

# **Package Build Instruction**

**Version: 1.7**

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# ***1 Purpose***

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How-to guide in building OpenAttestation SDK from source to package ready for installation.

## 2 *System Requirements*

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### 2.1 **System requirement**

The build environment has been validated in x86\_64 Fedora 19, Ubuntu 13.04, RHEL 6.4 and OpenSUSE 12.3.

### 2.2 **Proxy Configuration setup**

If you building package behind firewall, you would need to setup following proxies in order to download needed libraries

```
export http_proxy=<proxy_server>:<proxy_port>
export https_proxy=<proxy_server>:<proxy_port>
export ftp_proxy=<proxy_server>:<proxy_port>
```

### 2.3 **Software requirement**

#### 2.3.1 **Install basic packages in Fedora and RHEL**

```
yum install rpm-build
yum install ant
yum install trousers-devel
yum install gcc-c++
```

Also install following packages

- \* autoconf 2.63
- \* automake 1.11
- \* pam 1.1
- \* java 1.6 or 1.7

#### 2.3.2 **Install basic packages in Ubuntu**

```
apt-get install openjdk-7-jdk
```

```
apt-get install libtspi-dev
```

```
apt-get install zip
```

```
apt-get install ant
```

```
apt-get install g++
```

```
apt-get install make
```

### **2.3.3 Install basic packages in OpenSUSE**

```
zypper install gcc-c++
```

```
zypper install kernel-default-devel
```

```
zypper install ant
```

```
zypper install trousers-devel
```

```
zypper install xerces-j2
```

```
zypper install java-1_7_0-openjdk-devel
```

## 3 *Download OpenAttestation Required Components*

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### 3.1 **Download OpenAttestation Source**

Please download source tree, say `<OAT_DIR>/OpenAttestation`, you are to see following tree structure, `<OAT_DIR>` is the directory of OAT package.

`<OAT_DIR>/OpenAttestation/Source -`

```
HisAppraiser
HisClient
HisPrivacyCAWebServices2
WLMSservice
AttestationService
Portal
PrivacyCA
TPMModule
Build.sh
```

`<OAT_DIR>/OpenAttestation/Installer -`

.....

`<OAT_DIR>/OpenAttestation/docs -`

### 3.2 **Download required libraries**

OpenAttestation project in open source tree doesn't include all the necessarily runtime libraries, such as JAR files for Java runtime ...

To download runtime libraries, do

- `cd <OAT_DIR>/OpenAttestation/Source`
- `bash download_jar_packages.sh`
- `bash distribute_jar_packages.sh`

## 4 *Package building*

---

### 4.1 **Building RPM Package for Fedora/RHEL server**

Cd <OAT\_DIR>/OpenAttestation/Installer

```
bash rpm.sh -s <OAT_DIR>/OpenAttestation/Source
```

Where <OAT\_DIR> is from section #3.1 Download OpenAttestation. <OAT\_DIR> are absolute path.

You should see "RPM build: ----- [OK]" at the end.

### 4.2 **Building DEB Package for Ubuntu server**

Cd <OAT\_DIR>/OpenAttestation/Installer

```
bash deb.sh -s <OAT_DIR>/OpenAttestation/Source
```

Where <OAT\_DIR> is from section #3.1 Download OpenAttestation. <OAT\_DIR> are absolute path.

You should see "DEB build: ----- [OK]" at the end

### 4.3 **Building RPM Package for OpenSUSE server**

Cd <OAT\_DIR>/OpenAttestation/Installer

```
bash rpm_for_sles.sh -s <OAT_DIR>/OpenAttestation/Source
```

Where <OAT\_DIR> is from section #3.1 Download OpenAttestation. <OAT\_DIR> are absolute path.

You should see "RPM build: ----- [OK]" at the end

## 4.4 **Get install package**

### 4.4.1 **For Fedora**

You should find rpm package in /root/rpmbuild/RPMS/x86\_64/OAT-Appraiser-Base-OATapp-1.0.0-2.fcxx.x86\_64.rpm.



#### **4.4.2 For RHEL**

You should find rpm package in /root/rpmbuild/RPMS/x86\_64/OAT-Appraiser-Base-OATapp-1.0.0-2.el6.x86\_64.rpm.

