Installing CAT 7.4 for ENVI 5.3 and above versions for Windows Platforms

PDS Geosciences Node – Last update 2019-0103

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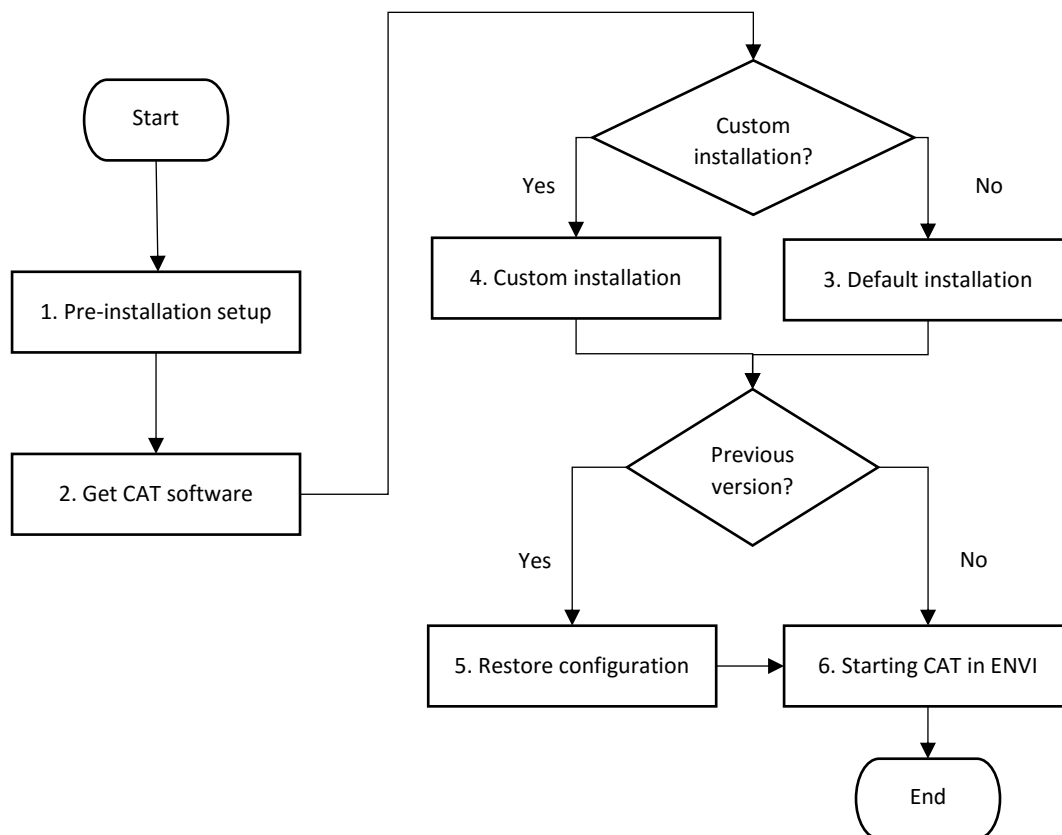
This document describes the procedure for installing CAT for use with ENVI 5.3 and above version for windows.

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 version. If not, install it before continuing (These instructions assume you have installed ENVI to the default directory C:\Program Files\Exelis for ENVI 5.3 or earlier version or C:\Program Files\Harris for version 5.4 and above).
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 7.4 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 C:\Program Files on your computer. (This will require administrator privilege.)
2. Set up CAT_ENVI as default IDL path. To do this, add the following line to the end of the idl.pref file (the location of idl.pref may vary based on your ENVI version) in your ENVI installed path inside the idl8x\resource\pref\ folder (idl8x: idl86 for ENVI 5.3 and 5.4; idl87 for ENVI 5.5):

```
IDL_PATH: +C:\Program Files\CAT_ENVI;<IDL_DEFAULT>
```

Note: *idl8x folder locates inside ENVI installed path for ENVI 5.4 and 5.5.*

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

```
.RESET_SESSION

.COMPILE 'C:\Program Files\CAT_ENVI\save_add\CAT_programs\cat_menu.pro'

RESOLVE_ALL, /CONTINUE_ON_ERROR, SKIP_ROUTINES='ENVI'

SAVE, FILENAME = 'C:\Program Files\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 C:\Program Files\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.
2. Edit the CAT_ENVI\catconfigs\crismcat_win_default.cfg file, updating the value for CAT_AUXFILES_PATH with the new location.
3. Edit the CAT_ENVI\envi.cfg file, replacing all occurrences of "C:\Program Files\CAT_ENVI" with the new location.
4. Set up CAT_ENVI as default IDL path. To do this, add the following line to the end of the idl.pref file (the location of idl.pref may vary based on your ENVI version) in your ENVI installed path inside the idl8x\resource\pref\ folder (idl8x: idl86 for ENVI 5.3 and 5.4; idl87 for ENVI 5.5), replacing all occurrences of "C:\Program Files\CAT_ENVI" with the new location:

   ```
   IDL_PATH: +C:\Program Files\CAT_ENVI;<IDL_DEFAULT>
   ```

   Note: *idl8x folder locates inside ENVI installed path for ENVI 5.4 and 5.5.*

5. Start IDL. At the **IDL>** prompt in the console window, enter these commands, replacing all occurrences of "C:\Program Files\CAT_ENVI" with the new location:

   ```
   .RESET_SESSION

   .COMPILE 'C:\Program Files\CAT_ENVI\save_add\CAT_programs\cat_menu.pro'

   RESOLVE_ALL, /CONTINUE_ON_ERROR, SKIP_ROUTINES='ENVI'

   SAVE, FILENAME = 'C:\Program Files\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.*

6. Move the cat_menu.sav file from CAT_ENVI\tmp folder to your ENVI installed path inside envi5x\extensions\ folder.
7. 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 idl8x\resource\pedata\user_defined\ folder (the location of user_defined folder may vary based on your ENVI version, idl8x: idl86 for ENVI 5.3 and 5.4; idl87 for ENVI 5.5).

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_win_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 7.4.

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 7.4.