# Purpose

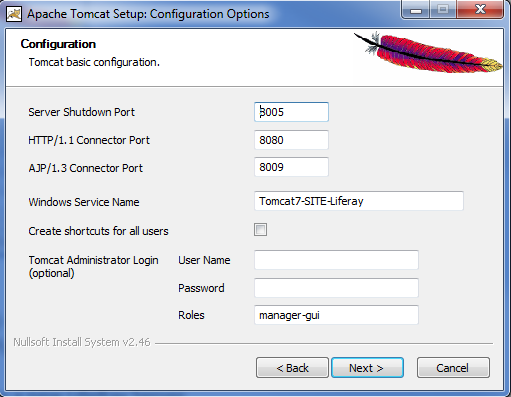
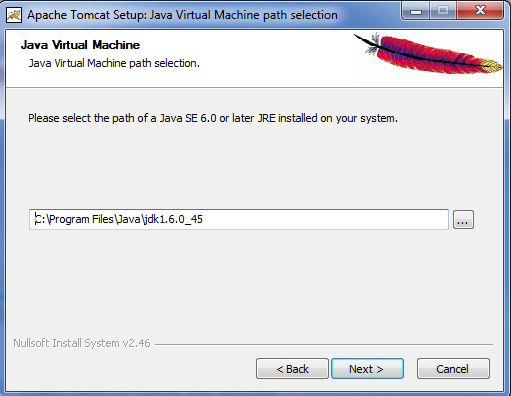
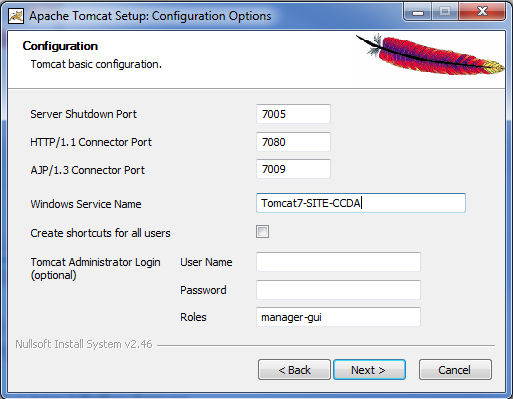
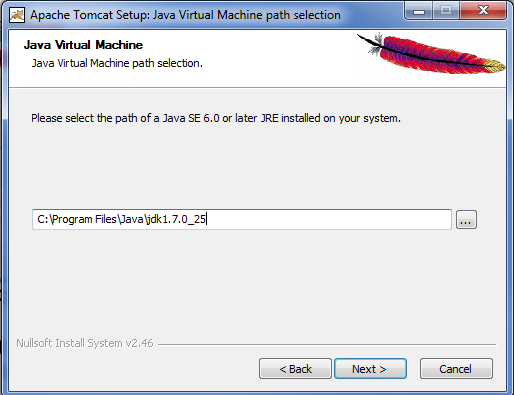
This tutorial outlines the process and tools required to setup a local development instance of the ONC SITE Project. The document assumes a basic understanding of Java, Java build path configuration, and the Eclipse IDE.

# Pre-requisites

The following are necessary step prior to continuing the tutorial.

1. Verify access to an existing git hub account (a new account can be created)
2. Review the download section of this document to gather all of the necessary files for this installation.

# Procedure

1. Install the Java 6 SDK (For Liferay)
2. Install the Java 7 SDK (For CCDA)
3. Install Apache Tomcat 7 (For Liferay)
   1. Name the service uniquely and select the proper ports  
      
