

# TO11 Slice 3 CAVE Client Installation Instructions

Note:

- Intellectual Property concerns are still an issue for TO11. In short, do not give the AWIPS II software to anyone. For details see the "AWIPS-II Software Distribution Guidance and Procedures" document.

Caveats:

- Your graphics card must support OpenGL. To see if it does run the command:  

```
glxinfo | grep rendering
```

  
You should see  

```
direct rendering: Yes
```

  
OK, so it really does not have to support OpenGL. You could install and bring up CAVE without it, but images will not display, only contours and plots, etc.
- Zooming will not work so well without a scroll wheel mouse, and most of us don't have one. But, the problem is zooming back out - do this with the button 3 menu option. To zoom in click on button 2.
- You can have only one CAVE installation for your account on a given machine. Since our home directories are on homestar this pretty much means one CAVE installation for your account, period, although there is a way around this if you really need it. This in turn means that connecting to your own EDEX installation, if you have one, and the dx1-a2dp EDEX is problematic. You will have to change your configuration each time you switch from one to the other. We are investigating a fast way to do this.
- You must have dx1-a2dp's hdf5 directory remote mounted to your machine. The mount point is /data/hdf5. Test this with "cd /data/hdf5" to get the automounter to put it in place. If you can get there, it's available.

Now, on with the show.

1. Decide on an installation directory. Mine is in `socrates:/scratch2/socrates/fluke/TO11s3/cave`. If you decide to remove your old versions, make sure you remove the `caveData` directory.
2. Run the wizard under your own account:  

```
cd /misc/linux/awips2-TO11-D45/INSTALLER/  
./setup_cave.sh
```

  
Refer to the CAVE installation instructions in Raytheon's `AWIPS_Cluster_Deployment_FlowTag_RevTO11d4-5 v2.pdf` and `AWIPS_Standalone_Deployment_FlowTag_RevTO11d4-5 v2.pdf` documents in `/misc/linux/awips2-TO11-D45/RESOURCES/Installation Flow Lines/`.  
Install CAVE in your install directory when prompted by the install wizard. Enter the full path, letting the install wizard create the basename directory (TO11s45 in my case) by answering "OK" when it asks.

On the "Packs" screen select both CAVE and Basemaps.

Change the EDEX and radar servers to "dx1-a2dp" (from localhost).

Change the DB Address to "dx3-a2dp"

Set DB Username and Password to "awips"

Change the hdf5 data directory to "/data/hdf5".

(These can be changed later in "Preferences" to switch to a local EDEX)

We created a BOU localization. See our localization setup document for how to use it.

On the shortcuts screen, unselect all shortcuts and then select "Next".

Installing the files takes about a minute. On the last screen, do not choose to create an installer; just click Done to exit the wizard.

3. The `<install directory>/cave.sh` is supposed to include all of the required environment variables. We've added 'umask 002' to ours, which makes files group writable - necessary to allow multiple users to run CAVE on a given workstation (using our AWIPS user login/environment for AWIPS II).
4. Launch CAVE:

```
cd <install directory>
./startCave&
```

In the top-menu bar, select CAVE > Preferences...

- o Click on Localization and ensure that it's set to "OAX" (or perhaps "BOU") and uses "http://dx1-a2dp:9581/services" as the server.
- o Click on Connectivity and ensure that JMS Server and HTTP Server refer to "dx1-a2dp" (not localhost) in the URL.
- o Click on Directory Paths and
  - ensure that Base Maps Directory is "`<install directory>/basemaps`".
  - ensure that Server Data Directory is "`/data/hdf5`".
- o We have not dealt with Hydro Apps yet, so leave that alone, unless you are brave.
- o Click Apply if you made changes, Cancel otherwise.

Exit and relaunch CAVE. Green times should show up within 30 seconds.

You'll need to remove or set aside your home directory `caveData/`, as the format of the `latlon10` map has changed between TO11d1 and TO11d3, and you'll get an error about a missing file, though CAVE seems to work fine otherwise. (If you wish, you can replace the lines in `caveData/etc/default-procedure.xml` that mention `latlon10.bcd` with the new lines from your `<install directory>/etc` version. As the saying goes, we'll leave that as an exercise for the reader.) This is related to why you can have only one CAVE install - you can have only one configuration per home directory. Of course, you could fudge this with a sym link if you need to.