AWIPS-2 Thin Client Training: Support Documentation

This document is provided as a supplement to the AWIPS-2 Thin Client Training. It contains information on launching the AWIPS-2 Thin Client, recommended Thin Client preferences, and quick referesher of the differences and best practices discussed in this training.

The Differences between the AWIPS-2 Thin Client and Operational CAVE

The five primary differences between the Thin Client and the Operational CAVE are that the Thin Client:

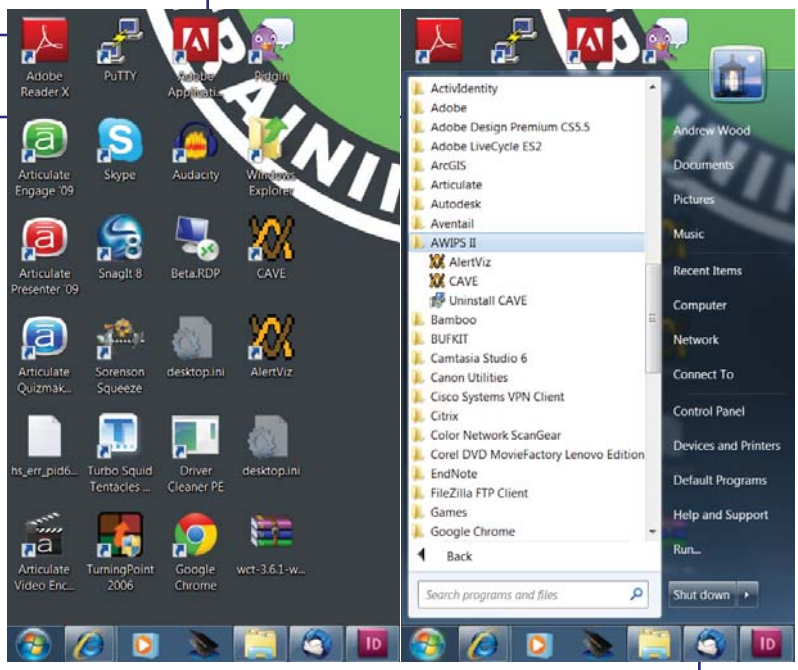
1. Has multiple available operating systems,
2. Supports data compression during transmission from the EDEX server,
3. Allows file caching form most weather data products,
4. Has fewer AWIPS applications available, and
5. External Users will have less data available to access.

The Recommended Best Practices for Thin Client Users

The five best practices recommended in the AWIPS-2 Thin Client Training were to:

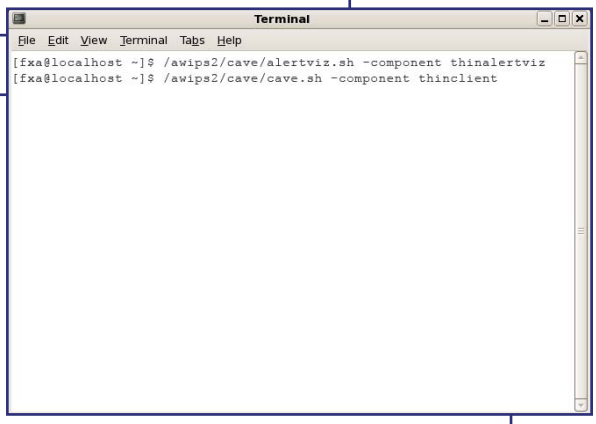
1. Initialize all potential accounts at your office prior to forecasters using the Thin Client at a remote location;
2. Use either the loop feature (or manually toggle through the frames) for each product you request to pre-load every frame;
3. Use care when requesting model and point data, limiting frame counts when using a poor Internet connection;
4. Know how to edit the CAVE preferences for Thin Client in order to optimize performance for narrow bandwidth & operating system; and
5. When working with a poor Internet connection, avoid products that are bandwidth hogs.

Launching Thin Client:



Start Up: Most users will launch the AWIPS-2 Thin Client using a desktop icon (Windows & Linux) or from the Windows Start Menu. When starting Thin Client on Windows, you need to start AlertViz first, then start CAVE. If you try to start CAVE first, you will get an error and have to quit the application. AlertViz should start automatically on login for Linux users (at least Internal Users). If AlertViz isn't running already on your Linux system, then start AlertViz first, followed by Thin Client.

