Installing CAT 7.3.1 for ENVI 5.3 and above versions for UNIX platforms (includes most Macs)

PDS Geosciences Node – Last update 2017-0629

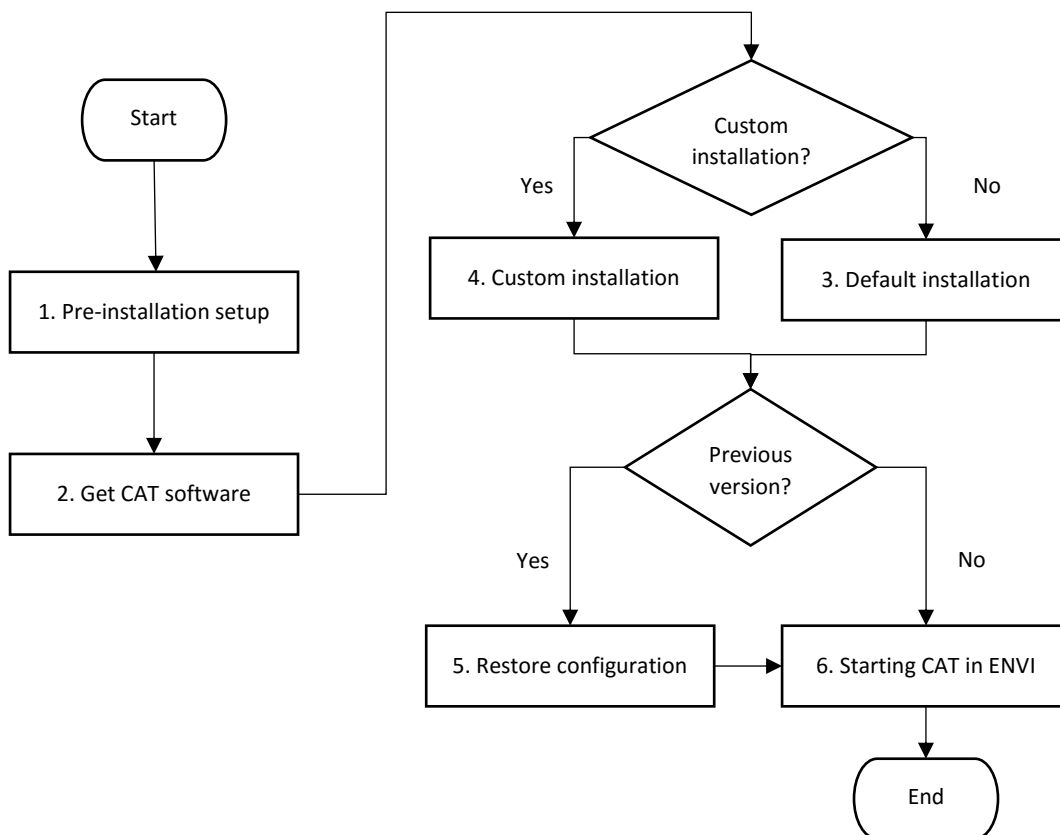## 0   Introduction

This document describes the procedure for installing CAT for use with ENVI 5.3 and above version for UNIX.

0.1   Contact information

This version of CAT is produced by the PDS Geosciences Node (http://pds-geosciences.wustl.edu/) based on work by the CRISM Science Team. Feel free to contact us with comments or questions at geosci@wunder.wustl.edu

0.2   Procedure flowchart

The installation process is shown in the flowchart below.

1 Pre-Installation

Before beginning, please take these steps.

1. Ensure you have administrator privilege on your machine. You will need it during installation.
2. Ensure you are running ENVI 5.3 and above versions. If not, install it before continuing.
3. If you have an existing version of CAT installed, you will have to rename or remove it before proceeding.
    o If you want to keep customized settings from a previous version of CAT installed on your system, you should rename the previous version directory.
    o If you don't have customized settings to keep, you should remove a previous installation of CAT by deleting the CAT_ENVI directory.

