

# Conda on Baal

Conda, more specifically Miniconda, has been installed on Baal cluster. Conda is an open source package management system and environment management which allows you to install packages in separate environments. It is mainly for Python but can be used also for R. Here the website:

<https://docs.conda.io/projects/conda/en/latest/>

On Baal, there is two conda modules :

1. **miniconda-py2/latest** for Python 2
2. **miniconda-py3/latest** for Python 3

Unless absolute requirement, you should always use the version for Python 3.



On the cluster, all commands to prepare an environment (create, install packages, etc) have to be done on the master (or login) node. Conda don't do compilation but just downloading and extracting archives

## Create Environments

Conda works with environments which are isolated from the rest of the OS. You can have as much as environments you like. To create one :

```
[baal master node] $ conda create -n "test" python=3.7
```

will create an environment called *test* with python 3.7



By default, conda create environments in your workdir (/workdir/my\_team/username/.conda/envs) so they can be used easily on the compute nodes.

## Using Environments

Now we created an environment called *test*, let's use it :

```
[baal master node] $ conda activate test  
(test) [baal master node] $
```

When activated, you should see the name of the environment between parenthesis, like above.

To stop using the environment, just deactivate it:

```
(test) [baal master node] $ conda deactivate
```

## Install packages

Once your environment is activate, you can install packages inside.

```
(test) [baal master node] $ conda install numpy
```

## Using environment on the compute nodes

Once you have created your environment and installed packages inside it, you can use it on the computer nodes within your job script. Just add the line to activate it inside your script :

```
#!/bin/bash
#PBS -S /bin/bash
#PBS -N <job-name>
#PBS -o <job-name>.out
#PBS -e <job-name>.err

[...]
#Modules
module load miniconda-py3/latest

conda activate test

python myscript.py

[...]
```

From:

<http://www-lbt.ibpc.fr, baal.lbt.ibpc.fr/wiki/> - **LBT's Computation Resources wiki**

Permanent link:

<http://www-lbt.ibpc.fr, baal.lbt.ibpc.fr/wiki/doku.php?id=cluster-lbt:extra-tools:conda>

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