

# DCSR Software Stack

## What is it?

The DCSR provides a software environment including commonly used scientific tools and libraries.

The software is optimised to make best use of the CPUs, GPUs and high speed Infiniband interconnect.

In order to create the environment we use the [Spack](#) package manager and [Lmod](#).

For information on the deprecated Vital-IT software stack please [see here](#).

## Release and lifecycle

Each year we provide a new release of the software stack which fixes versions for key tools and libraries - the new stack is put in production during the annual maintenance in early January and the previous release remains available for one year.

The versions for key components are given in the following table:

Year	Release name	GCC	R	Python	CUDA
2022/3	Arolle	10.4.0	4.2.1	3.9.13	11.6
2024/5	20240303	11.4.0	4.3.2	3.11.6	12.2.1

Newer versions of tools may be made available during the year but the base versions will remain the default.

## How to use it

The production software stack is loaded by default. You just have to list the module using the 'module' command:

```
module available
```

To load a give software:

```
module load gcc python
```

If you want to change of software stack you have to use the command: `dcsrcsoft`

`dcsrcsoft use 20240303`

Do not forge to do a `module purge` before changing software stack.

Please keep in mind that old software stack would eventually removed. Therefore, you should migrate your script to the current software stack, if any problem arises please send us a ticket via: [helpdesk@unil.ch](mailto:helpdesk@unil.ch) ( with DCSR on the subject of the mail)

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