



## D3.5

### Open Source Client Library and Server Tools for Trust Schemes

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## 1. Executive Summary

This document describes how to obtain, build, and maintain the open source libraries for the trust scheme publication authority. It describes the procedures to compile and run the software on any server.

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## 2. Document Information

### 2.1 Contributors

Name	Partner
Georg Wagner	TUG

### 2.2 History

Version	Date	Author	Changes
0.1	10/08/2018	Georg Wagner	Initial Version
0.3	10/08/2018	Georg Wagner	Additional Information about the build process
1.0	27/08/2018	Georg Wagner	Review comments

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## 4. Components

### 4.1 Technical Infrastructure

The details of the technical infrastructure can be found in D8.1 [1]. This deliverable describes the technical infrastructure for source code hosting as well as automated deployment methods. We use GIT as source code repository and Nexus to manage our software artefacts.

GIT is a version control system for tracking changes in computer files and coordinating work on those files among multiple people. It is primarily used for source code management in software development, but it can be used to keep track of changes in any set of files.

Sonatype Nexus is a repository manager. It allows developers to proxy, collect, and manage dependencies, and facilitates the distribution of software.

### 4.2 Obtaining the Source Code for the Delegation Provider

The source code can be obtained from <git@extgit.iaik.tugraz.at:LIGHTest/TrustSchemePublicationAuthority.git>

and can be received via git commands:

```
git pull
```

### 4.3 Getting the right Revision

The development for this version takes place in the branch 'v1.0'. The branch can be changed via the command

```
git branch v1.0
```

```
git checkout
```

To get the sources of that particular branch.

### 4.4 Building the Source Code

The project uses Maven as build system. The vast majority of maven projects can be build using the command

```
mvn verify
```

As an alternative to building the source code on the command line, you could as well use your favourite IDE.

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## 4.5 Running the TSPA

To run the Delegation Provider a java servlet server like Apache Tomcat is required. For Apache Tomcat copy the target folder into

`$CATALINA_BASE/webapps/`

and restart the server.

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## 5. Project Description

### **LIGHTest project to build a global trust infrastructure that enables electronic transactions in a wide variety of applications**

An ever increasing number of transactions are conducted virtually over the Internet. How can you be sure that the person making the transaction is who they say they are? The EU-funded project LIGHTest addresses this issue by creating a global trust infrastructure. It will provide a solution that allows one to distinguish legitimate identities from frauds. This is key in being able to bring an efficiency of electronic transactions to a wide application field ranging from simple verification of electronic signatures, over eProcurement, eJustice, eHealth, and law enforcement, up to the verification of trust in sensors and devices in the Internet of Things.

Traditionally, we often knew our business partners personally, which meant that impersonation and fraud were uncommon. Whether regarding the single European market place or on a Global scale, there is an increasing amount of electronic transactions that are becoming a part of peoples everyday lives, where decisions on establishing who is on the other end of the transaction is important. Clearly, it is necessary to have assistance from authorities to certify trustworthy electronic identities. This has already been done. For example, the EC and Member States have legally binding electronic signatures. But how can we query such authorities in a secure manner? With the current lack of a worldwide standard for publishing and querying trust information, this would be a prohibitively complex leading to verifiers having to deal with a high number of formats and protocols.

The EU-funded LIGHTest project attempts to solve this problem by building a global trust infrastructure where arbitrary authorities can publish their trust information. Setting up a global infrastructure is an ambitious objective; however, given the already existing infrastructure, organization, governance and security standards of the Internet Domain Name System, it is with confidence that this is possible. The EC and Member States can use this to publish lists of qualified trust services, as business registrars and authorities can in health, law enforcement and justice. In the private sector, this can be used to establish trust in inter-banking, international trade, shipping, business reputation and credit rating. Companies, administrations, and citizens can then use LIGHTest open source software to easily query this trust information to verify trust in simple signed documents or multi-faceted complex transactions.

The three-year LIGHTest project starts on September 1st and has an estimated cost of almost 9 Million Euros. It is partially funded by the European Union's Horizon 2020 research and innovation programme under G.A. No. 700321. The LIGHTest consortium consists of 14 partners from 9 European countries and is coordinated by Fraunhofer-Gesellschaft. To reach out beyond Europe, LIGHTest attempts to build up a global community based on international standards and open source software.

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# Open Source Client Library



The partners are ATOS (ES), Time Lex (BE), Technische Universität Graz (AT), EEMA (BE), G&D (DE), Danmarks tekniske Universitet (DK), TUBITAK (TR), Universität Stuttgart (DE), Open Identity Exchange (GB), NLNet Labs (NL), CORREOS (ES), IBM Danmark (DK) and Ubisecure (FI). The Fraunhofer IAO provides the vision and architecture for the project and is responsible for both, its management and the technical coordination.

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