-Node for a WebSphere server (including IdP.war, EidasNode.war, SP.war, SpecificConnector.war, SpecificProxyService.war)  |
| EIDAS-Binaries-Wls-2.4.0.zip       | Deployable war files of a preconfigured eIDAS-Node for a WebLogic server (including IdP.war, EidasNode.war, SP.war, SpecificConnector.war, SpecificProxyService.war)   |

### 3. Overview of the preconfigured demo eIDAS-Node packages

This distribution provides an example configuration in which each supported server represents one country providing an eID service. For the purpose of this demo, fictitious countries are used (CA, CB, CC, CD, CF).

The following table illustrates the setup of the configurations provided with this distribution.

| Application Server                                  | Version  | Default host | Default port | Country | Description |
|---|--|--------------|--------------|---------|-------------|
| <b>Tomcat</b>                                       | 8.x, 9.0*  | localhost    | 8080         | CA      | Country A   |
| <b>Glassfish</b>                                    | 4.1 (web profile) ,<br>5.0* (full profile)       | localhost    | 8081         | CB      | Country B   |
| <b>Wildfly</b>                                      | 11.0.0 (Web Distribution),<br>15.0.1*            | localhost    | 8085         | CC      | Country C   |
| <b>WebLogic</b>                                     | 12.1.3<br>12.2.1.3*                              | localhost    | 7001         | CD      | Country D   |
| <b>WebSphere/<br/>WebSphere<br/>Liberty Profile</b> | 8.5.5*<br>Liberty<br>Profile Core<br>v9/17.0.0.4 | localhost    | 9080         | CF      | Country F   |

\* Default build server provided with the binaries

## 4. Demo eIDAS-Node set up and configuration

Each example eIDAS-Node package is preconfigured to use 'localhost' as hostname and a default http listening port; see the table in section 3. The http listening port of your application server must be adapted according to these default values.

If you need to change these default values, refer to section 5.1 — *Changing the default hostname or http port* for details.

To set up and configure the demo, perform the following steps:

1. If Oracle provided JVM is going to be used, then it is necessary to apply the JCE Unlimited Strength Jurisdiction Policy Files, which contain no restriction on cryptographic strengths:
  - a. Download the Java Cryptography Extension (JCE) Unlimited Strength Policy Files from Oracle:
    - For Java 8: <http://www.oracle.com/technetwork/java/javase/downloads/jce8-download-2133166.html>
  - b. Uncompress and extract the downloaded zip file (it contains README.txt and two jar files).
  - c. For the installation, please follow the instructions in the README.txt file.
2. It is necessary to increase the default JVM memory settings. Set the following JVM parameter in the startup script of your application server `-XX:MaxPermSize=512m`.
3. Copy the server configuration files and keystores provided for testing purposes into the local directories:

Open the zip file (config.zip in the EIDAS-Binaries-xxx-yyy.zip) and copy the directory keystore and the directory of the application server as required (i.e. glassfish, tomcat, wildfly, wls, was) into the configuration directory.

4. Local directory or directories must be defined in order to store the configuration files and the test keystores. These directories need to be defined either as OS/AS environment variables or command-line parameters:

```
EIDAS_CONFIG_REPOSITORY for EidasNode
SPECIFIC_CONNECTOR_CONFIG_REPOSITORY for Specific Connector
SPECIFIC_PROXY_SERVICE_CONFIG_REPOSITORY for Specific Proxy Service
SP_CONFIG_REPOSITORY for SP
IDP_CONFIG_REPOSITORY for IdP
```

It is also possible to use only one common directory for all the modules. JVM command line example:

```
-DEIDAS_CONFIG_REPOSITORY=c:/Pgm/projects/configEidas/glassfish/
-DSPECIFIC_CONNECTOR_CONFIG_REPOSITORY
=c:/Pgm/projects/configEidas/glassfish/specificConnector/
-D SPECIFIC_PROXY_SERVICE_CONFIG_REPOSITORY
=c:/Pgm/projects/configEidas/glassfish/specificProxyService/
-DSP_CONFIG_REPOSITORY=c:/Pgm/projects/configEidas/glassfish/sp/
-DIDP_CONFIG_REPOSITORY=c:/Pgm/projects/configEidas/glassfish/idp/
```

