# Automating your CI/CD Stack with Java and Groovy Hands on Lab

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## Step 0: Install tools

This lab requires the following:

1. Docker
2. Docker images
3. Groovy
4. The ability to run curl

### Docker

To install Docker, follow the instructions at: <https://docs.docker.com/install/>

Validation:

At the command line, run **docker –version**. (Small version differences are ok in the output)

$ docker --version

Docker version 18.06.0-ce, build 0ffa825

### Docker images

These images take up 1.2GB combined. So as not to tax the conference network, please pull them in advance. This will also let you deal with any corporate internet proxies while you are still at work and can ask for help.

At the command line run:

**docker pull sonatype/nexus3**

**docker pull jenkins/jenkins:lts**

$ docker pull sonatype/nexus3

Using default tag: latest

latest: Pulling from sonatype/nexus3

7dc0dca2b151: Pull complete

68f6b3431de1: Pull complete

3d53a2c6a5ef: Pull complete

Digest: sha256:e57d22b59b607d055f9241f1613073ec1b46c37afae30d67707072f19a87d244

Status: Downloaded newer image for sonatype/nexus3:latest

$ docker pull jenkins/jenkins:lts

lts: Pulling from jenkins/jenkins

55cbf04beb70: Pull complete

1607093a898c: Pull complete

9a8ea045c926: Pull complete

d4eee24d4dac: Pull complete

c58988e753d7: Pull complete

794a04897db9: Pull complete

70fcfa476f73: Pull complete

806029475e0c: Pull complete

67959b355155: Pull complete

41f7bc92e17c: Pull complete

4d8bfa352101: Pull complete

feeaf56eeeff: Pull complete

eb47b9331a05: Pull complete

0d8477309478: Pull complete

24190549c833: Pull complete

e6b4510f18f4: Pull complete

b08067308d47: Pull complete

dbe0078ec7bf: Pull complete

db473578f869: Pull complete

c53900f2171b: Pull complete

896628ca8631: Pull complete

Digest: sha256:8d4a5ad1ed1b5c4b5c5a73ba5341eaa18953afabac2703a77921ae1abd5cd822

Status: Downloaded newer image for jenkins/jenkins:lts

### Groovy

Follow the instructions at: <http://groovy-lang.org/install.html>

Note: Please download Groovy 2.X rather than 3.X. Version 3.X is in alpha at the time of writing this lab.

Validation:

At the command line, run **groovy –version**.(Small version differences are ok in the output)

$ groovy -version

Groovy Version: 2.5.2 JVM: 1.8.0\_45 Vendor: Oracle Corporation OS: Mac OS X

### Disk space

This lab uses about 1.5 GB of disk space (not counting Docker itself.) The last step of the lab explains how to recover disk space.

### The ability to run curl

If you are running Mac, Linux or Windows 10, you don’t need to do anything. If you are running an older version of Windows, you can install <https://www.cygwin.com>.

Validation:

At the command line, run **curl https://www.oracle.com/code-one/index.html** and ensure the output isn’t an error message.

## Step 1: Install Tools

In this lab, we use basic Docker to make setup simple. We do not set up a volume to persist the data since the emphasis is Groovy setup.

### Install Nexus

At the command line, run:

**docker run -d -p 8081:8081 --name nexus sonatype/nexus3**

Validation

In a browser, go to <http://localhost:8081>. If you do not see Nexus, wait a few seconds and try again.

### Install Jenkins

At the command line, run

**docker run -d -p 8080:8080 --name lts jenkins/jenkins**

Validation

In a browser, go to [http://localhost:8080](http://localhost:8081).

## Final step: Cleanup

### Stop containers

Remember you can enter the first couple characters of the hash rather than the whole thing.

**docker ps**

**docker stop <hash1>**

**docker stop <hash2>**

### If want to reclaim disk space

Remove containers and images

**docker ps –a**

**docker rm <hash1>**

**docker rm <hash2>**

**docker images**

**docker rmi <hash1>**

**docker rmi <hash2>**

## References

<https://hub.docker.com/r/jenkins/jenkins/>

<https://github.com/jenkinsci/docker/blob/master/README.md>

<https://hub.docker.com/r/sonatype/nexus3/>