

# 2017 Annual Maintenance

During the summer a significant amount of work will be going on on the clusters. There are two periods of downtime (July and August) that you should be aware of. More details are given below.



## Change in Maintenance Windows

Unfortunately, and due to issues in the preparation of the August maintenance, we have had to postpone it for one week.

Please see below for the new date.

- [Maintenance Windows](#)
  - [10th to 18th of July](#)
  - [28th to 29th of August \(was 21st to 22nd\)](#)
- [Details](#)
  - [Bellatrix](#)
  - [Operating System and SLURM](#)
  - [Deneb Scratch](#)
  - [New Software Stack](#)

## Maintenance Windows

### 10th to 18th of July

During this period all the clusters will be unavailable. We will be carrying out work including moving the central storage, replacing Deneb's scratch filesystem and recabling certain parts of clusters.

### 28th to 29th of August (was 21st to 22nd)



Date changed!

In order to allow us to maintain the same software environment everywhere we will have a two day downtime to upgrade the operating system and batch system as well as switching to the new software release. Due to the potential impact of these changes the queues will be emptied during this period!

## Details

### Bellatrix

For Bellatrix nothing will change as the cluster is out of warranty and will be decommissioned at the end of the year. Those of you who use only Bellatrix can therefore ignore the rest of this page. Those who use Bellatrix and one of the other clusters will need to live with two different environments until December.

### Operating System and SLURM

In order to provide a modern environment and apply performance, security and bug fixes we will be changing the operating system and batch system on the 28th and 29th of August.

- Castor and Deneb will be upgraded to RedHat 7 and Fidis will receive updates.
- On Castor, Deneb and Fidis the SLURM batch system will be upgraded to version 17.02.5

To allow the preparation of these updates approximately 20% of the nodes in Castor and Deneb will be unavailable in the period running up to the 28th of August.

### Deneb Scratch

During the principal maintenance period (10th to 19th of July) we will be making major changes to Deneb's scratch filesystem to ensure its reliability and performance.

When you connect again after the maintenance you will see the following two filesystems:

```
/scratch  
/scratch_old
```

The `/scratch` is a new empty filesystem with the same size as the current scratch  
The `/scratch_old` is the current filesystem in read only mode.

It is your responsibility to copy any data from `/scratch_old` to `/scratch`. Please take the opportunity to consider if you really need to copy old data. We note that there are over 80 million files on `/scratch` and the majority have not been opened/read for over a year!

The `/scratch_old` will be kept in place for three months to allow data migration and will then be deleted.

## New Software Stack

The "software stack" is everything you see and load with the `modules` command! Every summer we release a new bundle of packages with the main changes being the compiler and MPI versions as well as newer versions of many packages.

## Future

During the maintenance period in August (28th and 29th) the next release of our software stack will be promoted to stable.

As of today the new release is available under the name 'future' and can already be used by issuing the following command before loading any modules:

```
$ sload -r future  
$ module load <module name>
```

We encourage you to try the new release as soon as possible and let us know (by opening a ticket) if you find any issues or missing software packages.

With this release newer versions of almost all packages and libraries are available. Please be aware that for packages with multiple package versions only one of the versions will be kept once the 'future' release becomes the default one.

In particular the supported compilers are now

- **Intel 2017 update 2**
- **GCC 5.4**

GCC version 7.1 is available for those requiring "new" C++ features but only libraries are built for it.

Another notable change is the name of two of the intel modules: `intelmpi` will now be available as `intel-mpi` and `mkl` will be available as `intel-mkl`. This is to align ourselves with the upstream names for these packages and make maintainability easier in the future.

## Note on Future and operating systems

If you compile code now using "Future" it is not impossible that it will need to be recompiled after the 29th of August as, although the software release is the same, the underlying operating system will be different.

## Current release (Stable)

The current stable release will still be available under the name 'deprecated'.

To use what is now the stable release after the 29th of August you will need to change to the 'deprecated' release before loading any modules:

```
$ sload -r deprecated  
$ module load <module name>
```

## Deprecated

Please also be aware that the current 'deprecated' set of software modules will no longer be available.

If you are still using any software packages or libraries from the current 'deprecated' release please check the 'future' release today to see if it is available there, and let us know immediately if it is not.

### **Software Release Summary**

- try the new software stack release now available as 'future': `smodules -r future`
- let us know if you use any packages/libraries not yet available in 'future' or the current default modules (release 'stable')
- contact us for any questions or issues by sending an email to [1234@epfl.ch](mailto:1234@epfl.ch) starting the subject with 'HPC'