By default, the configuration file structure (e.g. Glassfish) must be as follows:

```
glassfish/eidas.xml
glassfish/encryptionConf.xml
glassfish/EncryptModule_Connector.xml
glassfish/EncryptModule_Service.xml
glassfish/hazelcast.xml
glassfish/hazelcastSpecificCommunication.xml
glassfish/saml-engine-additional-attributes.xml
glassfish/igniteNode.xml
glassfish/igniteSpecificCommunication.xml
glassfish/SamlEngine.xml
glassfish/SamlEngine_Connector.xml
glassfish/SamlEngine_Service.xml
glassfish/SignModule_Connector.xml
glassfish/SignModule_Service.xml
glassfish/idp/additional-attributes.xml
glassfish/idp/idp.properties
glassfish/idp/user.properties
glassfish/metadata/MetadataFetcher_Connector.properties
glassfish/metadata/MetadataFetcher_Service.properties
glassfish/sp/additional-attributes.xml
glassfish/sp/sp.properties
glassfish/specificConnector/additional-attributes.xml
glassfish/specificConnector/eidas-attributes.xml
glassfish/specificConnector/specificCommunicationDefinitionConnector.xml
glassfish/specificConnector/specificConnector.xml
glassfish/specificProxyService/additional-attributes.xml
glassfish/specificProxyService/eidas-attributes.xml
glassfish/specificProxyService/specificCommunicationDefinitionProxyService.xml
glassfish/specificProxyService/specificProxyService.xml
keystore/eidasKeyStore.jks
keystore/eidasKeyStore_Connector_CA.jks
keystore/eidasKeyStore_Connector_CB.jks
keystore/eidasKeyStore_Connector_CC.jks
keystore/eidasKeyStore_Connector_CD.jks
keystore/eidasKeyStore_Connector_CF.jks
keystore/eidasKeyStore_IDP_CA.jks
keystore/eidasKeyStore_IDP_CB.jks
keystore/eidasKeyStore_IDP_CC.jks
keystore/eidasKeyStore_IDP_CD.jks
keystore/eidasKeyStore_IDP_CF.jks
keystore/eidasKeyStore_METADATA.jks
keystore/eidasKeyStore_Service_CA.jks
keystore/eidasKeyStore_Service_CB.jks
keystore/eidasKeyStore_Service_CC.jks
keystore/eidasKeyStore_Service_CD.jks
keystore/eidasKeyStore_Service_CF.jks
keystore/eidasKeyStore_SP_CA.jks
keystore/eidasKeyStore_SP_CB.jks
keystore/eidasKeyStore_SP_CC.jks
keystore/eidasKeyStore_SP_CD.jks
keystore/eidasKeyStore_SP_CF.jks
```

**Please note:** all components in the binary distribution are preconfigured for the file system layout indicated above. Deviating from this layout will require changes to the configurations of the individual modules. Please refer to the *eIDAS-Node Installation and Configuration Guide* for more details.

## 5. On wildfly

- a. Locate and open in a text editor the file  
\$JRE\_HOME/lib/security/java.security.
- b. Add a line after the lines containing the security providers:  
security.provider.N=  
org.bouncycastle.jce.provider.BouncyCastleProvider

(you should set N according to your config, to the next available index in the list of providers).

The folders AdditionalFiles/Wildfly11 and AdditionalFiles/Wildfly15 contain the bouncycastle configuration files to be applied to Wildfly 11.0.0 and 15.0.1 respectively. The bcprov-jdk15on-1.64.jar is a signed version obtained from <https://www.bouncycastle.org/download/bcprov-jdk15on-164.jar>. Copy the contents of the folder for the used Wildfly version to

```
%WILDFLY_HOME%\wildfly-15.0.1.Final\modules\system\layers\base\
```

The path to the files will be:

```
%WILDFLY_HOME%\wildfly-15.0.1.Final\modules\system\layers\base\org\bouncycastle\main
```

#### 6. On WebSphere Liberty Profile the following features should be enabled:

```
<feature>jsp-2.2</feature>
<feature>servlet-3.0</feature>
<feature>ssl-1.0</feature> (if planning to use HTTPS)
```

#### 7. On all supported WebSphere:

7.1. Add property `<webContainer com.ibm.ws.webcontainer.enableErrorExceptionTypeFirst="true"/>` to `$SERVER_HOME/usr/servers/defaultServer/server.xml` file.

