How to Make Changes to VWT Code

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Background

The Verification System was written in such a way that it can be used for 2 different purposes. One purpose is to generate static graphics and/or ascii files on a cron. This mode (from here on known as command line mode) can be run entirely on command line. The other purpose is to be loaded as an applet in a browser, allowing the user to interact with the Verification System (from here on known as the Verification Web Tool [VWT]). Each mode has slightly different requirements and installation instructions. This will be addressed in each section below.

A particular installation of the Verification System can only be run in one mode at a time (eg. an installation compiled for running on command line must be recompiled to run as a web tool, and vice versa).

Initial Setup

If you are running one of the command line modes, you should have done an initial install of the VWT following the How to Install. For the Web Tool mode, you should have at least done an initial install following the How to Install up to “deploying the server-side Java code”, but for development it isn’t necessary to perform the rest of the How to Install (“deploying the server-side webpage files”).

Making Changes

Command Line Direct Access Mode

Use this mode if you’re on the CF and want to run the Verification System on the command line or on cron. ***Note that when you compile for this mode, you can’t use the Verification System in any other mode until you compile it specifically for that mode.***

This mode only requires a single step to make changes, recompiling. Run the following command inside the Verification System root directory:

```
ant compile_command_line_direct_access
```

This will compile the Verification System and place a jar file verif_client.jar in the ./build directory.

Command Line Web Services Mode

Use this mode if you're on the cpc-lw-work1 or a Linux machine and want to run the Verification System on the command line or on cron. ***Note that when you compile for this mode, you can't use the Verification System in any other mode until you compile it specifically for that mode.***

Step 1 – Recompile the Code

Run the following command inside the Verification System root directory:

```
ant compile_command_line_web_services -Dwar_file_name=verif_[first.last].war
```

where [first.last] is your first name, a period, and your last name.

This will compile the Verification System and place 2 jar files, verif_client.jar and verif_server.jar, and a war file in the ./build directory.

Step 2 – Deploy in Tomcat

1. Go to the Tomcat Manager page (get login info from Mike Charles) and find the application called "verif_[first.last].war".
2. Click STOP, then UNDEPLOY, in that row on the right side.
3. Click the Browse... button under 'WAR file to deploy', and select the verif_[first.last].war file created in the step above, then click Deploy. If your file is on Compute Farm, navigate to /export-3/cpccftstnfs-cp/....

If you do not see the cpccftstnfs-cp directory you will need to list it on the command-line for it to reappear:

```
ls /export-3/cpccftstnfs-cp
```

For Windows users, you'll have to use WinSCP to copy the file from cpcwork1 to your Windows computer. Then you can upload the file using the Tomcat Manager.

The manager page will be refreshed and you should see a new application in the list matching the name of your .war file (without the .war).

Web Application Mode

Use this mode if you want to run the Verification Web Tool in a browser. ***Note that when you compile for this mode, you can't use the Verification System in any other mode until you compile it specifically for that mode.***

Step 1 – Recompile and Rebuild Web Package

Run the following command inside the Verification System root directory:

```
ant compile_web_tool -Dwar_file_name=verif_[first.last].war
```

where [first.last] is your first name, a period, and your last name.

This will compile the Verification System and place client and server jar files in the ./build directory, as well as a war file and a .tar.gz file.

Step 2 – Deploy in Tomcat

1. Go to the Tomcat Manager page (get login info from Mike Charles) and find the application called "verif_[first.last].war".
2. Click STOP, then UNDEPLOY, in that row on the right side. (If you already have an uploaded .war file. If not, continue to next step.)
3. Click the Browse... button under 'WAR file to deploy', and select the verif_[first.last].war file created in the step above, then click Deploy.

If your file is on Compute Farm, navigate to /export-3/cpccftstnfs-cp/....

*If you do not see the cpccftstnfs-cp directory you will need to list it on the command-line **(on your local Linux machine)** for it to reappear:*

```
ls /export-3/cpccftstnfs-cp
```

For Windows users, you'll have to use WinSCP to copy the file from cpcwork1 to your Windows computer. Then the path should appear when you re-browse to the file in the Tomcat manager. Upload the file.

The manager page will be refreshed and you should see a new application in the list matching the name of your .war file (without the .war).

You should be able to refresh/load the VWT with the updates.

Viewing Changes

Viewing the Applet Web Application

You can view your working copy (sandbox) index.php file using the web development server. Here are a few examples:

For Linux users:

- http://cpcintradev.ncep.noaa.gov/export/lnx369/mou/sandboxes/Verif_System_Trunk/web

For Windows users:

- http://cpcintradev.ncep.noaa.gov/home/slevinson/sandboxes/Verif_System/web

For a Compute Farm test account:

- http://cpcintradev.ncep.noaa.gov/export-3/cpccftstnfs-cp/mcharles/sandboxes/verif/trunk/web

Viewing logs

There are 2 logfiles; one on the server, one client side. These logs contain the respective content from either the server part of the processing or the client side.

Client-side

The client side is in the process ./logs sub-directory in the file ./logs/static.log

Server-side

Step 1 – SSH to the Tomcat server

```
ssh linuxName@wwwdev1.ncep.noaa.gov
```

where linuxName is your Linux username

Step 2 – Change into the Tomcat logs directory

```
cd /var/log/tomcat5
```

Step 3 – Open log file

```
vi catalina.out
```

Troubleshooting

jarsigner error – Certificate chain not found

If you get this error during compiling:

> *[signjar] jarsigner: Certificate chain not found for: vwt. vwt must reference a valid KeyStore key entry containing a private key and corresponding public key certificate chain.*

Make sure you've perform the first step in the How To Install in the "Command Line Web Services Mode" section, which is "Step 1 – Create a certificate to sign Java jar files".