New stuff:
Bioconda and Object storage

Bioconda
Easy way to install applications to Taito (or any othe linux or mac)

Conda and Bioconda

- Conda (https://conda.io/docs/) is package management tool originally developed for managing python libraries but it can be used for managing non-python software and libraries.
- With a functional Conda recipe you can install a tool and its' dependencies with one command
- Bioconda repository (https://bioconda.github.io/)contains recipes for bioinformatics tools

Bioconda in Taito

- In Taito you can use commands module load bioconda/3 and module load bioconda/2 to use pre-defined conda installation
- Bioconda modules includes:
  - Miniconda3 or Miniconda2
  - Python3 or python2 with biopython environment and spyder python editor
  - Pre-defined paths to bioconda environment
  - Some environments installed by CSC
  - Settings that guide your own installation to your $WRKDIR/DONOTREMOVE

Using Bioconda in Taito

- Load bioconda:

```
module load bioconda/3
```

- Found the package name from the biocoda page e.g “tepid”

```
conda create -n my_tepid tepid
```

- Lits the conda environmnets you have available:

```
conda env list
```

- Activate the environment you want to use (e.g. my_tepid)

```
source activate my_tepid
```

- Use the tool and when you wish to stop using it deactivate the environment

```
source deactivate
```

Object storage at CSC

- Object storage is a new storage service at CSC (launched on January)
- Each cPouta project will get 1 TB quota
- Data is owned by the project
- Files can be uploaded and downloaded from anywhere (Taito, cPouta, your local machine)
- Usage with **https://pouta.csc.fi**, **swift** or **sc3** clients.
- Data is stored as objects of max 5 GB. Larger files are automatically split into pieces
- Swift is available in Taito (within Bioconda(s))
- Containers can be accessed through public hyperlinks
- Transport rate from Object Storage to Taito: 7 GB/min
- Instructions in cPouta guide:

https://research.csc.fi/pouta-object-storage