7.2. Add this property in server.xml file of websphere:

```
<webContainer com.ibm.ws.webcontainer.redirectcontextroot="true"/>
```

If set to true, and a request is made to the context root of an application with a missing trailing slash, the WebContainer appends the trailing slash. The WebContainer redirects to the URL with the appended slash before it applies any servlet filters defined in the application.

#### 8. Deploy the applications according to your application server.

- EidasNode.war
- SP.war
- IdP.war
- SpecificConnector.war
- SpecificProxyService.war

## 9. Deployment of EidasNode on WebSphere

Change the class loaded order and class loader policy as shown below.

You now have a Service Provider, eIDAS-Node Connector, eIDAS-Node Proxy Service and IdP configured to run on localhost:

- Tomcat: <http://localhost:8080/SP/>
- Glassfish: <http://localhost:8081/SP/>
- Wildfly: <http://localhost:8085/SP/>
- WebLogic: <http://localhost:7001/SP/>
- WebSphere, WebSphere Liberty Profile: <http://localhost:9080/SP/>

To validate the installation, a first test can be performed simulating that a citizen from a country accesses services in the same country.

1. Open the Service Provider URL : <http://localhost:defaultport/SP/>
2. Choose for both the SP and citizen country the fictitious country for which your application server has been configured (CA, CB, CC, CD or CF).
3. The generated Simple Protocol Request is displayed. Submit the form.
4. Click **Next** to give your consent to attributes being transferred.
5. Enter the user credentials. Type 'xavi' as **Username** and 'creus' as **Password** and submit the page.

6. Click **Submit** to validate the values to transfer.

The `SAMLResponse` is displayed.

7. **Submit** the form.

You should see **Login Succeeded**.

## 5. Specific configuration

### 5.1. Changing the default hostname or http port

The parameters below can be adapted to reflect your configuration.

**Note:** The application server must be restarted after changes have been made.

#### 5.1.1. eIDAS-Node hostname and port

1. Edit the file `eidas.xml` located in the configuration directory as shown below.

| Property  | Value   |
|---|---|
| <code>connector.assertion.url</code>                            | <code>http://&lt;connector.yourHostname&gt;:&lt;connector.yourPort&gt;/EidasNode/ColleagueResponse</code>   |
| <code>connector.metadata.url</code>                             | <code>http://&lt;connector.yourHostname&gt;:&lt;connector.yourPort&gt;/EidasNode/ConnectorMetadata</code>   |
| <code>service.metadata.url</code>                               | <code>http://&lt;service.yourHostname&gt;:&lt;service.yourPort&gt;/EidasNode/ServiceMetadata</code>   |
| <code>ssos.serviceMetadataGeneratorIDP.post.location</code>     | The URL for the metadata <md:SingleSignOnService> location attribute of the SingleSignOnService related to Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST. e.g.<br><code>http://&lt;service.yourHostname&gt;:&lt;service.yourPort&gt;/EidasNode/ColleagueRequest/</code>     |
| <code>ssos.serviceMetadataGeneratorIDP.redirect.location</code> | The URL for the metadata <md:SingleSignOnService> location attribute of the SingleSignOnService related to Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect. e.g.<br><code>http://&lt;service.yourHostname&gt;:&lt;service.yourPort&gt;/EidasNode/ColleagueRequest/</code> |
| <code>specific.proxyService.request.receiver</code>             | The URL for specific-proxyService requests receiver only used when specific proxy service is build/deployed as WAR<br><code>https://&lt;specific ProxyService.yourHostname&gt;:&lt;specific ProxyService.yourPort&gt;/SpecificProxyService/ProxyServiceRequest</code>                 |
| <code>specific.connector.response.receiver</code>               | The URL for specific-connector response receiver used when specific connector is build/deployed as WAR<br><code>http://&lt;specific ProxyService.yourHostname&gt;:&lt;specific ProxyService.yourPort&gt;/SpecificProxyService/ConnectorResponse</code>                                |
| <code>security.header.CSP.report.uri</code>                     | Prefix for <code>report_uri</code> header populated by the node<br><code>http://&lt;service.yourHostname&gt;:&lt;service.yourPort&gt;/EidasNode</code>  |



