

Flex Code Camp 2010 (Preparation Only)



Preparation Guide

This document is to help you prepare your own laptop for the Flex Boot Camp. If you run into any issues during completion of this document, please contact dnickull@adobe.com.

Please make every effort to have your laptop prepared and functioning before you come to the Boot Camp.

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Forward:

Welcome to the Flex Code Camp. This course has been put together in hopes to provide developers a boot camp to learn all the basics of Adobe Flex and AIR development. Our overall goal is to provide you with an introduction to AIR so you can make your own decision if you want to pursue this exciting new application development technology in the future. If you do, we will be providing additional references where you can continue learning and become part of the larger community after this course is over.

IMPORTANT: There is a high probability we will not get through the entire course during the time allotted. This is by design. The course reflects a best case scenario whereby everyone covers the materials quickly. We felt it better to have extra rather than not enough content. If we do not get through the entire course, you can take the remaining labs by yourself as this instructional handout has sufficient notes to complete everything.

We hope you enjoy this course as much as we enjoyed putting it together. Remember – we are here for you. Don't hesitate to ask any questions during the event and afterwards.

Preparation

To take this course, you will need to download and configure the following software;

- A. Install and configure Adobe Flex Builder 3.0 AND Flash Builder 4.0. Note: If you decide to only use one of these, most of the projects will still work but some will not.
- B. Set up an account with Yahoo Developer Network and get an API key
- C. Download the Yahoo SWC file
- D. Download the ESRI SWC file
- E. Download and set up the BlazeDS Server including configuring your JAVA_HOME and PATH environmental variables.
- F. (Optional) – Download and install MAMP (Mac) or WAMP (Windows). One lab runs on MAMP, LAMP or WAMP but it is probably okay if you miss that one.
- G. Receive the project folders containing all the labs and starter files. These can be distributed during the first hour of the course but preparation in advance would be better.

Download and install Adobe AIR 1.5.2 or later (Mac, PC, Linux)

1. If you already have an earlier version of Adobe AIR, simply update it. This should happen automatically when you open an AIR application on your computer.
2. If you do NOT have Adobe AIR already installed:
 - a. Navigate with a browser to <http://get.adobe.com/air/>
 - b. The web page should already detect your operating system and allow you to download Adobe AIR. If you require other O/S support, click on "Different Operating System".
 - c. Start the installer and follow the on screen instructions.
 - d. If you have any problems, email dnickull@adobe.com. We will also be on hand 30 minutes prior to the lab at MAX to help with installations.




Download the latest version of Adobe AIR

Adobe AIR enables you to have your favorite web applications with you all the time.

Adobe AIR 1.5.2 Installer
Macintosh OSX, English | 21.5 MB
[Different operating system?](#)

[Learn more](#) | [System requirements](#) | [Distribute Adobe AIR](#)



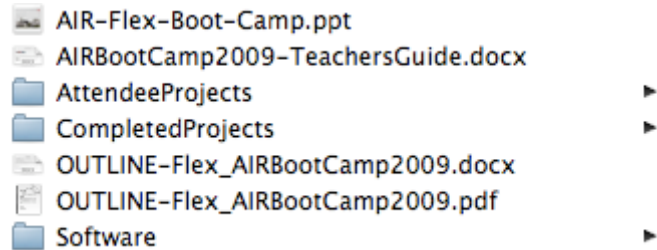
By clicking the Download Now button, you agree to the  [Software License Agreement](#)

Download and install Flash Builder 4 Beta

1. Grab a browser and navigate to https://www.adobe.com/cfusion/entitlement/index.cfm?e=labs_flashbuilder4
2. Enter your Adobe ID (or create a new one) and answer all the questions.
3. Download the installer and follow the instructions on screen.

Courseware CD

1. The courseware CD will be handed out prior to the. After that you will be able to download it from <http://www.web2open.org/courses.html>



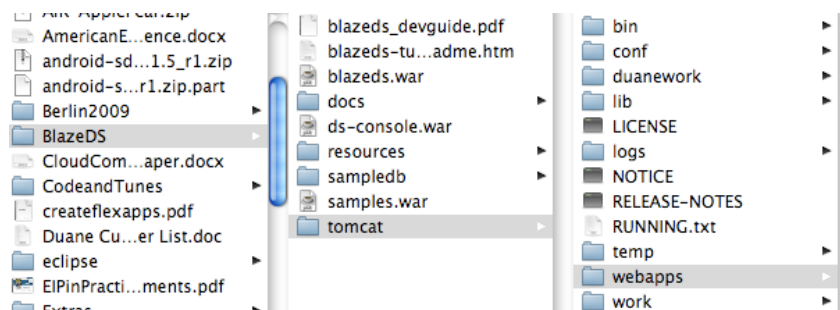
BlazeDS (Optional)

NOTE: without installing this build of BlazeDS you will not be able to do the Web Services lab. You will also have to use the web to complete the HTTP lab. We highly recommend you install BlazeDS if on your computer to reduce the internet traffic in the room during the lab.