2 Get the CAT software

You can find the latest version of CAT 7.3.1. for use with ENVI 5.3 and above versions at the PDS Geosciences Node web site: http://pds-geosciences.wustl.edu/missions/mro/crism.htm#Tools

3 Default installation

DECISION: *If you wish to install CAT to a directory other than the default, follow the instructions in the Section 4, "Custom installation".*

1. Unpack the CAT_ENVI zip file and copy the CAT_ENVI folder to your login directory.
2. Set up CAT_ENVI as default IDL path. To do this, add the following line to the end of the idl.pref file in your ENVI installed path inside the idl86/resource/pref/ folder (the location of idl.pref may vary based on your ENVI version):

```
IDL_PATH: ~/CAT_ENVI/:<IDL_DEFAULT>
```

3. Start IDL. At the `IDL>` prompt in the console window, enter these commands:

```
.RESET_SESSION

.COMPILE '~/CAT_ENVI/save_add/CAT_programs/cat_menu.pro'

RESOLVE_ALL, /CONTINUE_ON_ERROR, SKIP_ROUTINES='ENVI'

SAVE, FILENAME = '~/CAT_ENVI/tmp/cat_menu.sav', /ROUTINES
```

   Note: *For some ENVI versions, the RESOLVE_ALL command may produce a warning. It is ok to ignore the warning.*
4. Move the cat_menu.sav file from the ~/CAT_ENVI/tmp folder to your ENVI installed path inside envi5x/extensions/ folder.
5. Quit IDL.

DECISION: *If you had a previous version of CAT and wish to restore configuration files from that version, continue with Section 5, "Restore settings from a previous version of CAT_ENVI". Otherwise, continue with Section 6, "Start CAT".*

4   Custom installation (installing CAT to a different directory)

DECISION: If you wish to install CAT to a directory other than the default, follow these steps.

1. Unpack the CAT_ENVI.zip file and copy the CAT_ENVI folder to the desired directory location. Link your desired directory using following command:
    ```
    ln –s CAT_LOCATION ~/CAT_ENVI
    ```
    where CAT_LOCATION is the path you want to put CAT_ENVI in.
2. Set up CAT_ENVI as default IDL path. To do this, add the following line to the end of the idl.pref file in your ENVI installed path inside the idl86/resource/pref/ folder (the location of idl.pref may vary based on your ENVI version):

    ```
    IDL_PATH: ~/CAT_ENVI/:<IDL_DEFAULT>
    ```

3. Start IDL. At the `IDL>` prompt in the console window, enter these commands:

    ```
    .RESET_SESSION

    .COMPILE '~/CAT_ENVI/save_add/CAT_programs/cat_menu.pro'

    RESOLVE_ALL, /CONTINUE_ON_ERROR, SKIP_ROUTINES='ENVI'

    SAVE, FILENAME = '~/CAT_ENVI/tmp/cat_menu.sav', /ROUTINES
    ```

    Note: For some ENVI versions, the RESOLVE_ALL command may produce a warning. It is ok to ignore the warning.
4. Move the cat_menu.sav file from the ~/CAT_ENVI/tmp folder to your ENVI installed path inside envi5x/extensions/ folder.
5. Quit IDL.

DECISION: If you had a previous version of CAT and wish to restore configuration files from that version, continue with Section 5, "Restore settings from a previous version of CAT_ENVI". Otherwise, continue with Section 6, "Start CAT".

5   Set up CRISM Customized Map Projection

Move the CRISM customized map projection definitions files (datum.txt, geogcs.txt, spheroid.txt) from the ~/CAT_ENVI/aux_files/crism_projection/ folder to your ENVI installed path inside the IDL86/resource/pedata/user_defined/ folder (the location of user_defined folder may vary based on your ENVI version).

6   Restore settings from a previous version of CAT_ENVI (for experts)

Users with a previous version of CAT_ENVI installed on their system may wish to copy settings from the earlier version. To do so, replace these configuration files that may have contain custom settings:

1. Replace the /CAT_ENVI/envi.cfg file in your new version with the same file from your previous version in the CAT_ENVI-prev directory.
2. Replace the /CAT_ENVI/catconfigs/crismcat_unix_default.cfg file in your new version with the same file from your previous version in the CAT_ENVI-prev directory.

If you performed a custom installation of CAT, you will have to edit the two configuration files again as described in Section 4, steps 2 and 3.

You may now remove the previous version of CAT if you wish by deleting the CAT_ENVI-prev directory.

7   Start CAT

7.1   Starting CAT in ENVI 5.3+ interface
Start ENVI 5.X + IDL. CAT programs are found in the ENVI menu under Display > CAT 7.3.1.

7.2   Starting CAT in ENVI Classic interface
Start ENVI 5.x Classic + IDL. CAT programs are found in the ENVI Classic menu under CAT 7.3.1.