2. Open and edit the file `sp.properties` as shown below.

| Property                  | Value  |
|---------------------------|--|
| <code>country1.url</code> | <code>http://&lt;connector.yourHostname&gt;/SpecificConnector/ServiceProvider</code> |

### 5.1.2. SP hostname and port

Open and edit the file `sp.properties` as shown below.

| Property               | Value  |
|------------------------|--|
| <code>sp.return</code> | <code>http:// &lt;sp.yourHostname&gt;:&lt;sp.yourPort&gt;/SP/ReturnPage</code> |

Open and edit the file `/specificConnector/specificConnector.xml` as shown below.

| Property                                    | Value   |
|---|---|
| <code>specific.connector.request.url</code> | <code>https://&lt;connector.yourHostname&gt;:&lt;connector.yourPort&gt;/EidasNode/SpecificConnectorRequest</code> |

### 5.1.3. IdP hostname and port

Edit the file `/specificProxyService/specificProxyService.xml` located in the configuration folder as shown below.

| Property  | Value   |
|---|---|
| <code>idp.url</code>  | <code>http://&lt;idp.yourHostname&gt;:&lt;idp.yourPort&gt;/IdP/AuthenticateCitizen</code>   |
| <code>specific.proxyService.idp.response.service.url</code> | <code>https://&lt;specific ProxyService.yourHostname&gt;:&lt;specific ProxyService.yourPort&gt;/SpecificProxyService/IdpResponse</code> |
| <code>specific.proxyService.response.url</code>             | <code>https://&lt;service.yourHostname&gt;:&lt;service.yourPort&gt;/EidasNode/SpecificProxyServiceResponse</code>                       |

## 5.2. Changing the keystore location

By default, the test keystores are located in the directory 'keystore' in the same directory as the configuration directory. You can change these values by editing the files below to reflect your configuration. All filenames and path information are relative to the configuration directory for the given module.

| Keystore          | Files  |
|-------------------|--|
| <b>eIDAS-Node</b> | SignModule_Service.xml<br>SignModule_Connector.xml<br>EncryptModule_Service.xml<br>EncryptModule_Connector.xml |

### 5.3. Changing keystore configuration

By default, the preconfigured eIDAS components use the following extended configuration.

#### 5.3.1. Extended configuration

In this configuration, all stakeholders (Connector /Proxy Service) use their own certificate for the signing and encrypting of SAML messages.

This setup is close to a real-life scenario, where the components are distributed across servers and Member States.

Example for country 'CA':

|                      | Keystore   |          | Certificate                    | Country |
|----------------------|--|----------|--------------------------------|---------|
| <b>Connector</b>     | eidasKeyStore_Connector_CA.jks<br>(SignModule_Connector.xml,<br>EncryptModule_Connector.xml) | Key Pair | Connector-ca-demo-certificate  | CA      |
|                      |  | Trusted  | Metadata (signing certificate) | CA      |
| <b>Proxy Service</b> | eidasKeyStore_Service_CA.jks<br>(SignModule_Service.xml,<br>EncryptModule_Service.xml)       | Key Pair | Service-ca-demo-certificate    | CA      |
|                      |  | Trusted  | Metadata (signing certificate) | CA      |
| <b>Metadata</b>      | eidasKeyStore_METADATA.jks   | Key Pair | Metadata (signing certificate) | CA      |

#### 5.3.2. Basic configuration

In this configuration, all stakeholders share the same certificate.

This setup is a simplified scenario for a lab environment, but corresponds less to a real-life situation.