There are a few labs that use remote web resources. To run the web service example locally, you can use the BlazeDS server with Apache Axis SOAP downloadable from <http://www.web2open.org/courses/BlazeDS.zip>.

NOTE: You must have a Java JDK installed and configured. If you do not have this done, refer to Appendix A at the back of this document.

1. Download and install the zip file to your desktop or other suitable location.
2. Unzip the directory to your hard drive and copy the BlazeDS Root Folder over to a permanent location on your hard drive. This folder should contain the following folders and files as shown below:



3. Next, start up the BlazeDS server. To do this, open a Command Window (or shell) and navigate to <Course_Root>\BlazeDS\sampledb (if on OSX,

use forward slashes instead of back for path).

- a. On Windows, type in “startdb”. This should start the database.

```
C:\Documents and
Settings\Administrator\Desktop\MAX2008_BuildingServiceClients\s
ampledb>startdb

C:\Documents and
Settings\Administrator\Desktop\MAX2008_BuildingServiceClients\s
ampledb>java -cp hsqldb.jar org.hsqldb.Server
[Server@1d58aae]: [Thread[main,5,main]]: checkRunning(false)
entered
[Server@1d58aae]: [Thread[main,5,main]]: checkRunning(false)
exited
[Server@1d58aae]: Startup sequence initiated from main() method
[Server@1d58aae]: Loaded properties from [C:\Documents and
Settings\Administrato
r\Desktop\MAX2008_BuildingServiceClients\sampled\server.propertie
s]
[Server@1d58aae]: Initiating startup sequence...
[Server@1d58aae]: Server socket opened successfully in 40 ms.
[Server@1d58aae]: Database [index=0, id=0,
db=file:flexdemodb/flexdemodb, alias=
flexdemodb] opened successfully in 1512 ms.
[Server@1d58aae]: Startup sequence completed in 1552 ms.
[Server@1d58aae]: 2008-11-25 12:29:14.087 HSQLDB server 1.8.0 is
online
[Server@1d58aae]: To close normally, connect and execute SHUTDOWN
SQL
[Server@1d58aae]: From command line, use [Ctrl]+[C] to abort
abruptly
```

- b. On Mac or Linux, open a terminal and type `sudo sh ./startdb.sh`

```
Macintosh-91:sampled duane$ sudo sh ./startdb.sh
[Server@5d173]: [Thread[main,5,main]]: checkRunning(false) entered
[Server@5d173]: [Thread[main,5,main]]: checkRunning(false) exited
[Server@5d173]: Startup sequence initiated from main() method
[Server@5d173]: Loaded properties from [/Users/duane/Desktop/MAX2008/BuildingServiceClients/BlazeDS/
sampledb/server.properties]
[Server@5d173]: Initiating startup sequence...
[Server@5d173]: Server socket opened successfully in 7 ms.
[Server@5d173]: Database [index=0, id=0, db=file:flexdemodb/flexdemodb, alias=flexdemodb] opened suc
essfully in 927 ms.
[Server@5d173]: Startup sequence completed in 937 ms.
[Server@5d173]: 2008-11-25 12:14:43.454 HSQLDB server 1.8.0 is online
[Server@5d173]: To close normally, connect and execute SHUTDOWN SQL
[Server@5d173]: From command line, use [Ctrl]+[C] to abort abruptly
```

4. Now start the servers.

- a. On Windows, do this by changing directories until you are at the
<Course_Root>\BlazeDS\tomcat\bin directory (note: use

forward slashes on Unix based Systems) and type catalina run

```
C:\Documents and
Settings\Administrator\Desktop\MAX2008_BuildingServiceClients\t
omcat\bin>catalina run

Using CATALINA_BASE:   C:\Documents and
Settings\Administrator\Desktop\MAX2008_B
uildingServiceClients\tomcat

Using CATALINA_HOME:   C:\Documents and
Settings\Administrator\Desktop\MAX2008_B
uildingServiceClients\tomcat

Using CATALINA_TMPDIR: C:\Documents and
Settings\Administrator\Desktop\MAX2008_B
uildingServiceClients\tomcat\temp

Using JRE_HOME:        C:\Program Files\Java\jdk1.6.0_10

Nov 25, 2008 12:34:20 PM org.apache.catalina.core.AprLifecycleListener init

INFO: The Apache Tomcat Native library which allows optimal performance in
produ
ction environments was not found on the java.library.path: C:\Program
Files\Java
\jdk1.6.0_10\bin;.;C:\WINDOWS\Sun\Java\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\CF
u
sionMX7\verity\k2\_nti40\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32
\
Wbem;C:\Program Files\ATI Technologies\ATI Control Panel;C:\Program Files\PC-
Doc
tor for Windows\services;C:\Program Files\ATI Technologies\Fire GL 3D Studio
Max
;C:\WINDOWS\Downloaded Program Files;C:\Program Files\Common
Files\MXI;C:\Progra
m Files\Common Files\Adobe\AGL;C:\Program Files\QuickTime\QTSystem\

Nov 25, 2008 12:34:20 PM org.apache.coyote.http11.Http11Protocol init

INFO: Initializing Coyote HTTP/1.1 on http-8400

Nov 25, 2008 12:34:20 PM org.apache.catalina.startup.Catalina load

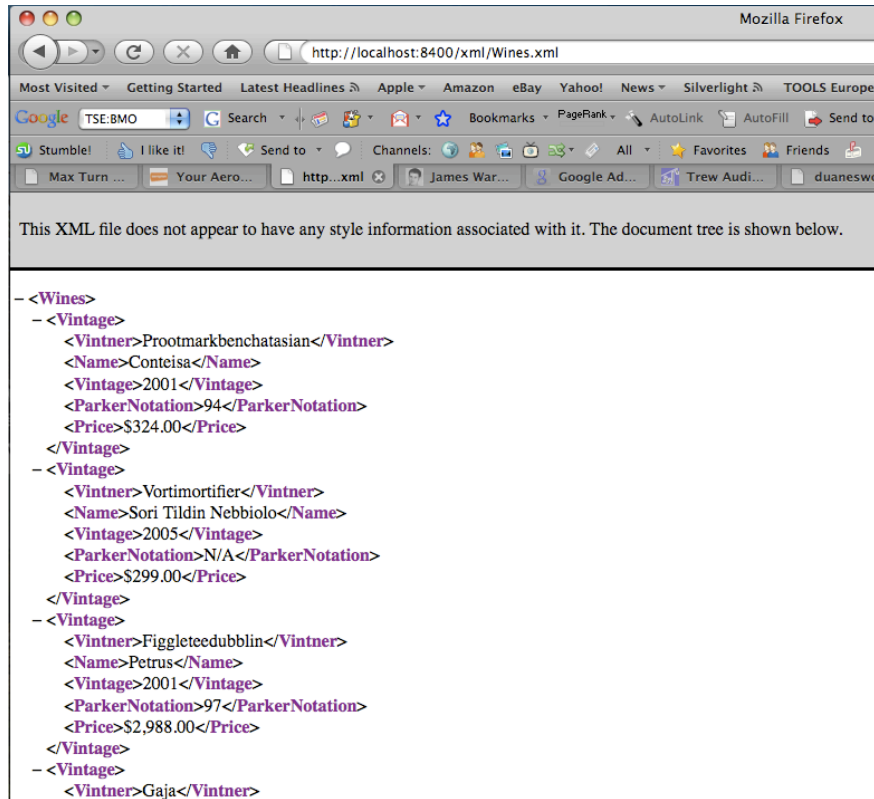
INFO: Initialization processed in 432 ms

Nov 25, 2008 12:34:20 PM org.apache.catalina.core.StandardService start
```

```
INFO: Starting service Catalina
Nov 25, 2008 12:34:20 PM org.apache.catalina.core.StandardEngine start
INFO: Starting Servlet Engine: Apache Tomcat/6.0.14
Nov 25, 2008 12:34:24 PM org.apache.coyote.http11.Http11Protocol start
INFO: Starting Coyote HTTP/1.1 on http-8400
Nov 25, 2008 12:34:24 PM org.apache.jk.common.ChannelSocket init
INFO: JK: ajp13 listening on /0.0.0.0:8009
Nov 25, 2008 12:34:24 PM org.apache.jk.server.JkMain start
INFO: Jk running ID=0 time=0/20 config=null
Nov 25, 2008 12:34:24 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in 3988 ms
```

- b. On Mac OSX and Linux, do this by changing directories until you are at the <Course_Root>/BlazeDS/tomcat/bin directory and type `sudo sh ./catalina.sh run`**

5. You should be able to validate the servers are up and running by hitting the following URL: <http://localhost:8400/xml/Wines.xml>



The screenshot shows a Mozilla Firefox browser window with the address bar displaying `http://localhost:8400/xml/Wines.xml`. The browser interface includes a search bar with "TSE:BMO" and various toolbars. Below the browser window, the XML document tree is displayed, showing a root element `<Wines>` containing three `<Vintage>` elements. Each `<Vintage>` element contains a `<Vintner>` element, a `<Name>` element, a `<Vintage>` element, a `<ParkerNotation>` element, and a `<Price>` element.

```
- <Wines>
- <Vintage>
  <Vintner>Prootmarkbenchatasian</Vintner>
  <Name>Conteisa</Name>
  <Vintage>2001</Vintage>
  <ParkerNotation>94</ParkerNotation>
  <Price>$324.00</Price>
</Vintage>
- <Vintage>
  <Vintner>Vortimortifier</Vintner>
  <Name>Sori Tildin Nebbiolo</Name>
  <Vintage>2005</Vintage>
  <ParkerNotation>N/A</ParkerNotation>
  <Price>$299.00</Price>
</Vintage>
- <Vintage>
  <Vintner>Figgleteedubblin</Vintner>
  <Name>Petrus</Name>
  <Vintage>2001</Vintage>
  <ParkerNotation>97</ParkerNotation>
  <Price>$2,988.00</Price>
</Vintage>
- <Vintage>
  <Vintner>Gaja</Vintner>
```

6. If you have any problems with this, come to the classroom early before the bootcamp and we will be glad to help.

Installing and configuring Adobe Flex Builder 3.X.

1. Take a browser and go to <http://www.adobe.com/cfusion/entitlement/index.cfm?e=flexbuilder3> and download the Flex Builder trial.
2. Open up the disk image and follow the on screen instructions.
3. Note where you set up your workspace. This is where you will place all the files you work on and various libraries needed for this course.
4. Mac OSX: By default, this will be under your `~home_directory/Documents/Flex Builder 3`.
5. Windows: By default, this will be under your `c:\Program Files\Adobe\Flex Builder 3`.

LINUX ONLY

6. For the Linux version, download the plugin from http://labs.adobe.com/downloads/flexbuilder_linux.html.

7. Run the installer either marking it as executable (chmod +x) or by using a shell to execute it (sh flexbuilder_linux_install_a4_081408.bin).
8. When prompted, specify whether to install Flash Player 9 (note that this is an updated version of Flash Player 9 and that Flex Builder Linux will work with earlier versions of Flash Player 9 for Linux). This is the debug version of Flash Player 9, which is required for debugging support and exception display.

Set up and account with Yahoo and download the SWC file.

1. Use your browser and navigate to <https://developer.yahoo.com/wsregapp/>
2. Sign in if you already have an account or register for a new one. If you have already registered for an API key, you can see it via the hyperlink near the top of the page as shown below:



Yahoo! - Help

We need some information from you...

To use Yahoo! Web Services, we need some information about you and the application you're building. We collect this information to get a better understanding of how Yahoo! Web Services are being used and to protect the security and privacy of Yahoo! users.

If you've already registered for an application ID, [you can see them here](#).

9. If you do not have an API key, fill in the form and agree to any license terms as shown below:

📌 Developer Registration

Fields marked with an asterisk * are required.

There are errors with you submission. Please check fields highlighted in red.

*Yahoo ID:

*Authentication method: [Click here](#) for more information

- Generic, No user authentication required
This appid will allow you to make calls to our non-authenticated web services
- Browser Based Authentication
Use this option for browser applications

*Developer/Company Name:
For example: 'Joe/Jane Developer' or 'BigCo Inc.'

*Product name:
For example: 'My Yahoo! Enabled Web App'

Web Application URL:
For example: 'http://myapp.com/welcome.html'

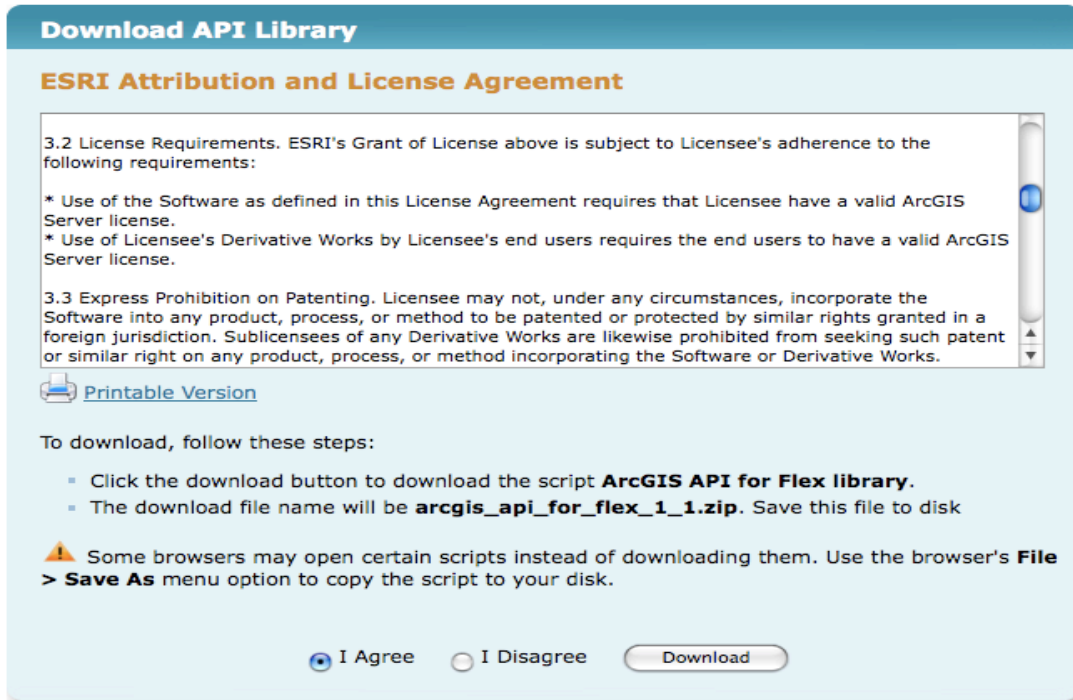
*Contact email:
For example: 'developer@domain.com'

Phone number:
For example: '123-456-7890'

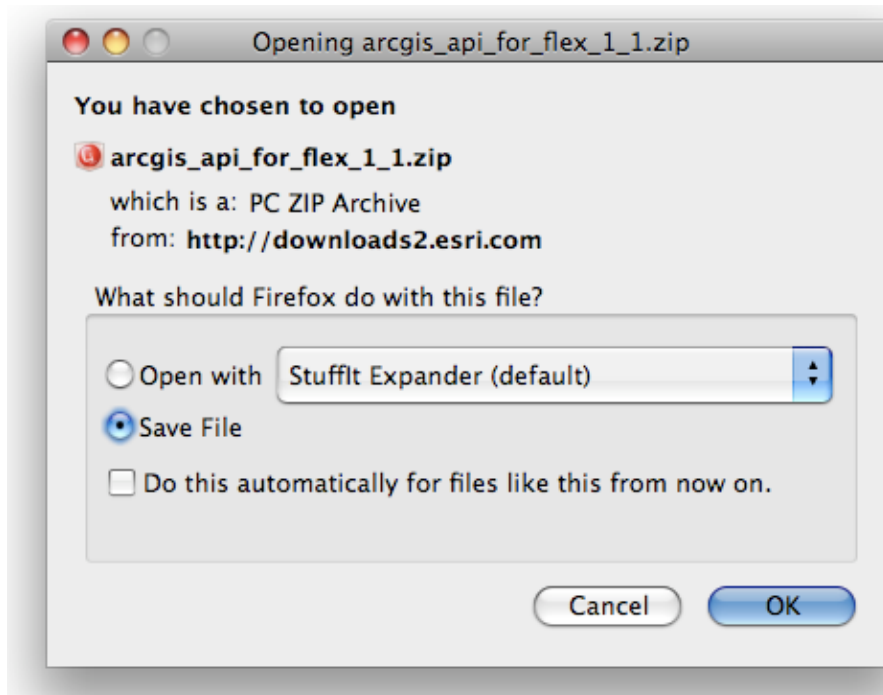
*Description of application:
(250 characters or less):

*Required access scopes: The user will be prompted to grant access every time he logs in:

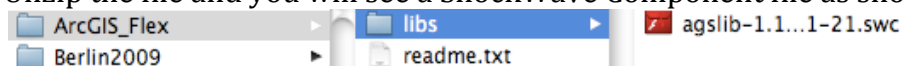
- Single Sign On, No user data can be accessed
- Yahoo! Mail with Read/Write access
- Yahoo! Taiwan Lifestyle with Read/Write access
- Yahoo! Address Book with Read Only access
- BOSS Search Service
- Yahoo! Music
- Yahoo! Taiwan Knowledge Plus



3. Save the file to your hard drive as you will require it for some labs.



H. Unzip the file and you will see a ShockWave Component file as shown below



I. Remember the location of this file as you will need it for labs 4,5,6.

(Optional) – Download and install MAMP (Mac) or WAMP (Windows)

If you are on a Mac, download and install MAMP -

<http://www.mamp.info/en/index.html>

If you are on a Windows Machine, download and install WAMP -

<http://www.wampserver.com/en/>

Follow the instructions for your particular operating system as per the documents describing installation.

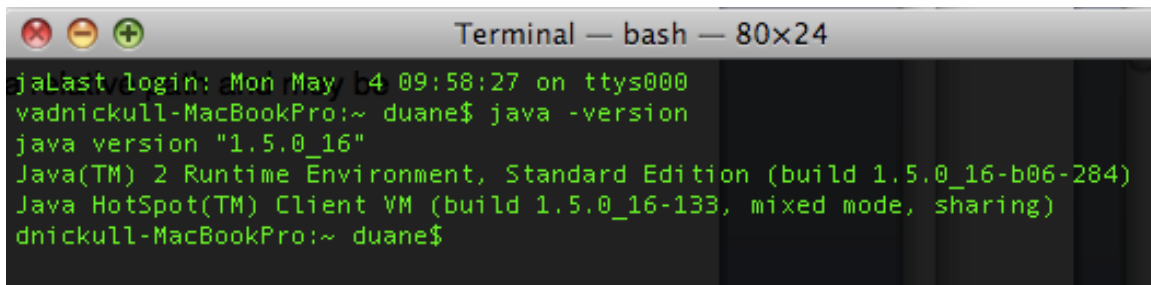
Additionally, download and install the Zend Framework for AMP-PHP connectivity from <http://www.zend.com/en/>

Appendix A: Java JDK

Downloading, installing and configuring Java JDK

This course uses a modified BlazeDS that contains some extra files not found on the standard BlazeDS available from Adobe's Open Source Website. In order to install and configure BlazeDS, you will need to have a Java JDK on your system and the JAVA_HOME Environmental variable set properly as well as your path.

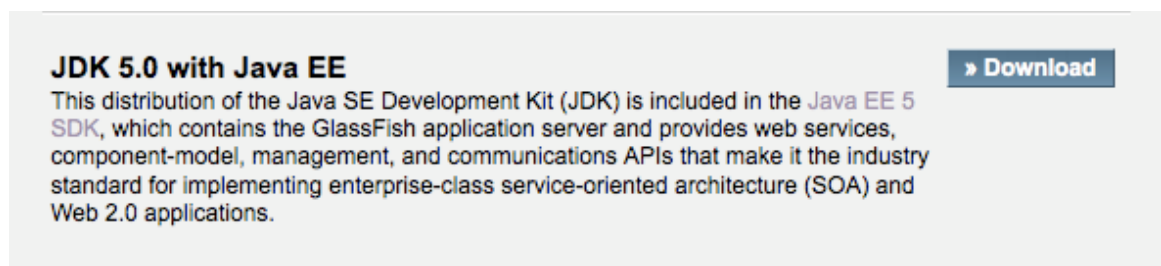
Note: If you already have Java JDK 1.5 (but not 1.6), please move ahead to the next step. This lab was tested with java version 1.5.0_16. To find out what version of Java you have on your system, open up a command window (Windows) or Terminal (Mac, Linux, Unix) and type "java -version" then hit the enter key.



```
Terminal — bash — 80x24
jaLast login: Mon May 14 09:58:27 on ttys000
vadnickull-MacBookPro:~ duane$ java -version
java version "1.5.0_16"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_16-b06-284)
Java HotSpot(TM) Client VM (build 1.5.0_16-133, mixed mode, sharing)
dnickull-MacBookPro:~ duane$
```

If you already have 1.5 installed, skip ahead to Section 2 to check classpath and set JAVA_HOME.

1. Navigate with a web browser to http://java.sun.com/javase/downloads/index_jdk5.jsp
2. Navigate down the page until you see the download for JDK 5.0 with Java EE. Click on download.



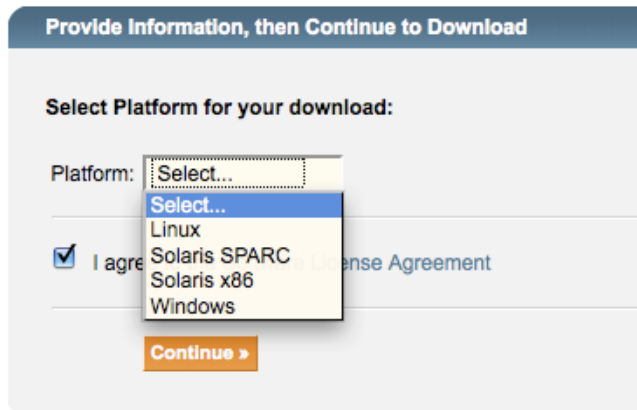
JDK 5.0 with Java EE » Download

This distribution of the Java SE Development Kit (JDK) is included in the Java EE 5 SDK, which contains the GlassFish application server and provides web services, component-model, management, and communications APIs that make it the industry standard for implementing enterprise-class service-oriented architecture (SOA) and Web 2.0 applications.

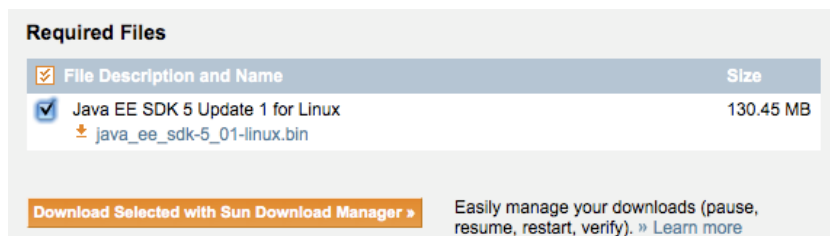
3. Select the correct Operating System for yourself, accept the license terms

then click download as shown below

Java EE SDK 5.0 Update 1



4. On the next screen select the download again and click the button.



5. Save the files to your desktop, then follow the instructions for your operating system to complete the installation process.

Setting the Java PATH and JAVA_HOME

This assumes you have Java JDK 1.5 installed as per Section 1. To test if your path is set properly, open up a command window (Windows) or Terminal (Mac, Linux, Unix) and type “java -version” then hit the enter key. If you see the screen below, your path is set.

```
Terminal — bash — 80x24
jaLast login: Mon May 14 09:58:27 on ttys000
vadnickull-MacBookPro:~ duane$ java -version
java version "1.5.0_16"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_16-b06-284)
Java HotSpot(TM) Client VM (build 1.5.0_16-133, mixed mode, sharing)
dnickull-MacBookPro:~ duane$
```

If you see something else, you have to set your path.

