

## TECHNICAL PARAMETERS

### SCOPE OF SUPPLY/ WORK

The scope of work under the present tender shall generally comprise of the following activities relating to supply, installation & commissioning, and support of all Hardware & Software:

- a) Supply, installation & commissioning of **01 (one) no. Workstation Desktop** with related accessories as per technical specification.
- b) Supply & installation of **01 (one) no. MS Windows-11 (Professional)** perpetual license.
- c) Supply & installation of **01 (one) no. A3 Colour Printer** as per technical specification.
- d) Supply, installation & commissioning of **03 (three) nos. 27 Inch Monitor** with related accessories as per technical specification.
- e) **Networking of Workstation** with the existing system as per technical specification.
- f) Supply & installation of **01 (one) no. UPS** as per technical specification.
- g) Supply & installation of **01 (one) no. Quick Heal Total Security** Antivirus for 01 User with 3 years validity.
- h) Supply & installation of **01 (one) no. Tower Server** as per technical specifications.
- i) Supply & installation of **01 (one) no. Windows Server 2022** latest version with perpetual license. Client Access License (CAL) of OS should match with number of core processor.
- j) **Networking of Server** with existing system as per technical specifications.
- k) Supply & installation of **01 (one) no. Online UPS** as per technical specification.
- l) Supply & installation of **01 (one) no. Quick Heal Total Security Antivirus – Server Edition** for 01 user with 3 years validity.
- m) Supply & installation of **01 (one) no. A4 All-in-One Printer** as per technical specification.
- n) Comprehensive support on all hardware supplied and all software installed.
- o) Installation & commissioning are to be done in presence of the BBJ team, on the specified date informed by BBJ.
- p) Support on Installation & commissioning of aforementioned Hardware supplied and Software installed for the next three years from the date of completion of entire works.

### TECHNICAL SPECIFICATIONS

- 1 **Server:** As per Annexure-A.
- 2 **Workstation Desktop:** As per Annexure-B.
- 3 **A3 Colour Printer:** Brother MFC-T4500DW (All-in-One Ink Tank Refill System Printer with Auto Duplex Printing)
- 4 **27 Inch Monitor:** HP / Dell 27-inch, 1920 x 1080 Pixels Full HD Monitor - Height Adjustable, IPS Panel with HDMI, VGA DP & USB Ports.
- 5 **Networking of workstation:** Cisco / Netgear make Smart Manage 24 Port RJ45 plus 2 SFP Port (for OFC) switch. 2 No's SFP Module for above switch, Molex OFC (as per actual requirement), CAT 6e (as per actual requirement), Splicing of Fiber with supply of Junction box & pigtail etc. Laying with labour and Material.
- 6 **UPS:** APC / Cyber Power 1100 VA Tower UPS (with battery) for backup of minimum 30 Minutes.
- 5 **Networking of server and other 5-6 points of connection:** Cisco / Netgear Smart Manage 24 Port RJ45 plus 2 SFP Port (for OFC) switch. 2 No's SFP Module for above switch, Molex OFC (as per actual requirement), CAT 6e (as per actual requirement), Splicing of Fiber with supply of Junction box & pigtail etc. Laying with labour and Material.
- 6 **Online UPS:** APC / Cyber Power 2 KVA online UPS (with battery).
- 7 **A4 All-in-One Printer:** Canon PIXMA G2730 All-in-one (Print, Scan, Copy) Ink tank Printer with Small Size Ink Bottles.

