

Moves on Windows 7 - Detailed Notes

1. Started with MIT Win 7 "Administrative" VM
2. Installed Firefox from mozilla.org
3. Downloaded JDK 6 from oracle.com and installed
4. Downloaded MyEclipse 10 from <http://www.myeclipseide.com> (custom/online installer)
5. Installed MyEclipse, used ES license
 - From Config Center, installed Subversive plugin (SVN kit & SVN team provider)
6. Downloaded svn 1.7.8 client from <http://www.sliksvn.com/en/download> and installed.
7. Downloaded 7zip from <http://sourceforge.net/projects/sevenzips>
8. Downloaded maven 3.0.4 binaries from <http://maven.apache.org/download.cgi> and installed
9. Configured MyEclipse to use external Maven 3.0.4
10. Configured sais-sis-common as svn repo in MyEclipse
11. MyEclipse: New Project -> M4MyEclipse -> Checkout from SCM
 - Needed to install m2svn connector (Maven SVN for Subversive). Made me restart MyEclipse
12. Now I have "checkout as Maven proj" to svn view. Did this. One error - MIT maven release plugin
13. In new project, Update Maven Deps - errors. Copied in settings.xml from other machine
14. Maven clean & install. Maven errors in console:
Plugin edu.mit.maven.plugins:mit-release-plugin:2.0.18 or one of its dependencies could not be resolved: Failed to read artifact descriptor for edu.mit.maven.plugins:mit-release-plugin:jar:2.0.18: Failure to find edu.mit.maven.plugins:mit-release-plugin:pom:2.0.18 in http://repo.maven.apache.org/maven2 was cached in the local repository, resolution will not be reattempted until the update interval of central has elapsed or updates are forced -> [Help 1]
15. Added repos from CSF master pom to settings.xml. Did not fix problem.
16. Copied my Linux settings.xml - did fix problem - release plugin jar was downloaded to local .m2 repo.
17. maven install now build successfully, but unit tests fail:
Failed to load ApplicationContext
Invalid bean definition with name 'mitsisDataSource'
This is usually because of a failure to configure the database connection. Often a missing test properties file.
18. Copied sais-common-test.properties to user home. This file has references to java keystores (registrar-test and serverTrustStore) so I copied these files too.
19. Similar result (failure): Could not resolve placeholder 'mitsis.database.url'. This property is in sais-common-test.properties, so the build must not be finding the file.
20. There was invalid XML in MockContainerPluginContext-test.xml . Once I fixed this, the build was more successful - there were test errors and failures, but also some successes:
Tests run: 55, Failures: 2, Errors: 35, Skipped: 0
21. Somewhere along the way, my Moves project in MyEclipse lost its subversion connection. I think it's because MyEclipse's svn client is older than 1.7. Added new SVNKIT from repo

<http://eclipse.svnkit.com/1.7.x>. Did not help.

22. Added <http://community.polarion.com/projects/subversive/download/eclipse/3.0/juno-site/> as an update site, installed SVNKit 1.7.5. Changed MyEclipse subversive config to use new SVNKit

23. Still would not recognize moves as an svn project. DELETED and rechecked out project.

24. Run as Maven Test...

25. Same results as 20. Turned out I needed more properties files, which Eoin sent me:

sais-moves-web.properties

sais-moves-web-build.properties

sais-moves-web-test.properties

and - moves-test.jks, which I got from a checkout of sais-common-conf

26. Changed references in prop files to my locations.

27. Installed OC4J as per CSF wiki. Needed to set JAVA_HOME to my java sdk. Tweaked prop files with OC4J details

28. Maven Clean -> Install: bit better this time:

Tests run: 55, Failures: 0, Errors: 35, Skipped: 0

29. Decided to skip tests for now and try to deploy the war file. Configured MyEclipse to use OC4J as a server, started server and did exec:exec maven goal. Deploy failed.

30. Pointer in sais-moves-web.properties to jks files was incorrect. Fixed & redeployed - this time successful, but somehow was deployed with context root "onlinereg". - probably because of settings.xml

31. Trying to access ap results in NPE in BasicAuthFilter

32. Changed settings.xml from onlinereg->moves - need to get away from having app name in my settings file!

33. Build with unit tests - failures due to "out of memory" Java errors, heap space. Changed memory config for JVM for the maven build/install/exec:exec (MyEclipse build configuration):

-Xmx768m -Xms512m -XX:MaxPermSize=768m

34. Conversation with Eoin gave some useful info:

- sais-moves-web-build.properties is used when Moves does a build, not in building moves itself. It is autogenerated by the Moves admin page, so we don't need to set it up or edit it manually.
- when running locally using local authh, the Moves home page (localhost/moves) will show authorization error messages. This is because this page is not under authentication. If you go to a subpage (e.g. moves/admin/index.htm) you will be authenticated and then the home page will be properly accessible.

35. Full build with tests. Some missing items in Windows:

- "echo": edu.mit.moves.shell.ShellTest java.io.IOException: Cannot run program "echo": CreateProcess error=2, The system cannot find the file specified
This is because "echo" on a windows machine is not a separate executable - it is a subcommand of "cmd.exe" (cmd.exe /C echo "Hello"). We could patch the code to try to recognize a Win OS and run the appropriate command OR we can install a separate echo utility. I chose the latter, installing GNU WIn Coreutils from <http://gnuwin32.sourceforge.net/packages.html>

- edu.mit.moves.httpsclient.HttpClientFactoryTest. java.io.FileNotFoundException: \tmp\sais-common-2.2-development.jar (The system cannot find the path specified). This is because \tmp does not exist on the machine. Solved by creating c:\tmp folder

36. Finally, a clean build and deploy with all tests passing!

37. Still get “You have not been granted permission to administer moves.

You have not been granted permission to view workflows which are in process.” on the home page. This is because I didn’t set my roles correctly in the moves properties file. Should be:

```
roles.function.category=APPM
```

```
local.mitroles = MOVES_ADMIN, MOVES_MANAGER, MOVES_DEV
```

38. Home->Build a Release gives:

```
java.lang.RuntimeException: The subversion command did not return with value 0 (indicating success). Command was:svn co
```

```
svn+ssh://svn.mit.edu/sais-sis-common/maven/releases/branches/playground
```

```
C:\Users\dev\Workspaces\MyEclipse10\sais-moves-web-3.0.9-SNAPSHOT\ui\releases
```

This is due to password-less SVN/SSH access not being defined. To do this, first we need an SSH client that can do Kerberos authentication. I chose putty

(<http://www.chiark.greenend.org.uk/~sgtatham/putty/> - download the zip file for Windows that

contains all the related binaries including putty and plink) , and reconfigured it to look at the MIT GSSAPI binary.. Then I got kerb 5 tickets using the Identity Manager client, and was able to SSH to svn.mit.edu without entering username/pwd.

Putty Config:

- Session section: created saved session “svn”
- Session section: host name = svn.mit.edu
- Connection->data section: Auto-login username = your-kerberos-name
- Connection->SSH->Auth->GSSAPI section: check “Attempt GSSAPI Authentication” AND “Allow GSSAPI Credential Delegation”. In Preference Order for GSSAPI libraries, move “User-supplied GSSAPI DLL” to the top, then under “User-supplied GSSAPI library path” browse to the installed location of gssapi32.dll in your Kerberos folder (default location is C:\Program Files\Kerberos\gssapi32.dll on 32-bit Windows.)
- Session section: hit the Save button to save the config.

To test this config out, go to a command prompt and type:

```
c:\putty-install-dir\plink.exe @svn
```

where putty-install-dir is the path to your putty installation.

After a short while you should be logged into the svn server and should see:

RHN kickstart on 2009-01-14

```
( success ( 2 2 ( ) ( edit-pipeline svndiff1 absent-entries commit-revprops depth log-revprops partial-replay ) ) )
```

Type "quit" to log out.

