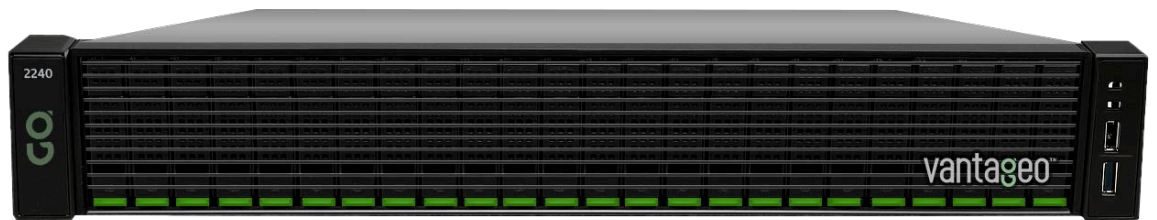# vantageo™

# Vantageo 2240-RE Server

## Flexible, Scalable, and Secure



Vantageo 2240-RE is a new-generation 2U 2 -socket general rack server, which supports 2 Intel ® Xeon ® 4th and 5th generation scalable processor (Eagle Stream). Vantageo 2240-RE uses a high-density, modular, and streamline design. It features high capability, large capacity, high reliability, easy expansion, and easy management, which is widely applicable to interconnection, network, cloud computing, big data, and virtualization.

## Overview

Vantageo 2240-RE is a highly versatile and powerful server designed for enterprise environments

## Key Specifications

- **Processor:** Supports up to two 4/5th Generation Intel Xeon Scalable processors (Eagle Stream), with up to 64 cores per processor.

- **Memory:** Supports up to 32 DDR5 DIMM slots, capable of up to 8 TB of memory using 256 GB DDR5 memory modules. It also supports Persistent Memory (PMem) modules.

- **Storage:** Provides a maximum of 45 2.5" slots or 20 3.5" slots + 4 2.5" slots to meet the requirements for largecapacity storage.
  Supports a maximum of 34 NVMe SSDs, a maximum of 40 E1.S1, and a maximum of 40 E3.S1, provides high-speed I/O interfaces, and solves the bottleneck of slow hard disk access in traditional solutions.

- **Networking:** OCP 3.0 slot for networking, providing options for 1GbE, 10GbE, 25GbE, and 100GbE network interfaces.

- **Expansion Slots:** Up to 20 PCIe 4.0 slots for expansion, allowing for various configurations of RAID controllers, GPUs, or additional networking cards.

- **Power Supply:** Redundant power supplies with options ranging from 550W/800W/1200W/ /2000W/2700W, depending on the configuration.

- **Management:** Integrated management port for server management, including remote management capabilities.

- **Virtualization:** Suitable for running multiple virtual machines (VMs) due to its high core count and memory capacity.

## Supports Details

- Supports standard interfaces such as IPMI, SNMP, and Redfish, so that the device can be integrated with third-party management systems.

- Supports automatic deployment, firmware upgrade, and remote operations to improve deployment and O&M efficiency.

## Vantageo 2240-RE Details

### Processor:

- **CPU Options:** Supports up to two 4/5th Generation Intel Xeon Scalable processors (code-named Eagle Stream).

- **Core Count:** Up to 64 cores per processor.

- **Cache:** Up to 105 MB of L3 cache per processor.

### Memory:

- **Memory Slots:** 32 DIMM slots supporting DDR5 memory.

- **Capacity:** Supports up to 8 TB of total memory when using 256 GB DDR5 RDIMM modules.

- **Memory Type:** DDR5 at speeds of up to 5600 MT/s.

### Storage:

- Provides a maximum of 45 2.5" slots or 20 3.5" slots + 4 2.5" slots

- Supports a maximum of 34 NVMe SSDs

- Supports a maximum of 40 E1.S and a maximum of 40 E3.S

### Networking:

- OCP 3.0 slot providing a range of options, including 1GbE, 10GbE, 25GbE, and 100GbE adapters.

- Additional PCIe slots can be used for further network expansion.

- **Security:** Silicon Root of Trust, and runtime firmware validation to ensure data and system integrity.

### Management:

- Provides advanced server management features, including remote console access, virtual media, and power management.

- Integrated with Vantageo server manager for predictive analytics and automated management.

- Vantageo Server Suite Provides enterprise-level management functions and reliability, automatic equipment on-duty observation, real-time monitoring of core components, and classification and reporting of faulty streamlines, providing comprehensive guarantee for data center O&M.

- Enhanced security with features like Secure Boot, Secure Erase etc...