**TECHNICAL SPECIFICATION/ MAKE/ MODEL OF THE OFFERED PRODUCT TO BE MENTIONED IN THE TECHNICAL BID.**

**Configuration / Technical specification of Appraisal System Web Server cum production server**

| Sl. No. | Item Description       | Specification  | Complied   | Remarks & Reference to OEM document |
|---------|------------------------|--|------------|-------------------------------------|
|         |                        |  | (Yes / No) |                                     |
| A       | Tower Server           | Required to install & configure Windows server standard 2022 including other software and server settings, RAID Configuration, auto data synchronization & backup to another systems.                    |            |                                     |
| 1       | Make & Model           | Dell / HP, Bidder required to mention Make & Model of server here.   |            |                                     |
| 2       | Configured processors  | 2 x Intel Xeon Gold 5217 or above, 3.0GHz or above, 2 x 8C (Total 16C), 10.4GT/s 2UPI, 11MB or above Cache   |            |                                     |
| 3       | DIMM slots             | 24 or above DIMM / RDIMM / LRDIMM slots supporting DDR4 RAM or above. 12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel   |            |                                     |
| 4       | Configured Memory      | Configured with 2 X 32 GB or 4 x 16GB or above ECC RAM   |            |                                     |
| 5       | Disks supported        | 16 or above drives (2.5 inch) Hot-swappable SAS, SATA SSD / HDD drives   |            |                                     |
| 6       | Disks configured       | 4 x 2.5" 800 GB or above SAS SSD and 2 x 3.5" 2TB, 7200 rpm or above SATA / SAS HDD  |            |                                     |
| 7       | Storage Controller     | Smart Array S100i SR Gen10 Software RAID, supporting 6Gb/s SATA, is an entry-level solution for supporting RAID 0, 1, 5, and 10 on SATA drives connected to the embedded SATA ports on the system board. |            |                                     |
| 8       | RAID configured        | Smart Array S100i SR Gen10 Software RAID or above. Should support RAID 0, 1, 5 and 10.   |            |                                     |
| 9       | Operating System       | Microsoft Windows Server 2022 Standard with Media Kit (CD / DVD / Paper license) + CAL of OS should match with no. of core processor.  |            |                                     |
| 10      | DVD Writer             | DVD RW, SATA, Internal   |            |                                     |
| 11      | I/O slots              | 4 or above PCIe3.0 or above  |            |                                     |
| 12      | Ethernet ports         | Minimum 2 x 1GbE Network Adapters  |            |                                     |
| 13      | Fibre Channel Adapters | 1 x 10GbE Fibre Channel Adapter  |            |                                     |
| 14      | Certification          | Should be certified for latest version of MS Windows, RHEL, SUSE Linux Enterprise Servers.   |            |                                     |
| 15      | Power Supply           | Dual, Hot-Plug, Redundant Power Supply   |            |                                     |
| 16      | Warranty               | 3 years On-site Comprehensive warranty with support directly managed by OEM (Bidders to submit letter from OEM confirming the same). Support procedure requirie to manage by the vendor.                 |            |                                     |
| 17      | Other acceries         | Keyboard, Mouse (wireless not acceptable), Monitor etc. with all other acceries of Tower Server.   |            |                                     |

## Configuration / Technical specification of Drawing Dept. Workstation Desktop

| Sl. No.   | Item Description       | Specification   | Complied  | Remarks & Reference to OEM document |
|---|------------------------|---|-----------|-------------------------------------|
|   |                        |   | (Yes/ No) |                                     |
| 1   | Workstation Desktop PC | Full Tower, Required to install & configure Windows OS (Latest Version) including other software and settings as per requirement and informed by BBJ.   |           |                                     |
| 2   | Make & Model           | Dell / HP, Bidder required to mention Make & Model of server here   |           |                                     |
| 3   | Configured processors  | Intel® Core™ i7-13700 (1.5 GHz E-core base frequency, 2.1 GHz P-core base frequency, up to 4.1 GHz E-core Max Turbo frequency, up to 5.1 GHz P-core Max Turbo frequency, 30 MB L3 cache, 8 P-cores and 8 E-cores, 24 threads)<br><b>OR</b> Intel® Core™ i7-13700K (2.5 GHz E-core base frequency, 3.4 GHz P-core base frequency, up to 4.2 GHz E-core Max Turbo frequency, up to 5.3 GHz P-core Max Turbo frequency, 30 MB L3 cache, 8 P-cores and 8 E-cores, 24 threads) on Chipset Intel® W680 or above |           |                                     |
| 4   | Memory Slots           | 4 No's DIMM slots with Maximum memory of 128 GB DDR5-4400 non-ECC SDRAM; 128 GB DDR5-4400 ECC SDRAM with Transfer rates up to 4400 MT/s.  |           |                                     |
| 5   | Configured Memory      | 2 x 16 GB DDR5 ECC SDRAM  |           |                                     |
| 6   | Disks supported        | External: One slim ODD; One 5.25" ODD;  |           |                                     |
|   |                        | Internal: One 2.5" HDD; Two 3.5" HDD; Three M.2 NVME 2280 SSD   |           |                                     |
|   |                        | Internal Storage Support:   |           |                                     |
|   |                        | 500 GB up to 2 TB 7200 rpm SATA HDD   |           |                                     |
|   |                        | 1 TB up to 12 TB 7200 rpm Enterprise SATA HDD   |           |                                     |
|   |                        | up to 500 GB 7200 rpm SED HDD   |           |                                     |
|   |                        | 512 GB up to 4 TB HP Z Turbo Drive PCIe® NVMe™ TLC M.2 SSD  |           |                                     |
| 512 GB up to 4 TB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 TLC M.2 SSD |                        |   |           |                                     |
| 256 GB up to 1 TB PCIe® NVMe™ Value M.2 SSD                           |                        |   |           |                                     |
| 500 GB up to 2 TB CRU SHIPS Removable NVMe™ Module                    |                        |   |           |                                     |
| 7   | Disks configured       | 3 X 1 TB or above PCIe® NVMe™ Value M.2 SSD   |           |                                     |
| 8   | Power                  | 350 W 92% efficient, wide-range, active PFC;<br>700 W 92% efficient, wide-ranging, active PFC;<br>500 W 90% efficient, wide-ranging, active PFC;<br>450 W 90% efficient, wide-ranging, active PFC;<br>with 350 W 92% efficient, wide-range, active PFC OR 700 W 92% efficient, wide-ranging, active PFC installed   |           |                                     |
| 9   | Operating System       | Microsoft Windows 11 Pro, Latest Version with Media Kit (CD / DVD / Paper license).   |           |                                     |
| 10  | Available Graphics     | Integrated:   |           |                                     |
|   |                        | Intel® UHD Graphics 770   |           |                                     |
|   |                        | Entry 3D:   |           |                                     |
|   |                        | NVIDIA® T400 (4 GB GDDR6 dedicated)   |           |                                     |
|   |                        | AMD Radeon™ Pro WX 3200 (4 GB GDDR5 dedicated)  |           |                                     |
|   |                        | Mid-range 3D:   |           |                                     |
|   |                        | NVIDIA RTX™ A2000 (12 GB GDDR6 dedicated)   |           |                                     |
|   |                        | NVIDIA® T1000 (8 GB GDDR6 dedicated)  |           |                                     |
|   |                        | AMD Radeon™ Pro W6600 (8 GB GDDR6 dedicated)  |           |                                     |
|   |                        | NVIDIA® T1000 (4 GB GDDR6 dedicated)  |           |                                     |
|   |                        | NVIDIA RTX™ A2000 (6 GB GDDR6 dedicated)  |           |                                     |
|   |                        | High-end 3D:  |           |                                     |
|   |                        | NVIDIA RTX™ A5000 (24 GB GDDR6 dedicated)   |           |                                     |
| AMD Radeon™ Pro W6800 (32 GB GDDR6 dedicated)                         |                        |   |           |                                     |
| AMD Radeon™ RX 6400 Graphics (4 GB GDDR6 dedicated)                   |                        |   |           |                                     |
| AMD Radeon™ RX 6700 XT Graphics (12 GB GDDR6 dedicated)               |                        |   |           |                                     |

