

Position	Quantity	01:00 -- 04:00 is mandator parts in TENDER	
		Controlle Node 8 core 3Ghz or 2*8 core	
1:00	1	1,7Ghz	mem: 32GB and disk: 2*300GB + 2*1,8TB
2:00	1	Compute Node with total 20 core 2.2Ghz	mem: 128GB and disk: 2*300GB + 4*500 GB
3:00	1	Compute Node with total 40 core 2.2Ghz	mem: 128GB and disk: 2*300GB + 4*500 GB
4:00	1	Other Equipment for installation	19" rack,switch,UPS,KVM,screenmouse,,keyb, TP- kable
5:00		Optional equiment	dep ion total price memory expantion, netwok card,

Position	Quantity	CONTROLL NODE	should have the following specifications
1:01		Chipset	Intel® C612 or equivalent
1:02	1	Product Type	Singel or Dual Socket Rack Server 1 or 2 U hight
1:03	1	Processor TOTAL 16 core of 1.7Ghz or 8core of 3Ghz	minimum dual Intel Xeon E5-2609v4 8C/8T 1.70 GHz or equivalent
1:04	1	Memory	No less than 32GB (2x16GB) 2Rx4 DDR4-2400 ECC se option 04:01
1:05	1	Memory slots	No less than 10 slots free for registered DDR4 ECC RAM
1:06	1	PCI-Express	2 empty slot for PCIe 2x8 equivalent future expansion
1:06	1		
1:08	1	Storage drive bays	No less than 8 x 3.5-inch hot-plug SAS/SATA
1:09	1	Storage drives	two HD SAS 12G 300GB 10K 512n HOT PL 3.5' EP
1:10	1	Storage drives	two HD SAS 12G 1.8TB 10K 512e HOT PL 3.5' EP
1:11	1	I/O controller onboard	RAID 5/6 Ctrl., SAS/SATA 12 Gbit/s, 8 ports int.
1:12	1	Communication, Network	No less than two 1Gb interface
1:13	1	USB port	min 4 USB ports ,( to Keyboard, mouse, Bootable devices)
1:14	1	Power supply configuration	No less than two hot-plug power supply for redundancy
1:15	1	Active power (max. configuration)	No less than 750 W each server management incl. graphics controller and 10/100/1000MBit
1:16	1	Server Management	Service LAN port or equivalent
1:17	1	Mounting kit for 19" rack to fit pos. 02:02	
1:18	1	3 years Warrenty on hardware 7 years downloadable support on Firmware	
1:19	1	and drivers	

**COMPUTE NODE 1** should have the following specifications same as Compute node 2

Position	Quantity	Chipset	
2:01	1	Product Type	Intel® C612 or equivalent
2:02	1	Processor TOTAL 20 core (40 HT)	No less than Dual Socket 19" Rack Server 1 or 2U high Rack server with two Intel Xeon E5-2630v4 10C/20T 2.20 GHz or equivalent, up to 2unit height 128GB (8x16GB) 2Rx4 DDR4-2400 ECC or equivalent *se option
2:03	1	Memory	04:02
2:04	1	FREE Memory slots	8 slots for DDR4 ECC RAM future expansion
2:05	1	PCI-Express	2 empty slot for PCIe 2x x8 equivalent future expansion
2:06	1	USB port	No less than 4 USB ports , Keyboard, mouse, Bootable devices
2:07	1	Storage drive bays supported	No less than 8 x 2.5-inch disk tray SAS/SATA (min 3 free/empty tray)
2:08	1	Storage drives	2 * 300GB
2:09	1	Storage drives	4 * 500 GB se also Option 04:03
2:10	1	Storage drives	No less than 2 free empty disk tray.for future expansion( intotal minimum 8 * 2.5" disk tray) RAID Ctrl., SAS/SATA 12 Gbit/s, 8 ports int.
2:11	1	Raid / disk Controller	RAID level: 0, 1, 10, 5, 1 GB, LSI SAS3108 or equivalent
2:12	1	Communication, Network	No less than 2 ethernet 1Gb copper interface two hot-plug power supply for redundancy each No less than 750
2:13	1	Power supply configuration	W
2:14	1	Server Management	server management incl. graphics controller and 10/100/1000MBit Service LAN port or equivalent
2:15	1	Mounting kit for 19" rack to fit pos. 02:01	
2:16	1	3 years Warrenty on hardware	3 years Warrenty on hardware
2:17	1	7 years downloadable support on Firmware and drivers	7 years downloadable support on Firmware and drivers

## COMPUTE NODE 2

Position	Quantity	Chipset	should have the following specifications same as Compute node 1
3:01	1	Product Type	Intel® C612 or equivalent
3:02	1	Processor TOTAL 20 core (40 HT)	No less than Dual Socket 19" Rack Server 1 or 2 U hight
3:03	1	Memory 128GB	Rack server with two Intel Xeon E5-2630v4 10C/20T 2.20 GHz or equivalent, up to 2unit height
3:04	1	FREE Memory slots	128GB (8x16GB) 2Rx4 DDR4-2400 ECC *se option 04:02
3:05	1	PCI-Express	8 slots for DDR4 ECC RAM future expantion
3:06	1	USB port	2 empty slot for PCIe 2x x8 equivalent future expantion
3:07	1	Storage drive bays supported	No less than 4 USB ports , Keyboard, mouse, Bootable devices
3:08	1	Storage drives	No less than 8 x 2.5-inch disk tray SAS/SATA ( min 3 free/empty tray)
3:09	1	Storage drives	2 * 300GB
3:10	1	Storage drives	4 * 500 GB se also Option 04:03
3:11	1	Raid / disk Controller	No less than 2 free empty disk tray.for future expantion( intotal minimum 8 * 2.5" disk tray)
3:12	1	Communication, Network	RAID Ctrl., SAS/SATA 12 Gbit/s, 8 ports int.
3:13	1	Power supply configuration	RAID level: 0, 1, 10, 5, 1 GB, LSI SAS3108 or equivalent
3:14	1	Server Management	No less than two ethernet 1Gb copper interface
3:15	1	Mounting kit for 19" rack to fit pos. 02:02	two hot-plug power supply for redundancy each No less than 750 W

3:16	1 3 years Warrenty on hardware 7 years downloadable support on Firmware	3 years Warrenty on hardware
3:17	1 and drivers	7 years downloadable support on Firmware and drivers

### 03:00 OTHER EQUIPMENT Installation

3:01	1 Consol screen	connected to KVM switch
3:02	1 Keyboard	connected to KVM switch
3:03	1 Mouse	connected to KVM switch
3:04	1 3 port KVM switch	with kabling to Controlle node + C.N. 1 and 2
3:05	1 Mikrotik / Switch Router	Cloud CRS125-24G-1S-RM Rack Mount
3:06	1 Server rack 19", 24U	Floor standing server rack enclosure 19, 24U , FAN, perforated walls
3:07	1 Rack UPS	No less than then 2800 W and minimum 7 220/240 V outlets
3:08	8 TP cable to connect	

### 04:00 OPTIONAL depending on price this could be orderd

OPTION - On order possibility to same time as order expand memory extra 10Gbs network card dep on total price

Position quantity description

Additional cost should be separated

- 4:01 1 expand CONTROLE NODE (to 64 GB) with 32 GB 2\*16GB DDR4 EEC
- 4:02 2 expand Compute 1, 2 Node (to 256GB) with 128GB memory (8x16GB) DDR4 ECC
- 4:03 2 exchange 4\*500GB on Computnoe 1,and 2 to SSD drives 4 \* 480GB