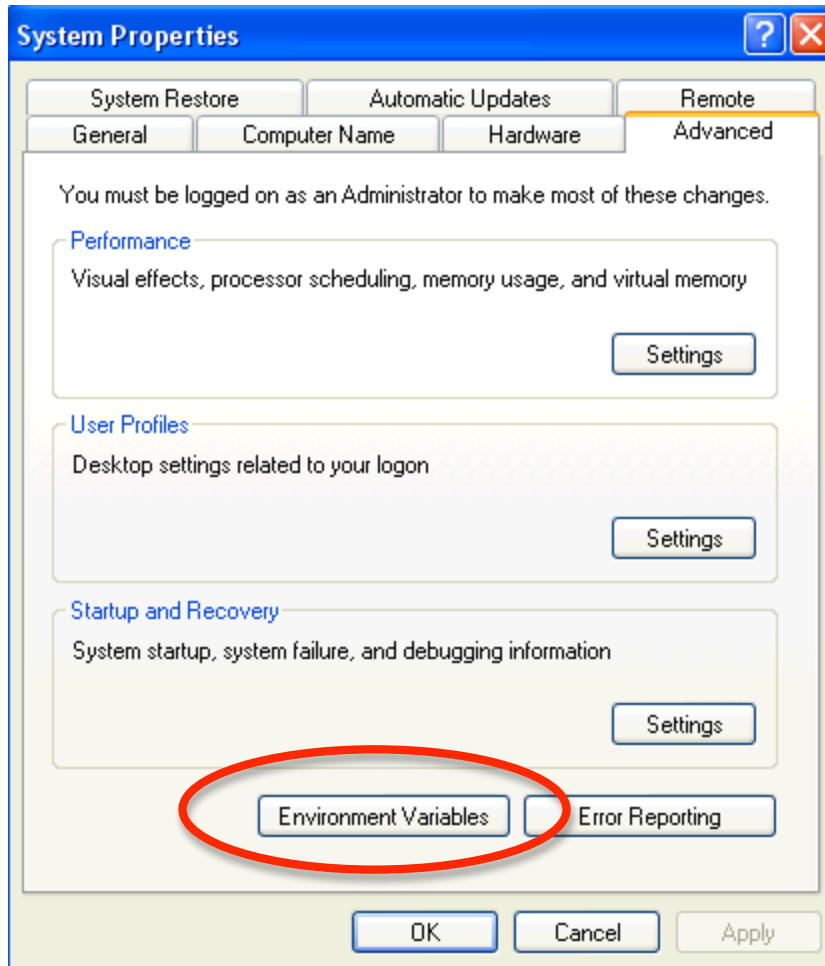
If you work on a Mac or Linux machine, this is most likely already up and configured properly so there is no need to do anything else. On the other hand, if you run....

Windows

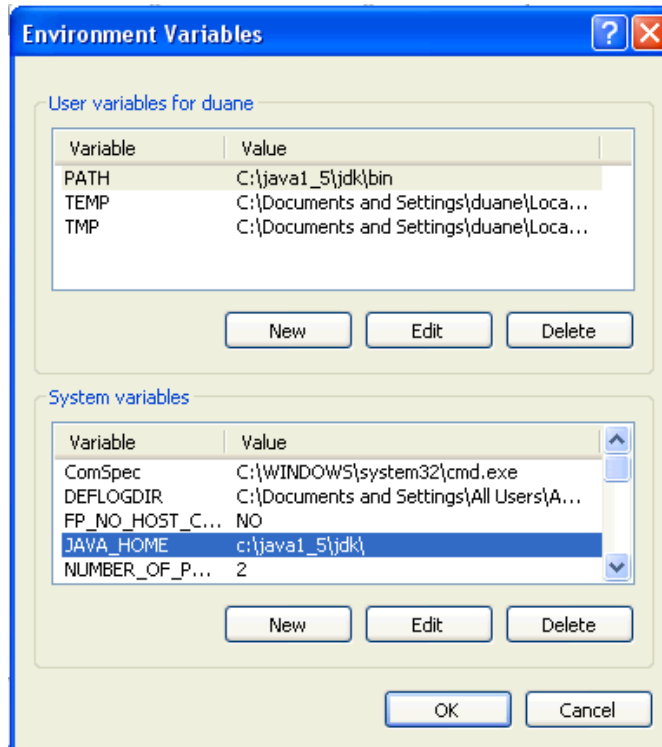
1. Click “**start**” and highlight “**My Computer**” with your mouse. Right click to bring up the popup menu and select “**Properties**” and click on it as shown below.



2. This will bring up a properties pane with several options. Click on the tab labelled “Advanced”



3. Click "Environment Variables". This brings up the Environmental Variables properties pane. If there is already a PATH variable defined, click on the "Edit" button below "User variables for <username>" and add the path to your java JDK bin. If there is no PATH variable defined, click "New".
4. This path will be something like "c:\java1_5\jdk\bin. Make sure in that directory there is a "java.exe" and a "javac.exe" in that directory.



5. Under System variables, if there is no JAVA_HOME variable, click “New” and add one. The value only have to point at the root directory of your Java installation. This MUST contain a subfolder called \bin. The path will be something like c:\java1_5\jdk.
6. Click “Okay” after adding these variables and close all the dialogs.
7. To test, open a command window (start -> run -> “cmd”) and type in “java -version” and hit return. Then type “javac” and hit return. If you do not get both commands recognized as shown below, consult the Sun documentation on setting the classpath for your system.