### Power Supplies:

- Supports 1+1 hot/swappable redundant power supplies (Optional)550W/800W/1200W/1600W/2000W/2700W,high-efficiency platinum/titanium power supply

### Security Features:

- Silicon Root of Trust: Ensures firmware and BIOS integrity by anchoring the server to the hardware.

- Runtime Firmware Validation: Continually verifies firmware integrity during operation.

- Vantageo Secure Recovery: Automatically restores firmware to a known good state in case of corruption.

- Secure Boot: Protects against unauthorized firmware and software from running during the boot process.

## Technical details     Vantageo 2240-RE Details

| | |
|---|---|
| Form Factor | 2U rack server |
| Adaptable cabinet | 19 inches ≥1,000mm-deep cabinet |
| Chipset | Intel C741 |
| Processor | Supports 1/2 Intel® Xeon® 4th/5th-generation scalable processors (Eagle Stream), with up to 64 cores per processor with heatsink |
| Memory slot | Supports 32 DDR5 memory slots with a maximum rate of 4800/5600MT/s |
| Memory Protection | Advanced ECC |
| Memory DIMMS Supports | 16GB DDR5-4800/5600    128GB DDR5-4800/5600<br>32GB DDR5-4800/5600    256GB DDR5-4800/5600<br>64GB DDR5-4800/5600 |
| Hard disk controller | Supports RAID 0/1/5/6/10/50/60 and power-off protection |
| Raid Controller | PCIe SAS Raid Card 12Gbps 2Gb caches, support Raid, 0, 1, 5, 6, 10, 50 ,60 with battery backup<br>PCIe SAS Raid Card 12Gbps 4Gb caches, support Raid, 0, 1, 5, 6, 10, 50 ,60 with battery backup<br>PCIe SAS Raid Card 12Gbps 8Gb caches, support Raid, 0, 1, 5, 6, 10, 50 ,60 with battery backup (Supports NVMe)<br>Raid controller cooling with heat sink |
| Raid Manager | RAID Manager<br>(command-line interface)<br>BIOS Configuration Utility |
| Key RAID Data Protection Feature | Online Capacity Expansion<br>Online RAID level Migration<br>Fast initialization for quick array setup<br>Check consistency for background data integrity<br>S.M.A.R.T support<br>Global and dedicated Hot Spare with Revertible Hot Spare support<br>Automatic rebuild<br>Health Monitoring tool, Error indication alerts<br>Multi Raid array Support |
| Hard disk | Provides multiple front storage bays, hot swapping, HDDs, and SSDs.<br>45x2.5 slots, supporting SAS/SATA/<br>20x3.5 slots+ 4x2.5 slots supporting SAS/SATA/<br>Support a maximum of 34 NVMe SSDs<br>Support a maximum of 40 E1.S and a maximum of 40 E3.S |
| Display | Integrated display controller,supporting the optional configuration of PCIe standard display cards |
| System management | Web Management interface<br>Monitoring of critical components like Fan, Power ,CPU , HDD, Raid<br>Telemetary details<br>Support sending alarm notification securely to OEM / Personal for troubleshooting<br>**Vantageo Server Suite Provides Comprehensive** |
| PCIe slot | Supporting up to 20 PCIe expansion slots: 2 OCP dedicated slots, 18 PCIe standard slots |
| Onboard Ports | 2 OCP NIC 3.0 |
| External device interface | Five USB interfaces (two rear USB3.0 interfaces, one front USB3.0 interface, one internal USB2.0 interface, one front USB2.0 interface)<br>Two VGA interfaces (one for front end and one back for end)<br>One serial port |
| Power | Supports 1+1 hot/swappable redundant power supplies.<br>(Optional)550W/800W/1200W/1600W/2000W/2700W,high-efficiency platinum/titanium power supply<br>Supports 110V/220V AC, 240V/336V high-voltage DC, and-48V DC. |