#### **4.4.3 For Ubuntu**

You should find deb package in /tmp/debbuild/DEBS/x86\_64/OAT-Appraiser-Base-OATapp-1.0.0-2.ubuntu.x86\_64.deb.

#### **4.4.4 For OpenSUSE**

You should find rpm package in /root/rpmbuild/RPMS/x86\_64/OAT-Appraiser-Base-OATapp-1.0.1-2.x86\_64.rpm.

## 5 *Import Projects to Eclipse*

---

In order to build OpenAttestation project within Eclipse, you should have Eclipse setup proxy accordingly as *section#2.2 Proxy Configuration Setup*.

<OAT\_DIR>/OpenAttestation/Source –

HisAppraiser

HisClient

HisPrivacyCAWebServices2

WLMSERVICE

AttestationService

PrivacyCA

TPModule

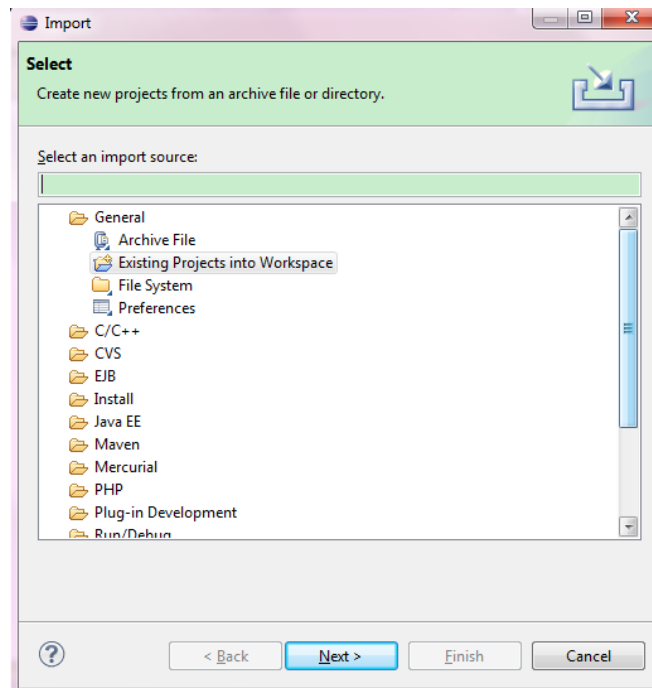
<OAT\_DIR> is from section #3.1 Download OpenAttestation.

We Recommend to get OpenAttestation development package after running #3.2

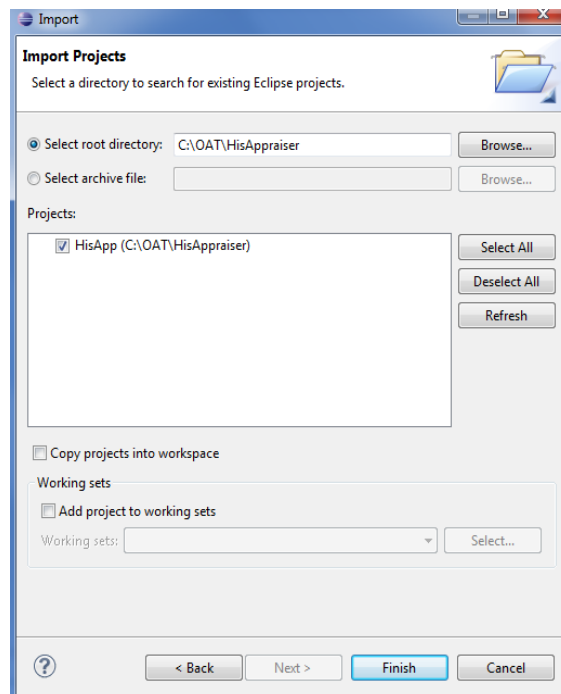
“ Download required libraries”

### 5.1 **Import to Eclipse**

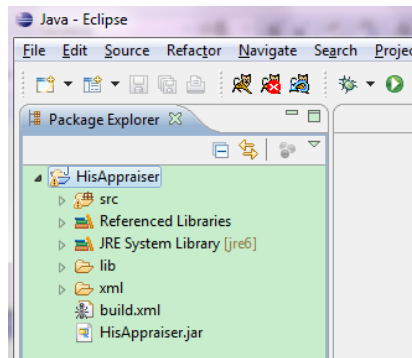
1. Open Eclipse; click File option, select Import option, select General options, and then select Existing Projects into Workspace.



