Montgomery County Community College

Functional, Technical and Support Features

Attachment A – Request for Proposal, Hyper Converged Hosting Environment for Virtual Workloads

March 2016
Functional, Technical and Support Requirements

The Functional, Technical and Support Requirements in this document summarize the key features of the proposed solution.

- The response must include answers directly below all questions.
- The responses must correlate to the solution being presented. For example, if the solution calls for hybrid (SSD and HDD) storage then it is expected that when a question asks to explain supported RAID types then only those pertinent to the solution will be described.
- If the response/answer to a question below is vague or a reference is made to any guide or supplement and not specifically answered in the section immediately following the question, then that feature will be determined as being unavailable and the product rated accordingly.
- See Proposal Preparation Instructions (Section 2) of the RFP Document for more information.

User guides and/or product specification guides will not be allowed to act as a substitute for the responses to any of the attachments in the aforementioned sections in the above paragraph. If the response to a feature availability, or response to a question (attachment A), is vague or a reference is made to any guide or supplement and not specifically answered, then that feature will be determined as being unavailable and the product rated accordingly. Product specification and user guides may be attached in order to provide supplemental information regarding the proposed solution’s features and specifications, but not act as a substitute for an answer or response to a question in an attachment to this RFP. The solution must provide for the full capacities. The College will only consider complete solutions combining all components of a Hyper Convergence solution including but not limited to hardware (chassis, compute), software, switching/connectivity, and storage as a selectable option

Please complete the requirement matrix by filling in the Vendor Response column to each requirement. The following are general classifications for determining vendor’s responses for the desired infrastructure environment.

- Functional – Description of various product features and components including overall usability, functionality, interoperability, and scalability
- Technical – Description of the products interfaces, performance in the ability to manage workloads, capacity (compute and storage), configuration, and management.
- Support – Description of the manufacturers support capabilities and upgrade paths

1 Functional Classification

1.1 Describe the basic concepts of the solution architecture and components.
Answer:

1.2 Describe the integration and the interoperability with VMware. Additionally list any benefits and any caveats to using your solution with VMware.
Answer:

1.3 Describe the integration and interoperability with Veeam Replication and with Veeam Backup and Recovery (these are two separate functions of Veeam software suite and requires two separate answers). Additionally list any benefits and any caveats to using your solution with Veeam replication and with Veeam.
Answer:
1.4 Explain how the solution would scale if more storage space was needed? Please note both the maximum supported raw storage capacity per node, and the maximum supported raw storage capacity per maximum cluster size in that the hyper-converged system supports for the entire system in its largest configuration.

Answer:

1.5 Explain how the solution would scale if more compute (cpu, memory) resources were needed? Please note both the maximum supported compute capacity per node, and the maximum supported compute capacity per maximum cluster size that the hyper-converged system supports for the entire system in its largest configuration. (Please list for both CPU and Memory).

Answer:

1.6 Explain the minimum and maximum number of nodes supported for the solution. Please note both the minimum and maximum number of supported nodes for the hyper-converged system. A node in this scenario is defined as a unit containing a CPU, memory, HDD and/or SDDs.

Answer:

1.7 Explain how the solution conserves disk space and protects data from a hardware failure? This may include the following features: compression, deduplication, thin provisioning, dynamic tiering, and multiple copies of data.

Answer:

1.8 Explain how the solution will allow for remote management of the nodes? Please note if this is a third party option and if so the costs must be included in the total cost of the solution.

Answer:

1.9 Does the solution require a top-of-rack switch? Please specify if the top of rack switch requires specific hardware or must be compatible with a specific manufacturers offering.

Answer:

1.10 Explain the solutions connectivity between the nodes, chassis and existing infrastructure. Please include supported speeds and protocols and how data path redundancy is implemented.

Answer:

1.11 Does the solution support multiple hypervisors? Please list the hypervisors supported.

Answer:

1.12 Does the solution offer native backup and recovery of virtual machines and physical nodes? Please describe the native backup and restore model if the solution does support backup without the use of third party. Please include a description of the following items: use of agents, targets supported (disk, tape, cloud), options (full, incremental, etc.), deduplication and compression, backup levels (VM, physical), supported applications (SQL, SharePoint, Exchange), and file recovery options (single file).

Answer:
1.13  Does the solution offer native replication options? Please describe the options available including replication types (async, sync) and if “like” (identical, or same manufacturer) hardware is required.
Answer:

1.14  Please list compatible backup software and hardware from third party vendors if the solution supports third party backup.
Answer:

1.15  Explain the storage management features that are implemented by the solution to ensure efficient performance? Describe the placement of data on SSD and/or HDD for reads/writes across VMs, and hosts.
Answer:

1.16  Explain the firmware update process including high availability capabilities to ensure the components remain online during routine system upgrades and patches.
Answer:

1.17  Can the hypervisor, in this case VMware, manage all functions of the solution? Please describe the management interface and the capabilities of the centralized reporting/monitoring functions including how the management interface is accessed, detailed storage metrics (IOPS, Latency, Throughput), notification methods (email, alerts in the interface, etc.) and integration with System Center Operations Manager and Veeam One.
Answer:

1.18  Describe the licensing options for the solution, including all components that comprise the total recommended solution.
Answer:

1.19  Explain how the solution handles non-disruptive upgrades when adding hardware or upgrading hypervisor, in this case VMware vCenter/vSphere, or ESXi software.
Answer:

2  Technical Classification
2.1  List the manufacturer of the processor and memory and the capacities of each as specified in the proposed solution.
Answer:

2.2  List the number of power supplies in each node.
Answer:

2.3  List the storage controller model in each node.
Answer:

2.4  List the drive types and manufacturer of the hard drives in each node. Please include capacities of each drive, the total raw capacity of the proposed solution and the useable capacity.
Answer:
2.5 Describe the RAID features of the proposed solution.
Answer:

2.6 List the number of network ports, port types, and port speeds in each node.
Answer:

2.7 Describe how an administrator would provision a datastore using the hyper-converged software management interface. Explain the types of storage policies that can be applied to a virtual machine as they relate to the datastores and placement of virtual machine files on the disks.
Answer:

2.8 Describe how the solution integrates with Active Directory to offer role based administration. Include a listing of the roles available to support the solution.
Answer:

2.9 List the operating system guests that are supported by the solution.
Answer:

3 Support Classification
3.1 Describe the different levels of support offered. Include a detailed description of the support level for the proposed solution.
Answer:

3.2 Describe the support access methods for the proposed solution.
Answer:

3.3 Describe the typical firmware and software update process for the hyper-converged solution and the manufacturer support that is offered. This does not include hypervisor, in this case VMware, upgrades and is specifically targeted to the hardware and software of the hyper-converged hardware and software solution.
Answer:

3.4 Describe the training options available to solution administrators for daily management of the hyper-converged solution.
Answer:

3.5 Describe the upgrade packages release schedule for the hyper-converged solution. Include the number of updates that can be expected to be released annually. This includes both security and feature updates.
Answer: