UG3.1.1: MARCONI100, the nVIDIA accelerated partition of MARCONI

hostname: login.marconi100.cineca.it
early availability: March 2020
start of production: to be defined (2020)

This system will be in production at the beginning of 2020 as an upgrade of the "non conventional" partition of the Marconi Tier-0 system. It is an accelerated cluster based on Power9 chips and Volta NVIDIA GPUs, acquired by Cineca within the PPI4HPC European initiative.

System Architecture

Architecture: IBM Power 9 AC922
Internal Network: Mellanox Infiniband EDR DragonFly+
Storage: 8PB (raw) GPFS of local storage

Login nodes: 8 Login IBM Power9 LC922 (similar to the compute nodes)

Model: IBM Power AC922 (Whiterspoon)
Racks: 55 total (49 compute)
Nodes: 980
Processors: 2x16 cores IBM POWER9 AC922 at 3.1 GHz
Accelerators: 4 x NVIDIA Volta V100 GPUs, Nvlink 2.0, 16GB
Cores: 32 cores/node
RAM: 256 GB/node
Peak Performance: about 32 Pflop/s
Internal Network: Mellanox Infiniband EDR DragonFly+
Disk Space: 8PB Gpfs storage