

# Hardware Overview

## Introduction

The Salomon cluster consists of 1008 computational nodes of which 576 are regular compute nodes and 432 accelerated nodes. Each node is a powerful x86-64 computer, equipped with 24 cores (two twelve-core Intel Xeon processors) and 128GB RAM. The nodes are interlinked by high speed InfiniBand and Ethernet networks. All nodes share 0.5PB /home NFS disk storage to store the user files. Users may use a DDN Lustre shared storage with capacity of 1.69 PB which is available for the scratch project data. The user access to the Salomon cluster is provided by four login nodes.

More about schematic representation of the Salomon cluster compute nodes IB topology.



Figure 1: Salomon

The parameters are summarized in the following tables:

## General information

In general **Primary purpose High Performance Computing Architecture of compute nodes x86-64 Operating system CentOS 6.7 Linux Compute nodes Totally 1008 Processor 2x Intel Xeon E5-2680v3,**

Node	Count	Processor	Cores	Memory	Accelerator
	-	-	-	-	-
	w/o accelerator	576	2x Intel Xeon E5-2680v3, 2.5GHz	24 128GB -	MIC
	accelerated	432	2x Intel Xeon E5-2680v3, 2.5GHz	24 128GB	2x Intel Xeon Phi 7120P, 61cores, 16GB RAM

## Remote visualization nodes

Node	Count	Processor	Cores	Memory	GPU Accelerator
visualization	2	2x Intel Xeon E5-2695v3	2.3GHz	28	512GB
K5000	4	GB RAM			NVIDIA QUADRO

For large memory computations a special SMP/NUMA SGI UV 2000 server is available:

2



Figure 2: