Installing StarDist

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Abstract

This is an overview of how to install StarDist in your CAMP space. We will first set up a symlink between a directory in your *working* directory and a **.conda** directory in your *home* directory. We will then run an installation file which will install starDist and set it up for Jupyter Notebooks. Finally, we will test that the installation worked properly.

File List:

- ***StarDist_Crick.yml*** This is the environment file, which lists all the packages that need to be installed for StarDist
- ***StarDist_bash_install.sh*** This script creates a Conda environment for StarDist, installs StarDist, and installs The StarDist_Crick environment into Jupyter notebooks.
- ***GPU_Test.ipynb*** This is a simple Jupyter notebook we can use to test that we have installed StarDist_Crick properly to run on Jupyter notebooks.

note: Details of files are at the end of the document

1 Setting up directories

In your working directory, please make two new directories:

- **\working\USER\Conda** Put ***StarDist_Crick.yml*** and ***StarDist_bash_install.sh*** into this directory
- **\working\USER\StarDist_Crick** Put ***GPU_Test.ipynb*** into this directory

2 Launching OnDemand

To install StarDist, we will be using OnDemand, so that you get used to it. This can be done from the terminal as well.

- Naviagate to http://ondemand.camp.thecrick.org/
- Login using your credentials
- Open a **CAMP Desktop** Interactive session with partitation = cpu, 1 hour, memory per node = 256

3 Symlink

A symlink is a basically a shortcut from one folder to another. On CAMP, our home directories are capped at 5GB, which will fill super quick as we get going. The problem is, CAMP looks for our conda installations (like StarDist) in our home directories. So will set up a shortcut from our home directory to our newly formed **Conda** directory in our working directory.
To set up the symlink, we need to launch a terminal window on our *CAMP Desktop* session. Right click anywhere on the desktop and open **xterm**.
Once in the terminal window, type in this command, changing the path to be the path for your lab and user

ln -s /camp/lab/GROUPLEADER/working/UserName/Conda /camp/home/UserName/.conda
You won't get any feed back from the computer after running this

4 Installing StarDist_Crick

Once the symlink is setup, navigate to **\working\USER\Conda** where you put the ***StarDist_Crick.yml*** and ***StarDist_bash_install.sh*** files. Once there, run the command
./StarDist_bash_install.sh
This should install StarDist to your Conda Installation. This will take a few minutes. If there is an error in incompatible packages, but it doesn't crash out, you're ok, and try the GPU_Test.ipynb

5 Testing the Install

On the Camp OnDemand page, launch a Jupyter Notebook Session
Choose Python Version 3.9.4, partition=gpu, hours=1, GPUs=1, Memory=300
When the session opens, naviagate to **\working\USER\StarDist_Crick** and open the ***GPU_Test.ipynb***.
In the menu bar, there is an option for Kernel. Change this to **StarDist_Crick Local** and run the notebook. The output of the second block should be *True*