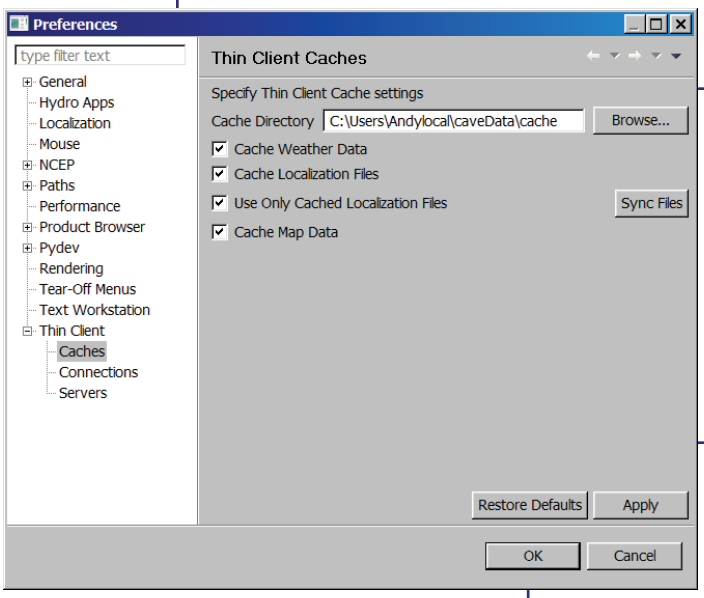
Launching Thin Client from a Terminal:



Start Up: The Windows version of Thin Client creates desktop icons by default. System administrators need to create these icons on Linux systems for forecasters to use them. If users need to launch AlertViz or Thin Client on a Linux system from a terminal window, you can do that just like in a WFO. The only difference is an additional data flag needs to be included in the command:

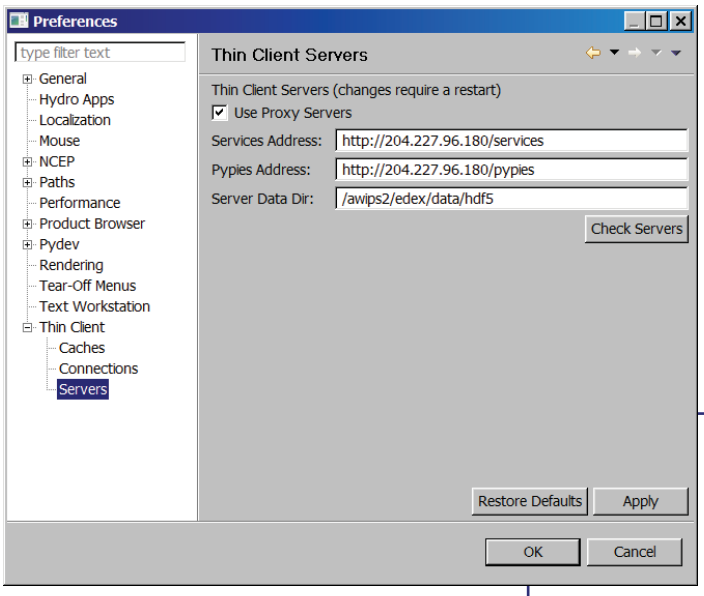
```
/awips2/cave/alertviz.sh -component thinalertviz
/awips2/cave/cave.sh -component thinclient
```

Thin Client Preferences Applicable to All Thin Client Users:



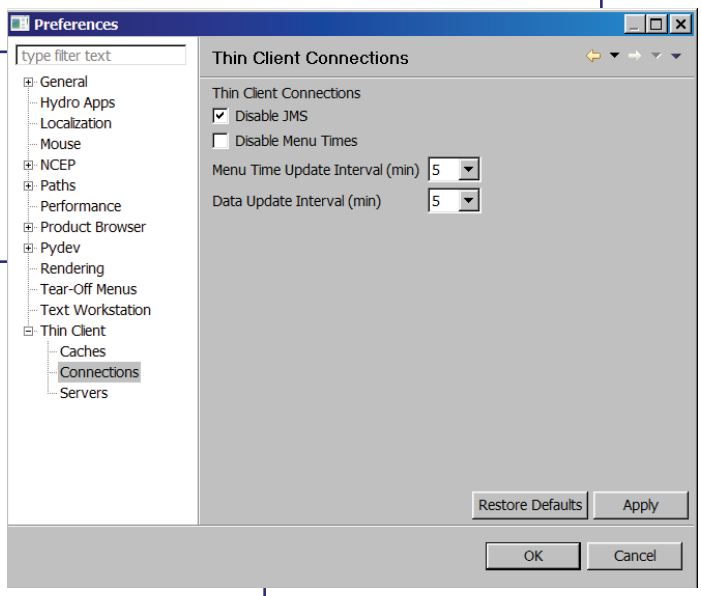
Cache Options: The cache directory on Linux will be slightly different:

`/home/$username/caveData/cache`



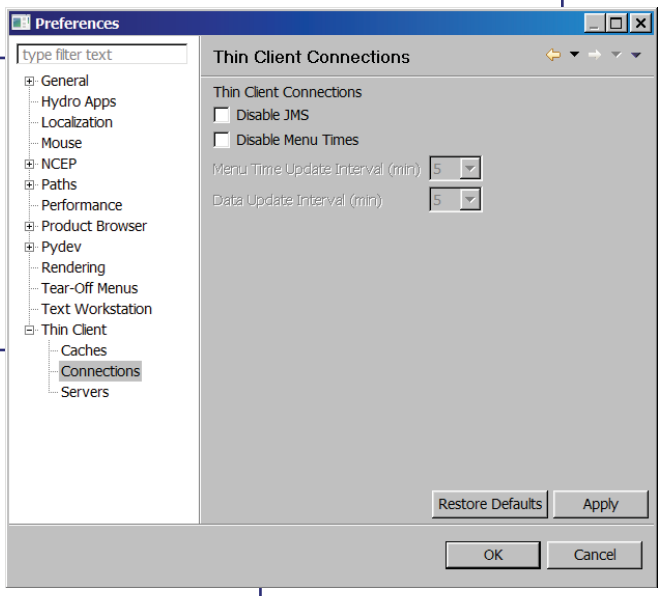
Server Options: The server addresses shown are an example. Your regional headquarters will have their own servers with different IP addresses for you to use.

Thin Client Connections Preferences for External Users with Moderate & High End Connection:



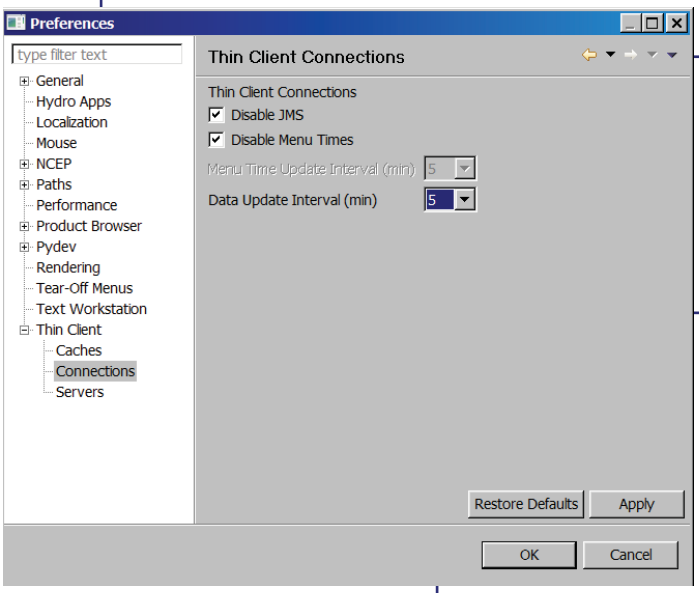
When working at moderate bandwidths (~1 MB/s), you can toggle off "Disable Menu Times" in the Connections options for Thin Client Preferences menu. This option will allow you to use the menu times to know at what time the most recent product was available.

Thin Client Connections Preferences for Internal Users with Moderate & High End Connection:



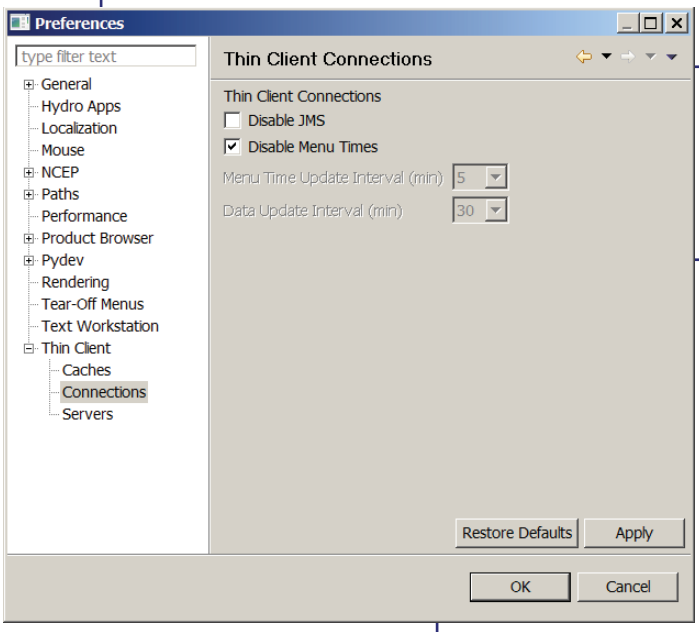
When using Thin Client on an internal, dedicated connection, it's best to turn off "Disable JMS" and let that application control your data updates.

Thin Client Connections Preferences for External Users with Limited Bandwidth:



To ensure your Thin Client performs its best at limited bandwidths, make sure to turn on "Disable Menu Times" in the Connections options for Thin Client Preferences menu.

Thin Client Connections Preferences for Internal Users with Limited Bandwidth:



As with External Users, make sure to turn on "Disable Menu Times" in the Connections options for Thin Client Preferences menu. However, you still want the JMS to handle your data updates since it avoids latency issues better than manual data updates.

Recommended Thin Client Preferences (from AWIPS-2 Documentation)

Preferences	**External (Med/ High)**	**External (Low)**	**Internal (Med/ High)**	**Internal (Low)**
Cache Directory	C:\Users*$username*\ caveData\cache (Windows) /user/*$username*/ caveData/cache (Linux)	C:\Users*$username*\ caveData\cache (Windows) /user/*$username*/ caveData/cache (Linux)	/user/*$username*/ caveData/cache	/user/*$username*/ caveData/cache
Cache Weather Data	Yes	Yes	Yes	Yes
Cache Localization Files	Yes	Yes	Yes	Yes
Use Only Cached Localization Files	Yes	Yes	Yes	Yes
Cache Map Data	Yes	Yes	Yes	Yes
Disable JMS	Yes	Yes	No	No
Disable Menu Times	No	Yes	No	Yes
Menu Update Interval (min)	Use local/ regional guidelines	N/A	N/A	N/A
Data Update Interval (min)	Use local/ regional guidelines	Use local/ regional guidelines	N/A	N/A
Use Proxy Servers (requires your regional server info)	Yes	Yes	Yes	Yes

Sample Download Times for Different Products and Internet Connections

Products	WFO (Dedicated Network Connection)	High End Connection (1+ MB/s)	Low End Connection (~100 KB/s)
Radar, Satellite, Lightning	1-4 s	3-5 s	5-15 s
Model Products	2-4 s	10-45 s	35-105 s
Surface Obs	3-9 s	15-60 s	90-120 s

Users should limit the number of frames requested at slower connections, especially for model fields and sruface observations. Derived-parameter model fields (e.g.,1000-500 mb RH, surface-based CAPE) tend to be particularly large because they require HDF data from multiple parameters and/or levels to compute the product in CAVE.

References for Thin Client (from AWIPS-2 Documentation)

AWIPS-2 Thin Client References:

AWIPS One Stop web page:
https://onestop.noaa3a.awips.noaa.gov/awips_2_Document2.html