   2. Select the proper JDK (Java 6 SDK)  
      
4. Install Apache Tomcat 7 (For CCDA)
   1. Name the service uniquely and select the proper ports  
      
   2. Select the proper JDK (Java 7 SDK)  
      
5. Install Maven
   1. Unzip the maven distribution archive, i.e. apache-maven-3.1.0-bin.zip to the directory you wish to install Maven 3.1.0. These instructions assume you chose C:\Program Files\Apache Software Foundation. The subdirectory apache-maven-3.1.0 will be created from the archive.
   2. Add the M2\_HOME environment variable by opening up the system properties (WinKey + Pause), selecting the "Advanced" tab, and the "Environment Variables" button, then adding the M2\_HOME variable in the user variables with the value C:\Program Files\Apache Software Foundation\apache-maven-3.1.0. Be sure to omit any quotation marks around the path even if it contains spaces. Note: For Maven 2.0.9, also be sure that the M2\_HOME doesn't have a '\' as last character.
   3. In the same dialog, add the M2 environment variable in the user variables with the value %M2\_HOME%\bin.
   4. Optional: In the same dialog, add the MAVEN\_OPTS environment variable in the user variables to specify JVM properties, e.g. the value -Xms256m -Xmx512m. This environment variable can be used to supply extra options to Maven.
   5. In the same dialog, update/create the Path environment variable in the user variables and prepend the value %M2% to add Maven available in the command line.
   6. In the same dialog, make sure that JAVA\_HOME exists in your user variables or in the system variables and it is set to the location of your JDK, e.g. C:\Program Files\Java\jdk1.5.0\_02 and that %JAVA\_HOME%\bin is in your Path environment variable.
   7. Open a new command prompt (Winkey + R then type cmd) and run mvn --version to verify that it is correctly installed.
6. Install Ant
   1. Unzip the ant distribution archive, i.e. apache-ant-1.9.2-bin.zip to the directory you wish to install Ant 1.9.2. These instructions assume you chose C:\Program Files\Apache Software Foundation. The subdirectory apache-ant-1.9.2 will be created from the archive.
   2. Add the ANT\_HOME environment variable by opening up the system properties (WinKey + Pause), selecting the "Advanced" tab, and the "Environment Variables" button, then adding the ANT\_HOME variable in the user variables with the value C:\Program Files\Apache Software Foundation\apache-ant-1.9.2. Be sure to omit any quotation marks around the path even if it contains spaces.
   3. In the same dialog, update/create the Path environment variable in the user variables and prepend the value %ANT\_HOME%\bin to add Ant available in the command line.
   4. In the same dialog, make sure that JAVA\_HOME exists in your user variables or in the system variables and it is set to the location of your JDK, e.g. C:\Program Files\Java\jdk1.7.0\_42 and that %JAVA\_HOME%\bin is in your Path environment variable.
   5. Open a new command prompt (Winkey + R then type cmd) and run ant --version to verify that it is correctly installed.
7. Unzip the maven-ant-tasks to the %ANT\_HOME%\lib directory
8. Unzip the Eclipse IDE zip file to C:\eclipse\
   1. Open C:\eclipse\eclipse.ini
      1. Update the min and max memory allocation for eclipse (m2e utilizes a ton of memory)
         1. Add the following lines to the end of the ini file configuration:  
            -Xms1024m  
            -Xmx2048m
      2. Save the eclipse.ini file
   2. Open eclipse
   3. Click on Help->Eclipse Marketplace in the menu bar
   4. Install eGit and Maven Integration for Eclipse (Juno and newer)
   5. Restart Eclipse after the installation
9. Unzip the liferay portal maven archetypes to C:\Liferay
   1. Open a command prompt
   2. Cd to C:\Liferay\liferay-portal-maven-6.1.1-ce-ga2
   3. Execute “ant install”
   4. Execute “mvn -Declipse.workspace=<path-to-eclipse-workspace> eclipse:add-maven-repo”, replacing the eclipse workspace directory; this will install the archetypes into m2eclipse
   5. Restart eclipse if it is already started.
10. Get the SITE projects from the github repository
    1. In Eclipse, select Window->ShowView->Other from the menu bar. In the Show View window, select Git->Git Repositories.
    2. In the Git Repositories view, click the icon to clone a Git repository.
       1. For the URI, enter <https://github.com/siteadmin/SITE.git>
       2. Enter your GitHub credentials
       3. Click “Next”
       4. Select the master branch
       5. Click “Next”
       6. Enter a local directory (default of “C:\Users\username\git\SITE” is fine, just remember the location for later)
       7. Click “Finish”.
    3. Import the Projects
       1. Expand the Repository in the Git Repository view
       2. Expand the Working Directory
       3. Right click on “sitenv” and select “Import Maven Project”
          1. If you don’t see Import Maven Project, you may need to install the m2eclipse git connector. It’s available in Window->Preferences->Maven->Discovery->Open Catalog.
    4. Rebind imported projects with GIT
       1. Select all sitenv project in project explorer
       2. Right click, and select Team->Share
       3. Select git and select the current local git repository
       4. Click finish.
11. Unzip the liferay portal source file to C:\Liferay (a subdirectory should be created named the same as the zip file)
12. Unzip the liferay war file to C:\Liferay\war
13. Unzip the liferay dependencies zip file to C:\Liferay\dependencies
14. Install Liferay into the Tomcat7-SITE-Liferay server (default %TOMCAT\_HOME% is C:\ C:\Program Files\Apache Software Foundation\Tomcat 7.0\_Tomcat7-SITE-Liferay)
    1. Delete everything in %TOMCAT\_HOME%\webapps\ROOT\
    2. Copy contents of C:\Liferay\war to %TOMCAT\_HOME%\webapps\ROOT\
    3. Make a directory called %TOMCAT\_HOME%\lib\ext
       1. Copy the following jars from the liferay source directory (C:\liferay\<liferay source>\)
          1. lib\development\activation.jar
          2. lib\development\jms.jar
          3. lib\development\jta.jar
          4. lib\development\jutf7.jar
          5. lib\development\mail.jar
          6. lib\development\persistence.jar
          7. lib\portal\ccpp.jar
       2. Copy all of the jars from the C:\Liferay\dependencies directory
       3. Copy the postgres JDBC driver jar
       4. Copy the JTA 1.1 jar
    4. Make a directory called %TOMCAT\_HOME%\temp\liferay\com\liferay\portal\deploy\dependencies
       1. Copy the following jars from the liferay source directory (C:\liferay\<liferay source>\)
          1. lib\development\resin.jar
          2. lib\development\script-10.jar
15. Update the Tomcat JVM settings
    1. If starting tomcat as a service, you’ll want to update the JVM settings with the corresponding Tomcat configuration manager; if starting tomcat from scripts/eclipse, create a file called setenv.bat in %TOMCAT\_HOME%\bin
    2. Setenv.bat:

|  |
| --- |
| set "JRE\_HOME=C:/PROGRA~1/Java/jdk1.6.0\_45"  set "JAVA\_HOME=C:/PROGRA~1/Java/jdk1.6.0\_45"  set "JAVA\_OPTS=%JAVA\_OPTS% -Dfile.encoding=UTF8 -Djava.net.preferIPv4Stack=true -Dorg.apache.catalina.loader.WebappClassLoader.ENABLE\_CLEAR\_REFERENCES=false -Duser.timezone=GMT -Xmx1024m -XX:MaxPermSize=256m" |

* 1. Service:

|  |
| --- |
| -Dfile.encoding=UTF8  -Djava.net.preferIPv4Stack=true  -Dorg.apache.catalina.loader.WebappClassLoader.ENABLE\_CLEAR\_REFERENCES=false  -Duser.timezone=GMT  -Xmx1024m  -XX:MaxPermSize=256m  -Dcatalina.home=C:\Program Files\Apache Software Foundation\Tomcat 7.0  -Dcatalina.base=C:\Program Files\Apache Software Foundation\Tomcat 7.0  -Djava.endorsed.dirs=C:\Program Files\Apache Software Foundation\Tomcat 7.0\endorsed  -Djava.io.tmpdir=C:\Program Files\Apache Software Foundation\Tomcat 7.0\temp  -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager  -Djava.util.logging.config.file=C:\Program Files\Apache Software Foundation\Tomcat 7.0\conf\logging.properties |

1. Update %TOMCAT\_HOME%\conf\catalina.properties  
   Find the line for common.loader. We need to add lib/ext to the path - make the following adjustments:  
   common.loader=${catalina.base}/lib,${catalina.base}/lib/\*.jar,${catalina.home}/lib,${catalina.home}/lib/\*.jar,${catalina.home}/lib/ext,${catalina.home}/lib/ext/\*.jar
2. Create %TOMCAT\_HOME%\conf\Catalina\localhost\ROOT.xml

|  |
| --- |
| <Context path="" crossContext="true">  <!-- JAAS -->  <!--<Realm  className="org.apache.catalina.realm.JAASRealm"  appName="PortalRealm"  userClassNames="com.liferay.portal.kernel.security.jaas.PortalPrincipal"  roleClassNames="com.liferay.portal.kernel.security.jaas.PortalRole"  />-->  <!--  Uncomment the following to disable persistent sessions across reboots.  -->  <!--<Manager pathname="" />-->  <!--  Uncomment the following to not use sessions. See the property  "session.disabled" in portal.properties.  -->  <!--<Manager className="com.liferay.support.tomcat.session.SessionLessManagerBase" />-->  </Context> |