In order to set up the basic scenario, all SignModule configuration files should be adapted to reference the common test keystore, eidasKeyStore.jks.

### 5.4. Preventing a citizen from authenticating in a country other than the requested one

By default, the preconfigured Demo eIDAS-Node has a protection, which does not allow citizens to authenticate in a country other than the one that has been requested.

If you need to disable this validation, edit the file eidas.xml located in the configuration directory.

| Property                                    | Value |
|---|-------|
| check.citizenCertificate.serviceCertificate | false |

## 5.5. eIDAS-Node compliance

For validation purposes, the demo eIDAS Nodes do not use HTTPS and the configuration parameters are set as shown below. The parameters can be changed to be fully eIDAS compliant if required.

| Parameter                                | Demo value      | eIDAS value  |
|--|-----------------|--|
| disallow_self_signed_certificate         | False           | True: do not allow self-signed and expired certificates  |
| check_certificate_validity_period        | False           | True: do not allow expired certificates  |
| metadata.activate                        | True            | True: specifies that metadata is generated by the Connector  |
| metadata.restrict.http                   | False           | True: metadata must be only available via HTTPS  |
| tls.enabled.protocols                    | TLSv1.1,TLSv1.2 | TLSv1.1,TLSv1.2: SSL/TLS enabled protocols   |
| tls.enabled.ciphers                      | N/A             | TLS enabled cipher suites. Default JDK cipher suites.  |
| metadata.check.signature                 | True            | True : metadata received from a communications partner must be signed  |
| metadata.validity.duration               | 86400           | Metadata validity period in seconds. Default=86400 (i.e. one day)  |
| response.encryption.mandatory            | True            | True: do not allow response not encrypted  |
| validate.binding                         | True            | True: the bindings are validated   |
| security.header.csp.enabled              | True            | True: the content-security and security checks are enabled   |
| disable.check.mandatory.eidas.attributes | False           | False: check the eIDAS minimum dataset constraint.<br><br><b>Note:</b> this parameter is used by both Proxy Service and Connector. |
| disable.check.representative.attributes  | False           | True: disable the check of representative attributes in the request  |

## 6. Compiling the modules from the source

If you need to rebuild the Maven project, open EIDAS-Parent and execute the Maven commands described in the table below according to your application server.

Recommended versions of Maven are 3.5.4 and above. Lower versions can result in exceptions.

| Folder       | Command line                                     |  |
|--------------|--|--|
| EIDAS-Parent | Tomcat/<br>Glassfish(full profile)/<br>WebSphere | <code>mvn clean install -PNodeOnly[,DemoToolsOnly] -PnodeJcacheIgnite[,specificCommunicationJcacheIgnite]</code>   |
|              | WebLogic   | <code>mvn clean install -P weblogic -PNodeOnly[,DemoToolsOnly] -PnodeJcacheIgnite[,specificCommunicationJcacheIgnite] [-Dweblogic12.1.3-BouncyCastle]</code> |
|              | Wildfly  | <code>mvn clean install -P wildfly -PNodeOnly[,DemoToolsOnly] -PnodeJcacheIgnite[,specificCommunicationJcacheIgnite]</code>                                  |
|              | Glassfish (webprofile)                           | <code>mvn clean install -P glassfishWebProfile -PNodeOnly[,DemoToolsOnly] -PnodeJcacheIgnite[,specificCommunicationJcacheIgnite]</code>                      |

## 7. Enabling logging

The locations of the audit files are by default configured to use a Java system properties variable called `LOG_HOME`.

A value can be assigned to this variable by using: `-DLOG_HOME="<myDirectoryName>"` at server start-up.

Additionally, the logging of the exchanged messages within the eIDAS Node and between eIDAS Node and the Specific could be enabled by setting the property `saml.audit` from `eidas.xml` configuration file to `true`.

**Note:** The eIDAS-Node logs may contain person identification data, hence these logs should be handled and protected appropriately in accordance with the European privacy regulations [Dir. 95/46/EC] and [Reg. 2016/679].

*[Reg. 2016/679] REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC.*

*[Dir. 95/46/EC] Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.*