2. Click Next, select one of those 7 subdirectories as the root directory, then project name will be listed in the Projects box, select the project and click Finish.



3. Project should be displayed in Eclipse Explorer Window:



4. For each of the other sub-directory, repeat step 2.

## 5.2 TPMModule

This module to be deployed onto the TPM client systems. This is a C++ project and should build in different ways between Windows and Linux. Here I only introduce how to build in Linux.

Below packages should be installed in Fedora:

- \* autoconf 2.63
- \* automake 1.11
- \* gcc 3.4
- \* pam 1.1
- \* trousers 0.3.1
- \* trousers-devel 0.3.1
- \* java 1.6 or 1.7
- \* rpm 4.7.2

Below packages should be installed in ubuntu:

- \* libtspi-dev
- \* g++
- \* openjdk-6-jdk

To build TPMModule, open a terminal window,

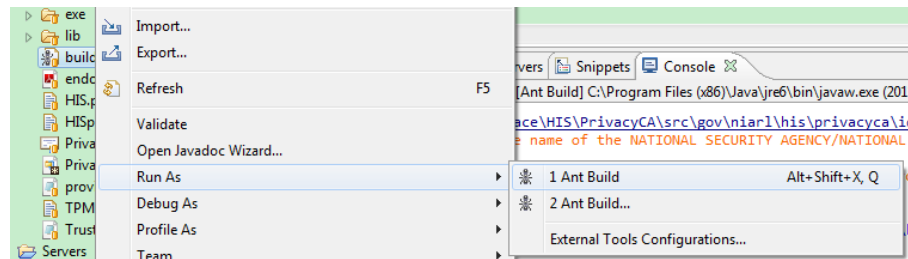
```
cd <OAT_DIR>/Source/TPMModule/sha1/linux/  
make
```

<OAT\_DIR> is from section #3.1 Download OpenAttestation.

## 5.3 PrivacyCA

There is build.xml in this project so that Eclipse can build it easily.

1. In Eclipse Explorer window, expand PrivacyCA, right click on build.xml, then select Run As, then 1 Ant Build;



2. The build will start and output messages in Console window. You will see **BUILD SUCCESSFUL** in Console at the end of build. Then you will get a PrivacyCA.jar file in this project.

```
Markers Properties Servers Snippets Console
<terminated> PrivacyCA build.xml [Ant Build] C:\Program Files (x86)\Java\jre6\bin\jav
[javac]
[javac] C:\work\workspace\HIS\PrivacyCA\src\gov\niarl\his\pr:
[javac] * ?Neither the name of the NATIONAL SECURITY AGENCY,
[javac] ^
[javac] 注意: C:\work\workspace\HIS\PrivacyCA\src\gov\niarl\his
[javac] 注意: 要了解详细信息, 请使用 -Xlint:deprecation 重新编译。
[javac] 84 警告
[javac] Creating empty C:\work\workspace\HIS\PrivacyCA\bin\g:
[delete] Deleting: C:\work\workspace\HIS\PrivacyCA\PrivacyCA.:
[jar] Building jar: C:\work\workspace\HIS\PrivacyCA\Privacj
BUILD SUCCESSFUL
Total time: 5 seconds
```

## 5.4 HisAppraiser

This module can be built on either machine. The same build steps as PrivacyCA.

## 5.5 HisClient

This module can be built on either machine. The same build steps as PrivacyCA.

## 5.6 HisPrivacyCAWebServices2

This module can be built on either machine. The same build steps as PrivacyCA.

## **5.7 HisWebServices**

This module can be built on either machine. The same build steps as PrivacyCA.

## **5.8 AttestationService**

This module can be built on either machine. The same build steps as PrivacyCA.

## **5.9 WLMService**

This module can be built on either machine. The same build steps as PrivacyCA.

## **5.10 Portal**

This is a PHP web application and is deployed under Apache. No need to build.