

Shakopee Datacenter Project



Server / Storage Replacement

Prepared by:
Brent Rebeschke – Solutions Architect
LOGIS

Goals of Project:

Design and implement a new server/storage solution with the following goals:

- Replace existing VMWare ESXI servers
- Replace existing storage
- Increase speed of storage
- Maintain the existing backup and recovery plan
- Maintain the existing disaster recovery plan
- Purchase a 5-year maintenance contract for new hardware
- Design solution to allow for 5 years of growth
- VMWare and Microsoft licensing to remain the same

Summary of Proposed Design:

- Replace 4 Dell VMWare ESXI Servers with 4x Super Micro ESXI Servers
 - The new Super Micros are more cost efficient than Dell
- Replace 2 Dell Compellent SAN's with 2 Pure Storage array SAN's
 - Dell Compellent no longer sells SAN's, and the Pure Storage arrays are better/faster/cheaper than the new Dell equivalents.
- Maintain the existing reference architecture “**VMWare vSphere Metro Storage Cluster**”. This architecture is commonly used in enterprise level IT environments, has the highest level of uptime, the most versatility, and the most robust disaster recovery solution.
 - VMWare Servers will be configured to be active/active with automatic site recovery.
 - Storage will be configured to be active/active with synchronous data replication, with automatic site recovery.
 - Disaster recovery is an automated process, and can easily be tested without an impact on production.

Pricing Summary:

All components will be purchased with “Omni Partners” or “State of MN” or other approved Governmental contracts.

Shakopee Data Center - On Premise - Server/Storage Replacement		
 Benefits through membership, sharing, and collaboration		
Date: June 3, 2024 Member: City of Shakopee Prepared By: Brent Rebischke		
SAN / Storage Purchase:		Pricing
Site 1: Pure Storage FlashArray X50R4-ETH-63TB-45/18-EMZZ		\$ 231,368.97
Site 2: Pure Storage FlashArray X50R4-ETH-63TB-45/18-EMZZ		\$ 231,368.97
(5 years hardware/software maintenance costs are included)		
Server Purchase:		
Site 1: 2x SuperMicro VMWare ESXI Servers - 512GB RAM each		\$ 18,946.54
Site 2: 2x SuperMicro VMWare ESXI Servers - 512GB RAM each		\$ 18,946.54
(5 years hardware/software maintenance costs are included)		
Infrastructure Replacement Project:		
Assumed that available 10/25GB SPF+ ports are available		
Cables - Pure (8x - AOC 3m) and VMWare ESXI (16x - AOC 10m)		\$ 5,088.00
New Nexus switching will be required for this on-premise solution - cost not determined at this time		unknown at this time
Software Purchase-Maintenance (VMWare)		
Shakopee to maintain 4 vSphere Standard licenses (cost not included in this project)		
Software Purchase-Maintenance (Microsoft)		
Shakopee to maintain x cores of Microsoft Datacenter licensing (costs not included in this project)		
Backup and Recovery Solution:		
LOGIS hosted Commvault backup solution - Costs remain the same		
Estimated Labor - Costs are included in yearly service fee - No charge		
See Est Labor Costs tab for details		
Labor Estimation:		\$ 44,660.00
Total Cost		\$ 550,379.02

LOGIS Labor Charges

The design component is a fixed bid. All other components will be billed as time and material. The below table is an estimate of hours for each of the core components.

Component	Hours	Bill Rate	Cost
Design, purchasing, project planning - fixed bid	100	\$ 145.00	\$ 14,500.00
Project management	40	\$ 145.00	\$ 5,800.00
Implement new Pure Storage			
Rack, Install, configure	40	\$ 145.00	\$ 5,800.00
Migrate to new storage with vStorage	16	\$ 145.00	\$ 2,320.00
Infrastructure			
ACL/Port changes as needed	32	\$ 145.00	\$ 4,640.00
Install of switch/cards/tranceivers will be extra			
VMWare ESXI Systems Work			
Implement new ESXI Servers	32	\$ 145.00	\$ 4,640.00
Test replications, failover, failback, HA, ETC	16	\$ 145.00	\$ 2,320.00
Migrate compute	16	\$ 145.00	\$ 2,320.00
Decommission of old equipment			
Server/Storage	16	\$ 145.00	\$ 2,320.00
Shakopee to handle physical disposal			
Totals	292		\$ 44,660.00