

How to ask for help: Finding your way when you run into problems

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Learn yt workshop 2016

Adapted from slides originally
created by Cameron Hummels

What should you do when you run into a problem?
(Adapted from <http://yt-project.org/docs/dev/help/>)

1. Don't panic and don't give up
2. Update to the latest version of yt
3. Find help inside of IPython
4. Use the python debugger
5. Find help in the yt documentation
6. Isolate & Document the problem
7. Ask for help
8. Submit a bug report

I. Don't panic and don't give up

Someone has probably encountered
this problem before.

2. Update to the latest version of yt

If you installed via conda:

```
$ conda update yt
```

If you installed from source:

```
$ yt update
```

3. Find help inside of IPython

- `X?` - shows the docstring for object or function X
- `X??` - shows the source code for object or function X
- `X<tab>` - find objects or function with names that begin with “X”
- `%pdb` - Drop into the debugger on error
- `sorted(X.keys())` - List sorted dictionary keys
- `pprint(X)` - Pretty print object X

4. Use the python debugger

To better understand what is happening in your script, you can add the following line to stop execution in the middle:

```
import pdb  
pdb.set_trace()
```

Now run your script and it will automatically stop at the `pdb.set_trace()` line.

Additional commands once in the pdb environment:

`l` - print out the source code near the current point

`n` - continue to the next line

`s` - step into a function

`c` - continue execution

`print(expression)` - print the value of an expression

`type(expression)` - print the type of an expression

5. Find help in the yt documentation

Visit: <http://yt-project.org/doc>

Search for key terms using the search box, such as class names, attributes, and function names.

Search the mailing list archives:

<http://lists.spacepope.org/pipermail/yt-users-spacepope.org/>

6. Isolate & document your problem

1. Identify what it is that is going wrong
2. Write a script that triggers the error
3. Distill the script to the smallest number of steps to trigger the error
4. Put your scripts, errors messages, and outputs online

\$ `yt pastebin script.py` - pastes script.py online

\$ `yt upload_image image.png` - uploads image.png to imgur

\$ <http://paste.yt-project.org> - manually pastebin text

5. Identify which yt version you are using

>>> `import yt; print(yt.__version__)` - inside Python

\$ `yt version` - from the command line

6. Isolate & document your problem

See if you can reproduce the issue using one of the public test datasets on yt-project.org/data

It's much easier to understand an issue if everyone can run a test script that triggers it.

If it's ok to share your dataset for debugging purposes, upload using the yt curldrop:

```
$ curl -T filename http://use.yt/upload/ - uploads the file
```

This will print out a URL that others can use to download the dataset

```
$ curl -JO http://use.yt/upload/hash - downloads the file
```

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**Going through these steps may help you
solve the problem on your own!**

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`$ http://paste.yt-project.org` - manually pastebin text

5. Identify which yt version you are using

`>>> import yt; print(yt.__version__)` - inside Python

`$ yt version` - from the command line

7. Ask for help!

- Ask on IRC: the #yt channel on freenode
<http://yt-project.org/irc.html> - web IRC chat
- Ask on the mailing list

Send a question to the yt-users mailing list,
yt-users@lists.spacepope.org

- Ask on stackoverflow.com

Use the [\[yt-project\]](#) tag

Include the steps to reproduce the issue you
uploaded in the previous step

8. Submit a bug report

Finally, if this is due to a defect in yt, let us know and ensure it doesn't get forgotten by submitting a bug report

https://bitbucket.org/yt_analysis/yt/issues/new

Describe the issue, include any error messages or tracebacks you get from triggering the issue, and include steps to reproduce the issue

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