To configure svn to use this SSH config, first set the SVN_SSH environment variable:

```
SVN_SSH=C:\\bin\\plink.exe
```

NOTE THE DOUBLE BACKSLASHES!!!

Then try this in a temp directory:

```
svn co svn+ssh://@svn/sais-sis-common/maven/releases/branches/playground  
C:\\Users\\dev\\Workspaces\\MyEclipse10\\sais-moves-web-3.0.9-SNAPSHOT\\ui\\releases
```

This should check out the referenced project into a subdirectory of your temp directory.

39. Plink access to svn via kerb is very slow.

40. Hitting "Build a release" from the Home Page hung on the svn checkout of sais-common-conf. Turns out Moves always uses "svn.mit.edu" as the SVN server URL, and my Putty saved session was named "svn". I renamed the Putty session as "svn.mit.edu" and the svn checkout proceeded.

41. BUT - maven error. The log shows me the maven command that failed. Tried it from command line: failed because mvn not on path. Pu mvn on path & command line ran OK.

42. mvn command failed - could not allocate heap (1024m). Changed to 512m across board for maven (in Moves->Admin->Build Config)

43. BUILD SUCCESS from maven log, but still got "maven failed" exception with this error:

```
'cmd' is not recognized as an internal or external command,operable program or batch file
```

This is a Windows error - as cmd is a valid Win command, I presume cmd must not be in the

maven execution path. Added C:\\Windows\\System32 to mvn path in Moves & tried again to get to "build a release". SUCCESS!!!! Got the page with all the projects listed.

44. Chose "Advisor Assign" from list. BUILD FAILURE:

Failed to execute goal edu.mit.maven.plugins:mit-release-plugin:2.0.19:release-info (default-cli) on project releases: Unable to checkout trunk

```
'scm:svn:svn+ssh://svn.mit.edu/sais-sis-academic/academic-advisorasgn-web/trunk' to
```

```
'C:\\Users\\dev\\Workspaces\\MyEclipse10\\sais-moves-web-3.0.9-SNAPSHOT\\ui\\releases\\target\\info\\edu\\mit\\list\\es\\advisorasgn\\assignadvisors' -> [Help 1]
```

45. I am able to run the release plugin command from the command line.

46. From the app log, env variables for this command I see SVN_SSH is still c:\\bin\\plink.exe - single backslashes, not the double. Rebooted machine to get a fresh start. Also, mvn memory seemed to still be 1024m.

47. I maven-cleaned the project. Also went into Moves Admin BuildConfig and set the Build Home to a location outside of the Moves MyEclipse project: C:/Users/dev/temp/moves-build

48. IMPORTANT - make sure you have Kerb 5 tickets before running moves or else the svn/ssh (plink) hangs and you have to kill PLINK.EXE from the task manager.

49. Still getting error in 44. Found this as a maven env variable:

```
-Djavax.net.ssl.trustStore=/mitbuilds/sais-common-conf/serverTrustStore.jks
```

BUT there is no /mitbuilds dir. Changed this to build home. STILL get error in step 44.

50. SO - the maven command runs fine in a Win shell, but not from the app. So there must be a difference in the two environments. I created a batch job to clear out all Win env variables in a Win command line, then copied all env variables from Moves app log (systemEnvironmentVariables) into another batch file and set these as the cmd env variables. Tried running maven cmd and works ok. back to the drawing board...

51. With the moves-app env, klist shows no tickets; with the normal win env, it shows tickets. Indeed the moves-app env has the MyEclipse JRE bin dir at the head of the path, so we are running the wrong kerb software from the app and cannot get to svn. Tried adding C:/Program Files/Kerberos to front of maven.environment.variable.PATH

52. OK - figured this out. the svn binary was missing from the maven path in Moves -> Admin -> Build Config. Somehow the svn bin folder was not in the path used by the release plugin shell command, although it was there for some earlier svn operations.

53. Submitted the "build a release" for advisor assignment...

... YEEEE HAAAAAAH!!!!!!! - Scheduled Build Succeeded