1. Copy the current liferay data directory from production (See Eric or Chris). This should be installed into %TOMCAT\_HOME%\data
2. Update Connectors in %TOMCAT\_HOME%\conf\server.xml to include UTF-8

|  |
| --- |
| <Connector port="8080" protocol="HTTP/1.1"  connectionTimeout="20000"  redirectPort="8443" URIEncoding="UTF-8"/> |

1. Create %TOMCAT\_HOME%\deploy\ directory
2. Create %TOMCAT\_HOME%\portal-setup-wizard.properties file (liferay home should be the tomcat home directory, spaces cannot be used, so the directory must have the old DOS name; verify name with CMD.exe)

|  |
| --- |
| admin.email.from.name=Test Test  liferay.home=C:/PROGRA~1/APACHE~1/TOMCAT~1.0/  admin.email.from.address=ccimaszewski@ainq.com  setup.wizard.enabled=false |

1. Create %TOMCAT\_HOME%\webapps\ROOT\web-inf\classes\portal-ext.properties

|  |
| --- |
| liferay.home=C:/PROGRA~1/APACHE~1/TOMCAT~1.0/  jdbc.default.driverClassName=org.postgresql.Driver  jdbc.default.username=LifeRaySys  jdbc.default.url=jdbc:postgresql://localhost:5432/lportal  jdbc.default.password=Audac1ous  #jdbc.default.liferay.pool.provider=c3po  #jdbc.default.acquireIncrement=5  #jdbc.default.acquireRetryAttempts=3  #jdbc.default.acquireRetryDelay=1000  #jdbc.default.connectionCustomizerClassName=com.liferay.portal.dao.jdbc.pool.c3p0.PortalConnectionCustomizer  #jdbc.default.idleConnectionTestPeriod=60  #jdbc.default.maxIdleTime=3600  #jdbc.default.maxPoolSize=100  #jdbc.default.minPoolSize=10  #jdbc.default.numHelperThreads=10  #jdbc.default.transactionIsolation=1  theme.shortcut.icon=liferay.ico  web.server.host=localhost  live.users.enabled=false  #virtual.hosts.default.site.name=SIT  company.default.home.url=/web/sit/home  admin.email.from.name=Admin Admin  admin.email.from.address=Admin@liferay.com  #production settings, turn them off for debugging.  last.modified.check=false  theme.css.fast.load=true  javascript.fast.load=true  com.liferay.portal.servlet.filters.sso.cas.CASFilter=false  com.liferay.portal.servlet.filters.sso.ntlm.NtlmFilter=false  com.liferay.portal.servlet.filters.sso.opensso.OpenSSOFilter=false  com.liferay.portal.sharepoint.SharepointFilter=false  #turn off the user agreement.  terms.of.use.required=false |

1. Install the PostgreSQL database.
   1. Make sure to remember the password you set for the administrator user (postgres). Most installations here will use “Audac1ous”
   2. Once the database is installed, create the “LifeRaySys” user. The password should be “Audac1ous”
2. Copy production data to the local database. If you don’t have access to the current production server, ask Chris or Eric for a database dump
   1. Log into the production server
   2. Open a command prompt window
   3. Create the lportal\_backup file by running: “pg\_dump -U postgres -C -f C:\Temp\lportal\_backup lportal”
   4. Copy the lportal\_backup to your local system (C:\Temp\ directory)
   5. Copy the liferay data directory to your local liferay installation.
      1. In Production, this directory is located at: C:\Program Files\liferay-portal-6.1.1-ce-ga2\data
      2. In Local, this directory may already exist, and you’ll want to delete it, and copy in the production data: C:\Liferay\liferay-portal-6.1.1-ce-ga2\data
   6. Close the connection to the production server
   7. Open a local command prompt
   8. In the local system, restore the backup with the following command: “psql -d postgres -U postgres -f C:\Temp\lportal\_backup”, you will need the password to the administrator user (postgres) that was created in the install
3. Once all of the projects are configured in Eclipse, and the local environment is configured,
   1. Open the servers view (Window->Show View->Servers)
   2. Right-click on the Liferay Server
   3. Select “Add and Remove”.
   4. Click “Add All”
   5. Click “Finish”
4. Start the tomcat server
   1. In eclipse, navigate to the server view
   2. Right-click on the Liferay server.
   3. Select “Start”
   4. Navigate to the page at <http://locahost:8080/>
5. Clean up Data in postgres
   1. UPDATE portletpreferences