| | |
|---|---|
| Security | TPM 2.0(Trusted Platform Module), Authenticated BIOS, secure Boot, Silicon Root of Trust, Disk Encryption, Hardware Root of Trust Sign firmware updates and bios core / Scan for malicious firmware Malicious core free design |
| BIOS | UEFI compliant<br>BIOS Flash EPROM update by software<br>BIOS settings save and restore<br>Local BIOS update from USB device<br>Secure boot support |
| Remote Management | Remote management supports hardware components, Power on/off and boot process. Supports Management log , Audit Logs and dedicated Management roles bases on users Ports can be integrate with industry wide KVM solution. Monitoring fan, power supply, memory, CPU, RAID, NIC for failures. Remote management supports telemetry streaming and Idle Server Detection. Supports Role Based Security through LDAP or Local and able to provide pre-failure alarms for CPU, Memory and HDD by SMTP. |
| Operating buttons | On/off switch<br>ID button<br>Reset button |
| Status LEDs | Power ON<br>Customer self service<br>Light path diagnostic led<br>Hard disks access |
| Environment conditions | Operating temperature: +5 C to +40 C (depending on the configuration, refer to the technical document for details) Storage temperature: -40°C - 65°C Operating humidity: 8% 90% RH, no condensation Transportation and storage humidity: 5% 95% RH, no condensation Altitude: ≤3,000m，When the altitude is 900m higher, the operating temperatureis reduced by 1 C for every 300m higher. If the altitude is more than 3,000m, you cannot configure mechanical hard disks |
| System size | 432mm x 87.6mm x 780mm (W x H x D) |
| Fan | Four groups of high-efficiency fans, N+1 redundancy, and intelligent heat dissipation system |
| Weight | 40 kg in full configuration (excluding guide rails) |

## Supported Components

| | |
|---|---|
| CPU | CPU-Intel-Xeon Silver-4410T-10core-2.7GHz-150W-HeatSink |
| | CPU-Intel-Xeon Silver-4410Y-12core-2.0GHz-150W-HeatSink |
| | CPU-Intel-Xeon Silver-4416+ -20core-2.0GHz-165W-HeatSink |
| | CPU-Intel-Xeon Gold-5415+ -8core-2.9GHz-150W-HeatSink |
| | CPU-Intel-Xeon Gold-5418N-24core-1.8GHz-165W-HeatSink |
| | CPU-Intel-Xeon Gold-5420+ -28core-2.0GHz-205W-HeatSink |
| | CPU-Intel-Xeon Gold-5416S-16core-2.0GHz-150W-HeatSink |
| | CPU-Intel-Xeon Gold-5418Y-24core-2.0GHz-185W-HeatSink |
| | CPU-Intel-Xeon Gold-6438M-32core-2.2GHz-205W-HeatSink |
| | CPU-Intel-Xeon Gold-6438Y+ -32core-2.0GHz-205W-HeatSink |
| | CPU-Intel-Xeon Gold-6426Y-16core-2.5GHz-185W-HeatSink |
| | CPU-Intel-Xeon Gold-6430-32core-2.1GHz-270W-HeatSink |
| | CPU-Intel-Xeon Gold-6438N-32core-2.0GHz-205W-HeatSink |
| | CPU-Intel-Xeon Gold-6428N-32core-1.8GHz-185W-HeatSink |
| | CPU-Intel-Xeon Gold-6448Y-32core-2.1GHz-225W-HeatSink |

CPU-Intel-Xeon Gold-6434-8core-3.7GHz-195W-HeatSink

CPU-Intel-Xeon Gold-6442Y-24core-2.6GHz-225W-HeatSink

CPU-Intel-Xeon Gold-6444Y-16core-3.6GHz-270W-HeatSink

CPU-Intel-Xeon Platinum-8468V-48core-2.4GHz-330W-HeatSink

CPU-Intel-Xeon Platinum-8458P-44core-2.7GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8460Y+ -40core-2.0GHz-300W-HeatSink

CPU-Intel-Xeon Platinum-8462Y+ -32core-2.8GHz-300W-HeatSink

CPU-Intel-Xeon Platinum-8452Y-36core-2.0GHz-300W-HeatSink

CPU-Intel-Xeon Platinum-8470N-52core-1.7GHz-300W-HeatSink

CPU-Intel-Xeon Platinum-8470-52core-2.0GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8480+ -56core-2.0GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8468-48core-2.1GHz-350W-HeatSink

