

ESMValTool v2 on Mistral

Most of this document is based on the instructions in [the official documentation](#).

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Installing ESMValTool on Mistral

The easiest way to install ESMValTool on Mistral is using Anaconda. It makes sense to move the environments to a different location than the home directory because each environment may use 4-5GB.

First, load the anaconda module:

```
module load anaconda3/bleeding_edge
```

If there is a problem loading the anaconda module, try:

```
module unload netcdf_c
```

To change the default environment directory, edit the `~/ .condarc` file:

```
envs_dirs:  
- /work/your_project/m123456/conda-envs
```

To create a new environment and install ESMValTool in it, run:

```
conda create --name esmvaltool_fixed -c esmvalgroup -c conda-forge julia  
esmvalcore==2.0.0b1 esmvaltool==2.0.0b1
```

On Nov 18 2019, the official installation instructions result in an installation that is incompatible with many examples. This configuration uses a slightly older ESMValTool version and explicitly installs julia.

Anaconda will print a list of packages that will be installed. Confirm with enter and get a coffee... (this can take a while).

Some useful commands for working with Anaconda can be found in the [conda cheat sheet](#).

Configure ESMValTool

A config file with some adjustments for Mistral can be copied from here:

```
/home/mpim/m300265/scripts/lunchbytes/esmvaltool/config-user-lunchbytes.yml
```

Run ESMValTool

A very simple example can be copied from here:

```
/home/mpim/m300265/scripts/lunchbytes/esmvaltool/examples/recipe_python.yml
```

In the `config-user-lunchbytes.yml`, all output will go into the directory `./esmvaltool_output` in your current working directory. You might want to change your directory before the next command.

Before running ESMValTool, make sure that the Conda environment that you created before is activated:

```
source activate esmvaltool
```

× Depending on your shell configuration, you can use `conda activate` instead of `source activate`:

```
Conda activate esmvaltool
```

Finally, to run this example, type:

```
esmvaltool -c config-user-lunchbytes.yml recipe_python.yml
```

When you are done with the ESMValTool runs and want to deactivate the Conda environment to return to your normal software tree or a different Conda environment, type:

```
source deactivate
```

× Depending on your shell configuration, you can use `conda deactivate` instead of `source deactivate`:

```
Conda deactivate
```

Understanding the output

Modifying the preprocessor and diagnostics

Additional resources

- CMIP6 data availability: https://pcmdi.llnl.gov/CMIP6/ArchiveStatistics/esgf_data_holdings/
- [recipes in the ESMValTool documentation](#)
- [More recipes on github](#)

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