Fidis and Gacrux, specify architecture

When you want to run on Fidis and its Gacrux extension

### Nodes specifications

Both types of nodes are accessible from the Fidis frontend (ssh fidis.epfl.ch)

<table>
<thead>
<tr>
<th>Fidis</th>
<th>Gacrux</th>
</tr>
</thead>
<tbody>
<tr>
<td>408 compute nodes</td>
<td>216 compute nodes</td>
</tr>
<tr>
<td>• 2 x Xeon E5-2690 v4 processors (each with 14 cores @ 2.6 GHz)</td>
<td>• 2 x Xeon 6132 processors (each with 14 cores @ 2.6 GHz)</td>
</tr>
<tr>
<td>• 336 nodes have 128 GB of RAM, • 72 nodes have 256 GB of RAM</td>
<td>• 192 GB memory</td>
</tr>
<tr>
<td>Infiniband FDR fully-non-blocking connectivity with a fat-tree topology</td>
<td>EDR Infiniband interconnect</td>
</tr>
</tbody>
</table>

The nodes are arranged in non-blocking groups of 24 and the "Skylake" architecture offers significantly increased memory bandwidth.

### Running on Gacrux

Please note that to make use of the new AVX-512 instructions your codes will need to be recompiled. The centrally provided codes and libraries available through modules have been optimised for the new architecture.

### Running on the Fidis nodes

If you wish to use only the Fidis nodes then please specify:

```
#SBATCH --constraint=E5v4
```

### Running on the Gacrux nodes

If you wish to specifically ask for Gacrux nodes then please use the following SLURM directive:

```
#SBATCH --constraint=s6g1
```

If you do not specify a constraint then jobs may run on either partition but they will never span different architectures.

### Debug nodes

Two of the Gacrux nodes are available through the debug partition along with four Fidis nodes.

### Build nodes

Two Gacrux nodes and two Fidis nodes are available for compiling codes via the build partition.
Related articles

- Fidis and Gacrux, specify architecture