

SN	Items	Descriptions	Qty
	A	Cluster 1	
1	Compute Nodes:		14
	CPU	Intel Xeon Processor E5-2683 v4 @ 2.10GHz/16-core/40MB Cache	
	Number of CPU's	2 Sockets scalable - 2 socket populated	
	Chipset	Intel C610 chipset or Higher	
	Memory populated	128GB DDR4 Registered ECC, 2400MHz	
	Memory Features	Advanced ECC, SDDC (Chipkill™), Rank sparing, Memory Mirroring support	
	Memory Scalability	24 DIMM slots per node	
	Cluster Interconnect	Omnipath HCI single port card	
	Management Ports	Atleast 2x1 Gigabit with PXE boot capability	
	Hard Disk Storage	2x1TB SATA, 7.2K RPM Hot Plug enterprise class hard disk in RAID 1	
	RAID	RAID Controller with Hardware RAID 0,1 support	
	Expansion Slots	2 PCIe 3.0 slots - At least 1xPCIe 3.0 x16 slot free	
	Remote Management	OEM Server Management Suite, Integrated remote management controller with dedicated 1GbE with license supporting Media over LAN and Video Redirection.	
	Power Supply	Node/Enclosure Redundant and Hot Swap energy efficient power supply with minimum (94%) Platinum level efficiency.	
	Fans	Redundant Hot Swap Fans	
	Form Factor	1U or Dense Rack form factor	
	OS Compatibility	RHEL/CentOS compatible, latest version	
	Warranty	5 years NBD OEM comprehensive onsite warranty with back-to-back OEM support. The OEM should have Service setup in India.	
	Bill of Material	The detailed BOM with part codes should be submitted. All the components of the server should be from the same OEM.	
2	Cluster Management Switch : Qty 1 nos		1
		48 Port x 1Gbps managed switch for Secondary interconnect/Management Network with required number of cables and rack mounting kit.	
	Warranty	5 years NBD OEM comprehensive onsite warranty with back-to-back OEM support. The OEM should have Service setup in India.	

3 Implementation of HPC

The vendor shall install and configure all required hardware and open source software suites, including but not limited to racking and stacking, cluster networking, configuring all nodes, installation of open source compilers and applications, configuration of environment variables and license utility configuration.

The vendor to ensure that the hardware and software components are compatible with each other, and provide necessary cables/wires and any other accessories necessary for connecting/mounting the supplied components. The vendor will be responsible for installation, configuration and integration of the new solution with the already existing HPC solution for which the upgrade is asked. The vendor will be provided with all necessary help from IIA and the existing solution provider for the integration of the complete solution interconnecting all the components above (software and hardware) including but not limited to the existing Cluster Manager with Workload Management Software and ensure commissioning before handing over the system to IIA.

	B	Cluster 2	
1	Compute Nodes:		4
	CPU	Intel Xeon Processor G-6130 @ 2.10GHz/16-core/22 MB Cache	
	Number of CPU's	2 Sockets scalable - 2 socket populated	
	Chipset	Intel C620 chipset or Higher	
	Memory populated	96GB DDR4 Registered ECC, 2666MHz	
	Memory Features	Advanced ECC, SDDC (Chipkill™), Rank sparing, Memory Mirroring support	
	Memory Scalability	16 DIMM slots per node	
	Management Ports	Atleast 2x1 Gigabit with PXE boot capability	
	Hard Disk Storage	3x4TB SATA, 7.2K RPM Hot Plug enterprise class hard disk.	
	RAID	RAID Controller with Hardware RAID 0,1,5, 10 support	
	Expansion Slots	2 PCIe 3.0 slots - At least 1xPCIe 3.0 x16 slot free	
	Remote Management	OEM Server Management Suite, Integrated remote management controller with dedicated 1GbE with license supporting Media over LAN and Video Redirection.	
	Power Supply	Node/Enclosure Redundant and Hot Swap energy efficient power supply with minimum (94%) Platinum level efficiency.	
	Fans	Redundant Hot Swap Fans	
	Form Factor	1U or Dense Rack form factor	
	OS Compatibility	RHEL/CentOS compatible, latest version	
	Warranty	5 years NBD OEM comprehensive onsite warranty with back-to-back OEM support. The OEM should have Service setup in India.	
	Bill of Material	The detailed BOM with part codes should be submitted. All the components of the server should be from the same OEM.	
	C	Cluster 3	
	Compute Nodes:		4
1	CPU	Intel Xeon Gold G-5122 @ 3.6 Ghz/4-core/16.5MB Cache	
	Number of CPU's	1 Socket	
	Chipset	Intel C620 chipset or Higher	
	Memory populated	192GB DDR4 Registered ECC, 2666MHz	
	Memory Features	Advanced ECC, SDDC (Chipkill™), Rank sparing, Memory Mirroring support	
	Memory Scalability	Atleast 8 DIMM slots per node	
	Management Ports	Atleast 2x1 Gigabit with PXE boot capability	
	Hard Disk Storage	3x4TB SATA, 7.2K RPM Hot Plug enterprise class hard disk.	
	RAID	RAID Controller with Hardware RAID 0,1,5, 10 support	
	Expansion Slots	2 PCIe 3.0 slots - At least 1xPCIe 3.0 x16 slot free	
	Remote Management	OEM Server Management Suite, Integrated remote management controller with dedicated 1GbE with license supporting Media over LAN and Video Redirection.	
	Power Supply	Node/Enclosure Redundant and Hot Swap energy efficient power supply with minimum (94%) Platinum level efficiency.	

Fans	Redundant Hot Swap Fans	
Form Factor	1U or Dense Rack form factor	
OS Compatibility	RHEL/CentOS compatible, latest version	
Warranty	5 years NBD OEM comprehensive onsite warranty with back-to-back OEM support. The OEM should have Service setup in India.	
Bill of Material	The detailed BOM with part codes should be submitted. All the components of the server should be from the same OEM.	
Bidder/OEM Eligibility		

Proposed compute OEM brand should have at least 10 installations every year in each of the Top500 supercomputer list for the June and November list starting from June 2015.

The bidder should submit the authorization letter from the OEM for to bid against this particular tender requirement. Bidders must have local registered office in Bangalore.

The compute brand OEM must have sales & support office in Bangalore, submit the confirmation & details on OEM letterhead.

The bidder should have set up at least 3 or more numbers of HPCs in the last three years with minimum peak speed of 50 Tera Flops or more. Purchase order copies/installations reports of previous installations to be submitted along with contact nos. of the person. Bidders also need to provide Client appreciation letter for the support provided for at least 1 of these installations.

Additional

Documentation, soft copy of installation, administration and user manual has to be submitted.

Per Unit price of each Server type should be provided, quantity may increase/decrease at the discretion of IIA at the time of release of the PO.

The vendor should give the power and cooling requirements for the cluster solution along with the proposal. Requirement for minimum cooling and power would be preferred

The bidder should have a support center for HPC and the team structure with call logging details and escalation matrix has to be provided

Installation and maintenance charges should be mentioned if applicable. Door delivery required at IIA. Vendor must include the charges additionally for door-step-delivery if applicable