

# OpenSensorHub

Development Training

# Setting Up Development Environment

Lab 0

# Requirements

- Java SDK
  - v1.4 requires Java 8
  - v2.0 requires Java 11
  - [OpenJDK Downloads | Download Java JDK 8 & 11 | OpenLogic](#)
- GIT
  - [Git \(git-scm.com\)](https://git-scm.com)
- OpenSensorHub SDK
  - APIs supported
    - v1.4: Sensor Web Enablement
    - v2.0: Sensor Web Enablement, Sensor Web API, SensorThings API

# Setting Up OpenSensorHub SDK

- Choose version to develop against
- Clone respective branch from GitHub repository

- v1.4

```
> git clone https://github.com/opensensorhub/osh-node-dev-template.git --recursive
```

- v2.0

```
> git clone --branch v2-upgrade https://github.com/opensensorhub/osh-node-dev-template.git --recursive
```

# Perform Initial Build

- Performing initial build ensures development environment setup correctly
- Make sure you have right JDK version for OSH SDK Version you are working on, for example:

```
> java -version
java version "1.8.0_231"
Java(TM) SE Runtime Environment (build 1.8.0_231-b11)
Java HotSpot(TM) Client VM (build 25.231-b11, mixed mode, sharing)
```

- Execute build command (excluding unit tests ‘-x’)

```
> cd osh-node-template
> ./gradlew build -x test
```

# Verifying Build

```
> ls
Directory: C:\Users\CodeSmith\Documents\osh-node-dev-template

Mode                LastWriteTime         Length Name
----                -
d-----            11/18/2021   3:23 PM          .gradle
d-----            12/16/2021   3:35 PM          .idea
d-----            12/16/2021   2:02 PM          build
d-----            11/18/2021   3:19 PM          config
d-----            11/18/2021   3:19 PM          container
d-----            11/18/2021   3:19 PM          gradle
d-----            11/18/2021   3:19 PM          include
d-----            11/18/2021   3:19 PM          scripts
d-----            11/18/2021   3:19 PM          sensors
-a----            11/18/2021   3:19 PM           131 .gitignore
-a----            11/24/2021   2:04 PM           258 .gitmodules
-a----            12/16/2021   3:04 PM          1479 build.gradle
-a----            11/18/2021   3:19 PM          1294 dockerfile
-a----            11/18/2021   3:19 PM          5477 gradlew
-a----            11/18/2021   3:19 PM          2269 gradlew.bat
-a----            11/18/2021   3:19 PM          3674 Jenkinsfile
-a----            11/24/2021   2:04 PM          4138 README.md
-a----            12/16/2021   3:04 PM          1962 settings.gradle
```

- Successful build will generate the build subdirectory
- build will contain subdir distributions
- distributions will contain osh-node-0.0.1.zip
- The zip file is the build target

# Deploying OpenSensorHub

- Unzip the build target

```
> unzip osh-node-dev-template\build\distributions\osh-node-0.0.1.zip
```

- Execute the launch script for your corresponding OS

- Windows

```
> ./launch.bat
```

- Linux (ensure permissions are correct – `chmod +x launch.sh`)

```
> ./launch.sh
```

# Verify Execution

- Connecting to a node requires the operator to know either the IP address or Uniform Resource Locator (URL) for the server hosting the particular node port. To connect to an OpenSensorHub node enter the following in the Web Browser's address bar

```
http://[IP_ADDRESS]:[PORT]/sensorhub/admin
```

or

```
[URL]:[PORT]/sensorhub/admin
```

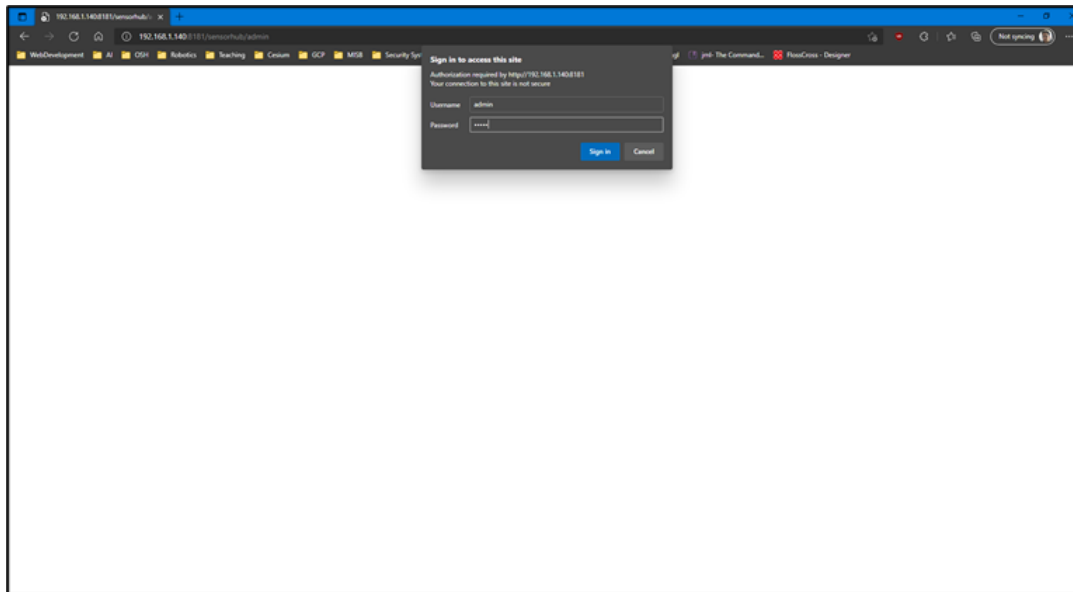
- The default port is 8181 but may be changed through the admin panel (see Network for configuration)
- Note that if the node is being served through https the default port will be different (likely, 443) but does not need to be specified, for example

```
https://[IP_ADDRESS]/sensorhub/admin
```



# Success!

Open Web Browser and navigate to localhost:8181/sensorhub/admin



Default username: admin  
Default password: admin