|    |                        |   |  |  |
|----|------------------------|---|--|--|
|    |                        | <p>AMD Radeon™ Pro W7900 (48 GB GDDR6 dedicated)</p> <p>NVIDIA RTX™ 5000 Ada Generation (32 GB GDDR6 dedicated)</p>   |  |  |
| 11 | Ports and Connectivity | <p>Front:</p> <p>4 SuperSpeed USB Type-A 10Gbps signaling rate (1 charging); 1 universal audio jack;</p> <p>Rear:</p> <p>1 audio-in; 1 audio-out; 1 RJ-45; 2 DisplayPort™ 1.4; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 1 SuperSpeed USB Type-A 5Gbps signaling rate; 3 USBType-A 480Mbps signaling rate;</p> <p>Optional Ports: Flex IO Front – choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (1 charging), 1 SD 4.0 card reader. Flex IO – choose one of the following options: 1 DisplayPort™ 1.4, 1 HDMI 2.0b, 1 VGA, 1 2nd 1GbE LAN, 1 Dual SuperSpeed USB Type-A 5Gbps signaling rate, 1 SuperSpeed USB Type-C® 10Gbps signaling rate (15W USB Power Delivery, Alt Mode DisplayPort™), 1 Thunderbolt™ 3 with SuperSpeed USB4 Type-C® 40Gbps signaling rate (cabled to PCIe®/AIC). Front: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 1 SD card reader. Flex IO Rear: choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 2 SuperSpeed USB Type-A 5Gbps signaling rate, 1 serial. Flex IO Front : choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 1 SD 4.0 card reader.</p> |  |  |
| 12 | Communications         | <p>LAN: Intel® Ethernet Network Adapter I225-T1; Intel® I350-T2 dual-port GbE NIC; Intel® X550-T2 dual-port 10GbE NIC; NVIDIA® Mellanox ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC; Allied Telesis AT-2911T/2-901 dual-port 1GbE NIC; Intel® i225-T1 single-port 2.5 GbE NIC; WLAN: Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card with external antenna; Intel® Wi-Fi 6 AX211 (2x2) and Bluetooth® 5.3 wireless card with internal antenna. Intel® X550-T2 dual-port 10GbE NIC installed.</p>  |  |  |
| 13 | Warranty               | <p>3 years On-site Comprehensive warranty with support directly managed by OEM (Bidders to submit letter from OEM confirming the same)</p>  |  |  |
| 14 | Other accessories      | <p>Keyboard, Mouse (wireless not acceptable), minimum 27" Monitor etc. with all other acceries of Tower work station.</p>   |  |  |