

CRAS Imagery in D-2D

Instructions for AWIPS Installation

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Contributors

This document and the products gained from this installation could not have been accomplished without the dedicated work and assistance of the individuals listed below.

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Important Notes

This document is applicable only to offices located in Central Region (CRH) and Southern Region (SRH). Moreover, these products are not considered operational. The Space Science and Engineering Center (SSEC) is not staffed around the clock. As a result, data outages may result periodically.

Contact Information

If you have questions regarding this document or experience installation problems, please contact Jordan Gerth, SSEC, jordang@ssec.wisc.edu or jordan.gerth@noaa.gov.

If you have questions regarding the CRAS model and satellite data assimilation, please contact Robert Aune, NESDIS/NOAA, boba@ssec.wisc.edu or robert.aune@noaa.gov.

For questions and comments about these images and future developments involving satellite imagery in AWIPS, contact Kathy Strabala, SSEC, kathys@ssec.wisc.edu.

A copy of this document as well as updates and sample imagery is maintained at <http://cimss.ssec.wisc.edu/~jordang/awips-cras>. This is version 1.11.

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Instructions

!! Always use /tmp as your temporary directory when applying these instructions. These scripts have been written to look for files in /tmp/cras-setup. Every time directions request to extract a new tarball, make sure to have deleted the old, previous cras-setup directory. !!

!! Assure that the temporary files have the proper file permissions before running scripts. !!

To add CRAS menu items under “Satellite” on each AWIPS D-2D workstation, extract the files in cras-setup-loc.tar on PX1, review the depict keys file to assure the key numbers (first column) are not already used on your system, and run localization.sh from within. Upon successful completion, delete the cras-setup directory and tarball, then force run a '-tables' and '-dataSupps' localization on each workstation as user fxa.

```
su - fxa
cd /tmp
tar -xvf cras-setup-loc.tar
cd cras-setup
vi UW-localDepictKeys.txt
./localization.sh      # Ignore errors if previous files do not exist
cd ../
```

```

rm -rf cras-setup
rm -f cras-setup-loc.tar
cd /awips/fxa/data/localization/scripts
./mainScript.csh f -tables -dataSups

```

To create the data management system (directory structure, data monitor, and purger) for the CRAS files, extract the files in cras-setup-px1.tar to the temporary directory on PX1 and run px-purge-ldad.sh as user fxa. Delete the temporary cras-setup directory when complete, then run a '-tables', '-dataSups', and '-dirs' localization on PX1 as user fxa. The html-add.sh script may need to be rerun after an operational build upgrade.

```

su - fxa
cd /tmp
tar -xvf cras-setup-px1.tar
cd cras-setup
./px-monitor-purge.sh          # Also runs two other scripts in directory
cd ../
rm -rf cras-setup
rm -f cras-setup-px1.tar
cd /awips/fxa/data/localization/scripts
./mainScript.csh -tables -dataSups -dirs

```

Caution: These are satellite images, not GRIB files. The LDAD is not used to process CRAS files; there is no preprocess script and there is no entry in the LDADinfo.txt file. The LDAD would likely be unable to maintain a load of incoming CRAS products.

Important: The CRAS files are filed in their LDM state (compressed) on LS1, but moved to PX1 for processing and filing. This is done by setting and running a cron task *at least once hourly*, which will be done in the following step. It is important to make sure this cron task exists and is executing properly or CRAS products may quickly overwhelm LS1. The process script writes to a log file in /data/logs/fxa/[...].

As user fxa on PX1, uncompress processCRAS.pl.gz in a local directory of choice. That is, choose a directory that is not overwritten during an operational build upgrade and contains other local applications. Since processCRAS.pl is an executable, it may be best placed in a bin directory, but not /awips/fxa/bin. Kim Licitar suggested this procedure:

```

su - fxa
cd /data/local/localapps          # Choose the directory you wish
mkdir CRAS
mv /tmp/processCRAS.pl.gz CRAS
cd CRAS                          # Move to that directory
gunzip processCRAS.pl.gz
chmod 775 processCRAS.pl
su - root
vi /etc/cron.d/SITEpx1cron        # Make cron change in two files
vi /etc/ha.d/cron.d/SITEpx1cron  # After the first file complete
ssh px2 vi /etc/ha.d/cron.d/SITEpx1cron # In case PX1 fails
<Page Up>                        # vi command to move to bottom of file
a                                 # vi command to append

```

```

<Enter>                # vi command to add blank line
# Process CRAS products from CIMSS/SSEC
10,25,40,55 * * * * fxa
    csh -c '/data/local/localapps/CRAS/processCRAS.pl &> /dev/null'
<Esc>                  # vi command to stop append mode
:wq!                    # vi command to write and quit

```

Run a '-purge' localization on DX1 as fxa to acknowledge the new purge information, then restart the purge process. The notification server may need restarting as well.

```

su - fxa
cd /awips/fxa/data/localization/scripts
./mainScript.csh -purge
cd /awips/fxa/bin
./stopPurgeProcess
./startPurgeProcess
./stopNotificationServer      # Optional, but may be necessary
./startNotificationServer    # Optional, but may be necessary

```

If there are no errors with the '-purge' localization, do the same on DX2. Remember, if PX1 is offline, there is nothing running to purge the incoming files on LS1.

```
ssh dx2 /awips/fxa/data/localization/scripts/mainScript.csh -purge
```

On LS1 as ldm user, extract the files in cras-setup-ls1.tar to a temporary directory and run ldad.sh. Delete the temporary directory when complete.

```

su - ldm
cd /tmp
tar -xvf cras-setup-ls1.tar
cd cras-setup
./ldad.sh
cd ../
rm -rf cras-setup
rm -f cras-setup-ls1.tar

```

Make the following addition to ldmd.conf in /usr/local/ldm/etc at the appropriate location:

```

request EXP \"*_AWIPS_CRAS_.*\" ldm.crh.noaa.gov      # Central Region
request EXP \"*_AWIPS_CRAS_.*\" lyndon.srh.noaa.gov  # Southern Region

```

Create the initial storage directory for the compressed CRAS data on LS1 as ldad user.

Give the directory proper permissions.

```

su - ldad
cd /data/ldad
mkdir CRAS
chmod 775 CRAS

```

Restart the Local Data Manager on LS1 as ldm user. Watch the EXP feed if you wish.

```

su - ldm
cd /usr/local/ldm/runtime/bin
./ldmadmin.in stop
./ldmadmin.in start

```

This completes the installation. Products will arrive in AWIPS shortly after 00Z or 12Z.