

Package Build Instruction

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1 Purpose

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

2 *System Requirements*

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
```

```
zypper install rpm-build
```

3 *Download OpenAttestation Required Components*

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
WLMSERVICE
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

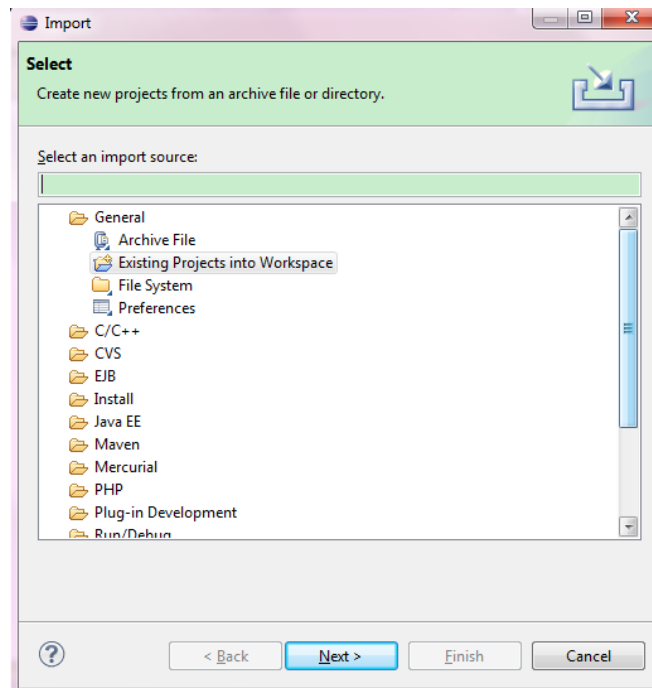
<OAT_DIR> is from section #3.1 Download OpenAttestation.

We Recommend to get OpenAttestation development package after running #3.2

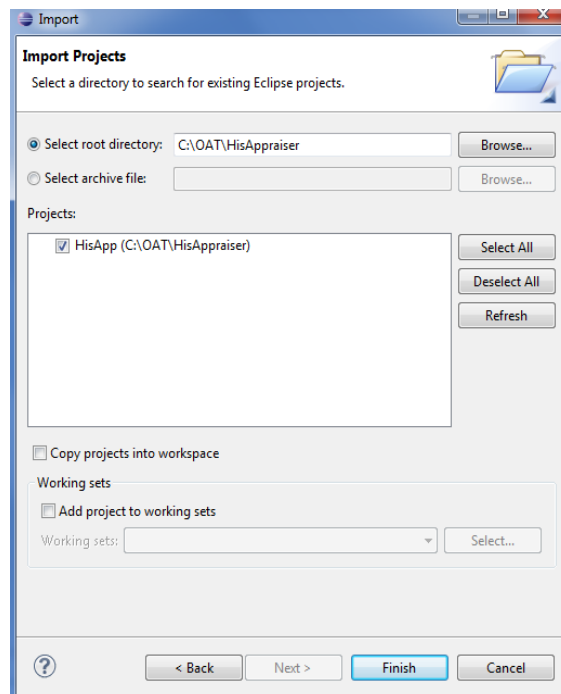
“ Download required libraries”

5.1 **Import to Eclipse**

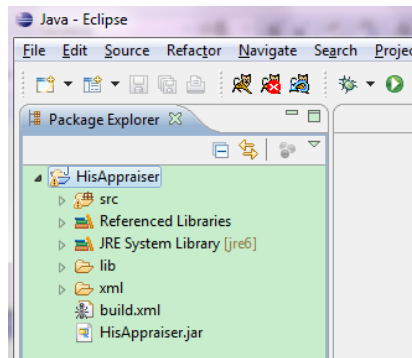
1. Open Eclipse; click File option, select Import option, select General options, and then select Existing Projects into Workspace.



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,

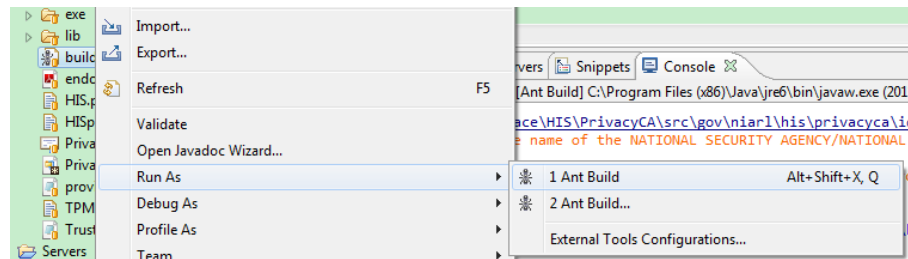
```
cd <OAT_DIR>/Source/TPMModule/sha1/linux/  
make
```

<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.