# Endeavour Enterprise Setup Guide

Guide to setting up a PC (Windows 7) for development of the Enterprise product.

## Git and Node.js

<https://nodejs.org/en/>

<http://git-scm.com/>

## Setting Up Tomcat7

Download

## Install IntelliJ

Download from <https://www.jetbrains.com/idea/>

Currently (Feb 2016) offers a free 30-day trial and then a 50% discount for start-ups.

When at the Default Plugins page, I disabled EVERYTHING except:

* Version control -> Git
* Version control -> GitHub
* Database Tools
* Tomcat
* <<<need to list all required plugins>>>

After installation, close IntelliJ

## Download Repo

Open Cmd and navigate to wherever you want the Enterprise project to be.

Clone to remote repository from GitHub using the command:

git clone https://github.com/endeavourhealth/Enterprise.git

This should clone the remote repo and put all the source etc. on your local machine.

## Bower

Use cmd and run “npm install -g bower”

Once bower is installed, run bower to download all the js libraries;

In cmd, go to …Enterprise\src\enterprise-web\src\main\web (look for bower.json file)

Run “bower install”

## TypeScript

Once nodejs is installed, use cmd to run command “npm install -g typescript”

To manually run the TypeScript compiler, from the command line, simply navigate to the root of the web folder and type:

tsc

## Back to IntelliJ

Start IntelliJ, select to open a project

Select the Enterprise\src\.idea folder

This should open the project – open the Project view in IntelliJ and you should see enterprise-code and enterprise-web both shown.

### Create Run Configuration

Open Run->Edit Configurations. Click +, then Tomcat Server->Local to create the configuration. Select the Deployment tab then click + and select the Artefact you just created. Click ok.

## Installing Local SQL Server

Install SQL Server (or SQL Server EXPRESS)

Note whether you opted to install with an instance name or not (SQL EXPRESS defaults to having the instance name SQLEXPRESS)

Ensure both the SQL Server and SQL Server Browser services are running

Open SQL Server Configuration Manager

Expand SQL Server Network Configuration -> Protocols for SQLEXPRESS (or similar)

You should see TCP/IP shown on the right

Right-click and change to Enabled

Right-click and select Properties

Select IP Addresses tab

Scroll to the bottom and find the IP ALL section, then enter 1433 into the TCP Port field

Ok dialog and close Configuration Manager

Change connection string in Configuration class to be:

jdbc:jtds:sqlserver://127.0.0.1:1433/Endeavour\_Enterprise;instance=SQLEXPRESS;Network Library=dbmslpcn;user=Endeavour\_Enterprise\_ApplicationUser;password=TheQuickBrownFox1234%^&\*

Note: instance=SQLEXPRESS should be omitted or amended depending on your instance name

# Ubuntu

## SSH client

Download PuTTY from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

## Create Config Folder

In PuTTY:

Cd /etc

Cd endeavour <- to test if folder is already there

Sudo su

Mkdir endeavour <- to create folder

Cd endeavour

Mkdir enterprise-web

## Installing Java 8

See <http://www.webupd8.org/2012/09/install-oracle-java-8-in-ubuntu-via-ppa.html>

First, use this to test if Java is already installed:

Java -version

If not installed, run:

Sudo apt-get update

Sudo apt-add-repository ppa:webupd8team/java

Sudo apt-get update <- must be run after adding a repo

Sudo apt-get install oracle-java8-installer

Java-version <- to test installed version

## Installing Tomcat

See <https://www.digitalocean.com/community/tutorials/how-to-install-apache-tomcat-7-on-ubuntu-14-04-via-apt-get>

To install Tomcat:

Sudo apt-get update

Sudo apt-get install tomcat7

sudo apt-get install tomcat7-admin <-web management

Tomcat requires the Java\_Home environment variable to be set:

Sudo nano /etc/default/tomcat7 <- to edit the settings

JAVA\_HOME=/usr/lib/jvm/java-8-oracle <- add this line

Find the JAVA\_OPTS line…

Change the max memory setting to something bigger

-Dlogback.configurationFile=/etc/endeavour/enterprise-web/logback.xml <- add this line to JAVA\_OPTS

-Denterprise.configurationFile=/etc/endeavour/enterprise-web/config.xml <- add this line toocd /

AUTHBIND=yes <-add this line at the bottom

Ctrl+O to save the change

Ctrl+X to exit nano

Also set up the user details for the Tomcat web manager:

Sudo nano /etc/tomcat7/tomcat-users/xml

<user username=”admin” password =”xxx” roles=”manager-gui,admin-gui”/> <-add this

Ctrl+O to save

Ctrl+X to exit nano

Sudo service tomcat7 restart

Open browser and go to 10.11.87.69:8080 and you should see the Tomcat page

Tomcat defaults to using port 8080, so we need to change that:

Sudo nano /etc/tomcat7/server.xml

Change 8080 to 80 in the Connector XML element

Ctrl+O

Ctrl+X

Sudo touch /etc/authbind/byport/80

Sudo chmod 500 /etc/authbind/byport/80

Sudo chown tomcat7 /etc/authbind/byport/80

Sudo service tomcat7 restart

Open browser and go to 10.11.87.69 and you should see the Tomcat page

To check Tomcat status:

Sudo service tomcat7 status

To start, stop or restart Tomcat:

Sudo service tomcat7 stop

Sudo service tomcat7 start

Sudo service tomcat7 restart

## Installing RabbitMQ

See <https://www.rabbitmq.com/install-debian.html>

Note, RabbitMQ logs are found in /var/log/rabbitmq/

By default RabbitMQ creates a user called “guest” but restricts it to the local host. The below steps change this user, to allow remote connections too.

In PUTTY:

Sudo apt-get install rabbitmq-server

Sudo nano /etc/rabbitmq/rabbit.config <- to create a config file

[{rabbit, [{loopback\_users, []}]}]. <- add this, including .

Ctrl+O

Ctrl+X

Sudo service rabbitmq-server restart

To stop, start and restart:

Sudo service rabbitmq-server status

Sudo service rabbitmq-server start

Sudo service rabbitmq-server stop

Sudo service rabbitmq-server restart

## Deploying Config and Logback files to Web Server

Use PUTTY SFTP client from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Run PSFRP:

Open 10.11.87.69

Enter username and password

Put <path>config.xml <-to copy to server

Put <path>logback.xml <-to copy to server

Exit

Run PuTTY:

Sudo su

Mv config.xml /etc/endeavour/enterprise-web

Mv logback.xml /etc/endeavour/enterprise-web

Exit

## Deploying War to Web Server

Use PUTTY SFTP client from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Run PSFTP:

Open 10.11.87.69

Enter username and password

put <path>enterprise-web.war <-to copy to server

Exit

Run PUTTY:

sudo su <- to got into super user mode

mv enterprise-web.war /var/lib/tomcat7/webapps/ROOT.war

exit <- exit super user mode

sudo service tomcat7 restart

Checklist:

* Check out from GitHub
* Run TSC to compile ts files
* Build WAR file
* PSFTP WAR file to server
* PUTTY copy WAR to Root.war
* Restart Tomcat

## Useful Info

$CATALINA\_BASE is /var/lib/tomcat7

Tomcat logs are in /var/log/tomcat7

Sudo netstat -tulpn <- to see what processes are open on what port

Sudo nano /var/log/tomcat7/catalina.out <- to view logs

free <- to find machine RAM

top <- to see what processes are running and mem usage

## To Edit DNS Settings

Sudo nano /etc/network/interfaces

dns-nameservers x.x.x.x y.y.y.y <- add this line

Sudo ifdown eth0 && sudo ifup eth0 <- to reload DNS settings

Host [www.google.com](http://www.google.com) <- to test DNS