SET preferences = REPLACE(preferences, 'sitenv.org/delegate', 'localhost:8080/delegate')

WHERE preferences LIKE '%sitenv.org/delegate%'

* 1. UPDATE journalarticle

SET content = REPLACE(content, 'http://sitenv.org/', 'http://localhost:8080/')

where content LIKE '%http://sitenv.org/%'

# Downloads

|  |  |  |
| --- | --- | --- |
| Product | Version | Download URL |
| Java SDK | 6 | <http://www.oracle.com/technetwork/java/javasebusiness/downloads/java-archive-downloads-javase6-419409.html#jdk-6u45-oth-JPR> |
| Java SDK | 7 | <http://download.oracle.com/otn-pub/java/jdk/7u40-b43/jdk-7u40-windows-x64.exe?AuthParam=1380306257_1236752e542c8aad7ae1188500dce282> |
| Tomcat Server as a Windows Service | 7.0.42 | [http://apache.mirrors.pair.com/tomcat/tomcat-7/v7.0.42/bin/apache-tomcat-7.0.42.exe](http://apache.mirrors.pair.com/tomcat/tomcat-7/v7.0.42/bin/apache-tomcat-7.0.42.exe" \t "_blank) |
| Eclipse IDE  Zip File | Latest Juno JEE Release | <http://www.eclipse.org/downloads/download.php?file=/technology/epp/downloads/release/kepler/R/eclipse-jee-kepler-R-win32-x86_64.zip&mirror_id=187> |
| Maven | 3.1.0 | <http://mirror.sdunix.com/apache/maven/maven-3/3.1.0/binaries/apache-maven-3.1.0-bin.zip> |
| Ant | 1.9.2 | <http://apache.mirrors.hoobly.com//ant/binaries/apache-ant-1.9.2-bin.zip> |
| Maven Ant Tasks | 2.1.3 | <http://www.apache.org/dyn/closer.cgi/maven/ant-tasks/2.1.3/binaries/maven-ant-tasks-2.1.3.jar> |
| Liferay Portal Maven Archetypes | 6.1.1 ce GA2 | <http://softlayer-dal.dl.sourceforge.net/project/lportal/Liferay%20Portal/6.1.1%20GA2/liferay-portal-maven-6.1.1-ce-ga2-20120731132656558.zip> |
| Liferay Portal War | 6.1.1 ce GA2 | <http://softlayer-dal.dl.sourceforge.net/project/lportal/Liferay%20Portal/6.1.1%20GA2/liferay-portal-6.1.1-ce-ga2-20120731132656558.war> |
| Liferay Portal Dependencies | 6.1.1 ce GA2 | <http://hivelocity.dl.sourceforge.net/project/lportal/Liferay%20Portal/6.1.1%20GA2/liferay-portal-dependencies-6.1.1-ce-ga2-20120731132656558.zip> |
| Ligeray Portal Source | 6.1.1 ce GA2 | <http://superb-dca2.dl.sourceforge.net/project/lportal/Liferay%20Portal/6.1.1%20GA2/liferay-portal-src-6.1.1-ce-ga2-20120731132656558.zip> |
| PostgreSQL jdbc driver | 9.2 | <http://jdbc.postgresql.org/download/postgresql-9.2-1003.jdbc4.jar> |
| JTA jar | 1.1 | <http://repo1.maven.org/maven2/javax/transaction/jta/1.1/jta-1.1.jar> |
| PostgreSQL database | 9.2.4 | <http://www.enterprisedb.com/postgresql-924-installers-win64?ls=Crossover&type=Crossover> |