CPU-Intel-Xeon Gold-5515+ -8core-3.2GHz-165W-HeatSink

CPU-Intel-Xeon Gold-5520+ -28core-2.2GHz-205W-HeatSink

CPU-Intel-Xeon Gold-6416H-18Core-2.2GHz-165W-HeatSink

CPU-Intel-Xeon Gold-6418H-24Core-2.1GHz-185W-HeatSink

CPU-Intel-Xeon Gold-6433N-32core-2.0GHz-205W-HeatSink

CPU-Intel-Xeon Gold-6434H-8Core-3.7GHz-195W-HeatSink

CPU-Intel-Xeon Gold-6443N-32core-2.0GHz-195W-HeatSink

CPU-Intel-Xeon Gold-6448H-32core-2.4GHz-250W-HeatSink

CPU-Intel-Xeon Gold-6526Y-16core-2.8GHz-195W-HeatSink

CPU-Intel-Xeon Gold-6530-32core-2.1GHz-270W-HeatSink

CPU-Intel-Xeon Gold-6530-32core-2.1GHz-270W-HeatSink

CPU-Intel-Xeon Gold-6534-8core-3.9GHz-195W-HeatSink

CPU-Intel-Xeon Gold-6538N-32core-2.1GHz-205W-HeatSink

CPU-Intel-Xeon Gold-6538Y+ -32core-2.2GHz-225W-HeatSink

CPU-Intel-Xeon Gold-6542Y-24core-2.9GHz-250W-HeatSink

CPU-Intel-Xeon Gold-6544Y-16core-3.6GHz-270W-HeatSink

CPU-Intel-Xeon Gold-6548N-32core-2.8GHz-250W-HeatSink

CPU-Intel-Xeon Gold-6548Y+ -32core-2.5GHz-250W-HeatSink

CPU-Intel-Xeon Gold-6554S-36core-2.2GHz-270W-HeatSink

CPU-Intel-Xeon Platinum-8444H-16Core-2.9GHz-270W-HeatSink

CPU-Intel-Xeon Platinum-8450H-28Core-2.0GHz-250W-HeatSink

CPU-Intel-Xeon Platinum-8454H-32Core-2.1GHz-270W-HeatSink

CPU-Intel-Xeon Platinum-8460H-40Core-2.2GHz-330W-HeatSink

CPU-Intel-Xeon Platinum-8468H-48Core-2.1GHz-330W-HeatSink

CPU-Intel-Xeon Platinum-8490H-60Core-1.9GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8558-48core-2.1GHz-330W-HeatSink

CPU-Intel-Xeon Platinum-8558P-48core-2.7GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8562Y+ -32core-2.8GHz-300W-HeatSink

CPU-Intel-Xeon Platinum-8568Y+ -48core-2.3GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8570-56core-2.1GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8580-60core-2.0GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8592+ -64core-1.9GHz-350W-HeatSink

CPU-Intel-Xeon Platinum-8592V-64core-2.0GHz-330W-HeatSink

CPU-Intel-Xeon Silver-4509Y-8core-2.6GHz-125W-HeatSink

CPU-Intel-Xeon Silver-4510-12core-2.4GHz-150W-HeatSink

CPU-Intel-Xeon Silver-4510T-12core-2.0GHz-115W-HeatSink

CPU-Intel-Xeon Silver-4514Y-16core-2.0GHz-150W-HeatSink

CPU-Intel-Xeon Silver-4516Y+ -24core-2.2GHz-185W-HeatSink

| SAS HDD | HDD-600GB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box |
|---|---|
| | HDD-1.2TB-SAS-2.5"-10K-12Gb/s-TOSHIBA-2.5-inch hard disk box |
| | HDD-1.8TB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box |
| | HDD-2.4TB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box |
| | HDD-1.2TB-SAS-2.5"-10K-12Gb/s-TOSHIBA-3.5-inch hard disk box |
| | HDD-12TB-SAS-3.5"-7.2K-12Gb/s-3.5-inch hard disk box |
| | HDD-1.8TB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box |
| | HDD-2.4TB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box |
| | HDD-4TB-SAS-3.5"-7.2K-12Gb/s-WD-3.5-inch hard disk box |
| | HDD-600GB-SAS-2.5"-10K-12Gb/s-SEAGATE-2.5-inch hard disk box |
| | HDD-600GB-SAS-2.5"-10K-12Gb/s-SEAGATE-3.5-inch hard disk box |
| | HDD-600GB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box |

| SATA HDD | HDD-12TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
|---|---|
| | HDD-14TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-16TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-16TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-20TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-2TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-4TB-SAS-3.5"-7.2K-12Gb/s-WD-3.5-inch hard disk box |
| | HDD-4TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-8TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |
| | HDD-8TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box |

| SSD SATA | SSD-480GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box |
|---|---|
| | SSD-960GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box |
| | SSD-1.92TB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box |
| | SSD-1.92TB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box |
| | SSD-240GB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4510-2.5-inch hard disk box |
| | SSD-240GB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4510-3.5-inch hard disk box |
| | SSD-3.84TB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-2.5-inch hard disk box |
| | SSD-3.84TB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-3.5-inch hard disk box |
| | SSD-3.84TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-2.5-inch hard disk box |
| | SSD-3.84TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-3.5-inch hard disk box |
| | SSD-480GB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-2.5-inch hard disk box |
| | SSD-480GB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-3.5-inch hard disk box |
| | SSD-480GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box |
| | SSD-480GB-SATA-M.2-2280-6Gb/s-Intensive read type-Intel S4520 |
| | SSD-480GB-SATA-M.2-2280-6Gb/s-Intensive read type-Micron |
| | SSD-7.68TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-2.5-inch hard disk box |
| | SSD-7.68TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-3.5-inch hard disk box |
| | SSD-960GB-SATA-2.5"-6Gb/s-Read-write hybrid-Intel S4620-2.5-inch hard disk box |
| | SSD-960GB-SATA-2.5"-6Gb/s-Read-write hybrid-Intel S4620-3.5-inch hard disk box |
| | SSD-960GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box |
| | SSD-960GB-SATA-M.2-2280-6Gb/s-Intensive read type-Micron |

| NVME SSD | SSD-1.92TB-NVMe PCIe-2.5 -PCIE 4.0*4-Intensive read type-Samsung PM9A3-2.5-inch hard disk box |
|---|---|
| | SSD-7.68TB-NVMe PCIe-2.5 -PCIE 4.0*4-Intensive read type-Samsung PM9A3-2.5-inch hard disk box |

|  |  |
|---|---|
|  | SSD-960GB-NVMe PCIe-2.5 -PCIE 4.0*4-Intensive read type-Samsung PM9A3-2.5-inch hard disk box |
|  | SSD-1.6TB-NVMe PCIe-2.5 -PCIE 4.0*4-Read-write hybrid-Intel P5620-2.5-inch hard disk box |
|  | SSD-1.6TB-NVMe PCIe-2.5 -PCIE 4.0*4-Read-write hybrid-Intel P5620-3.5-inch hard disk box |
|  | SSD-1.92TB-NVMe PCIe-2.5 -PCIE 4.0*4-Intensive read type-Samsung PM9A3-3.5-inch hard disk box |
|  | SSD-960GB-NVMe PCIe-2.5 -PCIE 4.0*4-Intensive read type-Samsung PM9A3-3.5-inch hard disk box |
| Fibre Channel Card | PCIe FC HBA-LPE31002-2x16G SFP+ -PCIe3.0x8-with optical module |
|  | PCIe FC HBA-LPe32002-2x32G SFP+ -PCIe3.0x8-with optical module |
| NIC card | PCIE NIC-I350-Intel-2x1G-RJ45-PCIe3.0x8 |
|  | PCIE NIC-I350-Intel-4x1G-RJ45-PCIe3.0x8 |
|  | PCIE NIC-MCX512A-ACAT-Mellanox CX5-2x25G SFP28-PCIe3.0x8-no optical module |
|  | PCIE NIC-X710-Intel-2x10G-RJ45-PCIe3.0x8 |
|  | PCIe NIC-NS312-Mellanox CX4-2x25G SFP28-PCIe3.0x8-no optical module |
|  | PCIE NIC-MCX512A-ACUT-Mellanox CX5-2x25G SFP28-PCIe3.0x8-no optical module |
|  | PCIE NIC-MCX623106AN-CDAT-Mellanox CX6-2x100G QSFP56-PCIe4.0x16-no optical module |
|  | PCIE NIC-XXV710-Intel-2x25G SFP28-PCIe3.0x8-no optical module |
| Certified or supported operating system & virtualization Software | Compatible with mainstream server operating systems: |
|  | Microsoft Windows Sever - 2022 Datacenter |
|  | Microsoft Windows Sever - 2019 Datacenter |
|  | Microsoft Windows Sever - 2019 Standard |
|  | Microsoft-Hyper V |
|  | Red Hat Enterprise Linux 9.0 - 9.x |
|  | Red Hat Enterprise Linux 8.6 - 8.x |
|  | Red Hat Enterprise Linux 8.4 LTS, 8.5 and Late |
|  | Red Hat Open stack 17.0 - 17.X |
|  | Red Hat Openshift Virtualization |
|  | Red Hat Openshift Kubernetes |
|  | Open Source Linux KVM |
|  | SUSE Linux Enterprise Server 15 SP3 and Later |
|  | SUSE Linux Enterprise Server 15.5 Virtualization (KVM and XEM) |
|  | Ubantu Server 21.10 & 22.04 LTS and Later |
|  | VMWare vSphere 8.0 |
|  | VMWare vSphere 7.0 |

## Recommended support

24x7 - 4 hours Response, Next Business Day Call to Resolution CTR

24x7 - 4 hours Response, 24 Hours Call to Resolution CTR

24x7 - 4 Hours Response, 6 Hours Call to Resolution CTR

Default support Next Business Day  Consulting and deployment offerings are also available. Contact Vantageo representative for the more information.

vantageo™