

# SMITHVILLE



## School District

*Tradition of Excellence*

### **STORAGE AREA NETWORK REQUEST FOR PROPOSAL**

TECHNOLOGY OFFICE 816-532-0406

# STORAGE AREA NETWORK RFP (2023-2024 SCHOOL YEAR)

## Overview

### 1 Request for Proposal-Purpose and Scope

The purpose of this Request for Proposal (RFP) is to solicit information and proposals for resources, implementation support, and on-going maintenance for Storage Area Network (SAN) in the Smithville School District (The District).

General information about the District can be found on the District's website at <http://www.smithvilleschooldistrict.net>

The District is seeking proposals for SAN with capabilities as described below. The District may purchase all or part of the listed components.

The District reserves the right to reject any and/or all proposals in response to this request. Force Majeure is in effect.

#### 1.1 Timeline

The District anticipates equipment delivery and installation to occur within 30 days of vendor receiving purchase order. Vendor must specify in bid response if this timeline is not attainable.

#### 1.2 Requested Solution Capabilities

##### Service Description

- The solution should include maintenance for options of three and five years and cover software upgrades and hardware failure.
- The District needs a highly available storage solution that can be configured flexibly, allowing the assignment of appropriate storage using VMWare.
- The solution must provide robust backup and restore capabilities with highly effective snapshot capabilities capable of restoring access to data with zero or minimal downtime.
- The solution must present a robust, centralized, flexible data storage solution that easily scales to growing storage demand and supports redefinition of configurations as needs change.
- The solution must have the ability to create snapshot backups of member server's data files to allow quick recovery upon failure.
- The solution will integrate with two VMware hosts at each site.
- The solution will need to have the proper overhead to support 50 VMware virtual machines
- Vendor must have a strong working knowledge of VMware and networking to

properly install and integrate the system within the current network infrastructure.

- Vendor must have a strong working knowledge in storage management including but not limited to Cloning, Thin Provisioning, Snapshots, Data Migrations, SAN Monitoring and Compression analysis.
- Vendor must have a strong working knowledge in migrating from one VMware installation to the new storage system.
- Vendor will integrate the new storage system to the current system so that virtual machines can VMotion to the new storage system.

### Desired Specifications

Installation Sites	<b>2</b>
Capacity at each site (useable)	<b>64 TB Minimum</b>
Connectivity	<b>Fiber Channel/iSCSI</b>
Host Interface	<b>Minimum of 4 Onboard 10GbE</b>
Storage Type	<b>Hybrid SSDs and SAS HDDs</b>
RAID	<b>Triple Parity</b>
Scalability	<b>Storage Arrays are expandable up to 4</b>
High Availability/Disaster Recovery	<b>Site to Site Replication (Veeam compatible)</b>
Redundancy	<b>Redundant Power Supplies Redundant Storage Controllers Redundant Hardware/Software Design</b>
Management	<b>Redundant Local Management Ports Cloud Management/Reporting Local Management Ports</b>

### 1.3 Bidder Criteria and Response Requirements

- Bidder shall provide a list of 3 customer references including: business name, contact name & title, telephone number, business address, brief description of project, and approximate dollar value of purchased products and services, of customers who agree to be contacted as a reference for your company.
- Provide a list of name(s) and professional qualifications, responsibilities for managerial, technical and support staff identified to conduct the engagement.
- Provide number of year's firm has been in business and the firm's qualifications and experience performing similar scope of services.
- Provide a list of similar projects that the firm has performed within the last three years.
- Provide individual prices by line item for products/services, installation/configuration and training necessary for the new SAN solution.
- Bidder shall provide a list of the physical locations of its operations.
- The bidder shall attach a certificate of general liability insurance with Broad Form General Liability Endorsement.

## 2 Responding to Smithville School District Request

### 2.1 Deadline for Questions

Questions with regard to the RFP maybe asked via e-mail. Questions may be submitted by e-mail to [wallacer@smithville.k12.mo.us](mailto:wallacer@smithville.k12.mo.us) up to 11:59 PM CST on April 28th. Responses to submitted questions will be posted on District's web site at: <https://www.smithvilleschooldistrict.net/o/ssd/page/request-for-proposals>

### 2.2 Inclusion in Proposal

The following items are to be included with proposal submission:

- Proposed solution hardware (brand, make, model)
- Overview of system capabilities
- Proposals offering two different configuration types
  - All flash storage system
  - Hybrid storage system
- Proposals offering two different maintenance options
  - 4 Hour Response
    - If applicable identify hardware or software covered under this response time.
  - Next Day Response
    - If applicable identify hardware or software covered under this response time.
- Costs to included hardware, maintenance and services for three and five years
  - If applicable identify different levels of services and maintenance offered

### 2.3 RFP Submission

Bids are due on or before May 5th at 1:00 PM, CST. Please adhere to the requested format for response. Please use the subject of Bid: SAN RFP

Forms may be emailed, submitted in person or mailed to:

Attn: Bids- SAN RFP  
Smithville School District  
Attn. Randy Wallace  
655 S. Commercial Ave., MO 64089

*A copy of this Request for Proposal (RFP) may be obtained from the District's website at <https://www.smithvilleschooldistrict.net/o/ssd/page/request-for-proposals>. It is the sole responsibility of the "proposer" to monitor the District website for any amendments to the RFP.*

*The Technology Department and/or Board of Education reserve the right to reject any and all offers, or any part thereof, and to waive informalities and to enter into such contractor contracts as shall be deemed in the best interest of the Smithville School District.*

### 3 RFP Response Form

Provide the following overview for each proposed solution and include appropriate documentation regarding the systems capabilities. Do not include unnecessary marketing materials.

<b>Proposed Networking Equipment Solution Brand</b>	
<b>Proposed Networking Equipment – specific line and model</b>	
<ul style="list-style-type: none"> <li>Hardware cost as proposed (Flash and Hybrid)</li> </ul>	
<ul style="list-style-type: none"> <li>Implementation Cost</li> </ul>	
<ul style="list-style-type: none"> <li>Three and Five years hardware maintenance costs</li> </ul>	
<ul style="list-style-type: none"> <li>Three and Five years services costs</li> </ul>	
<ul style="list-style-type: none"> <li>Training costs (on-site training for 3 people)</li> </ul>	
<ul style="list-style-type: none"> <li>Two different levels of maintenance response options</li> </ul>	
<b>Total Proposed Cost for 3 and 5 years</b>	

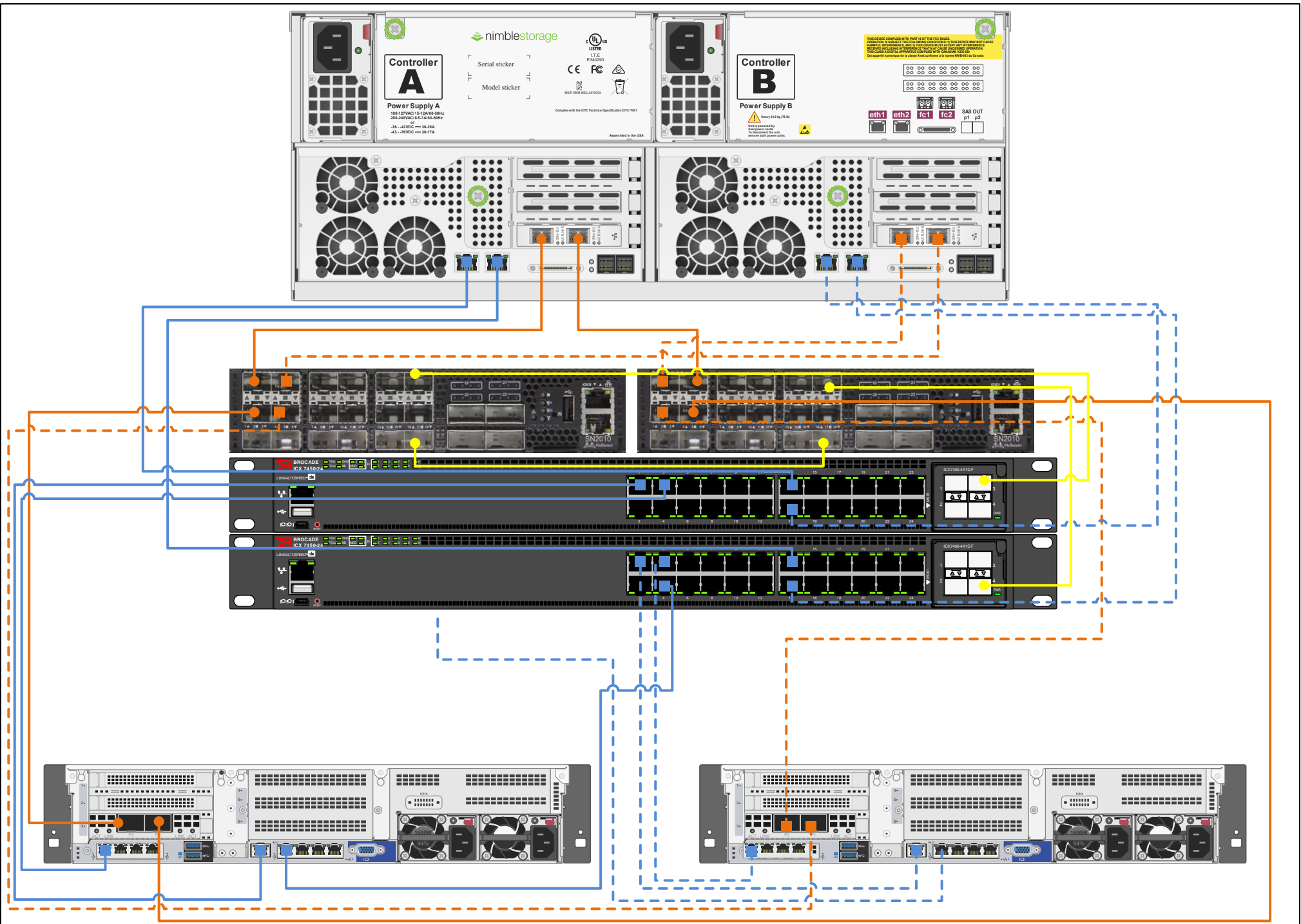
#### 3.1 Weighted Factors

The contract will be awarded based on best-value to the District and its constituents, as well as evaluation criteria set forth in this document. Weighted factors contributing to the award are included in the following breakdown:

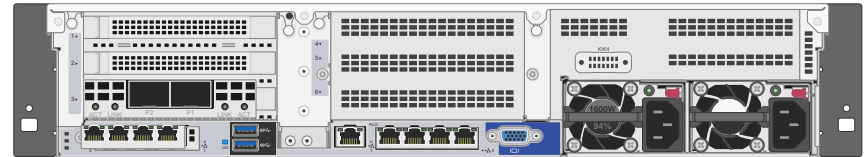
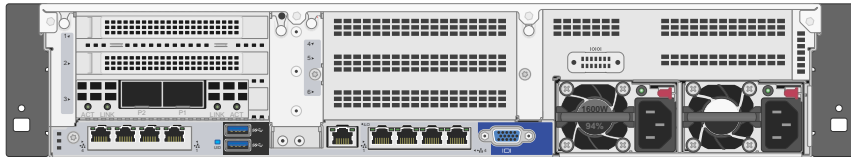
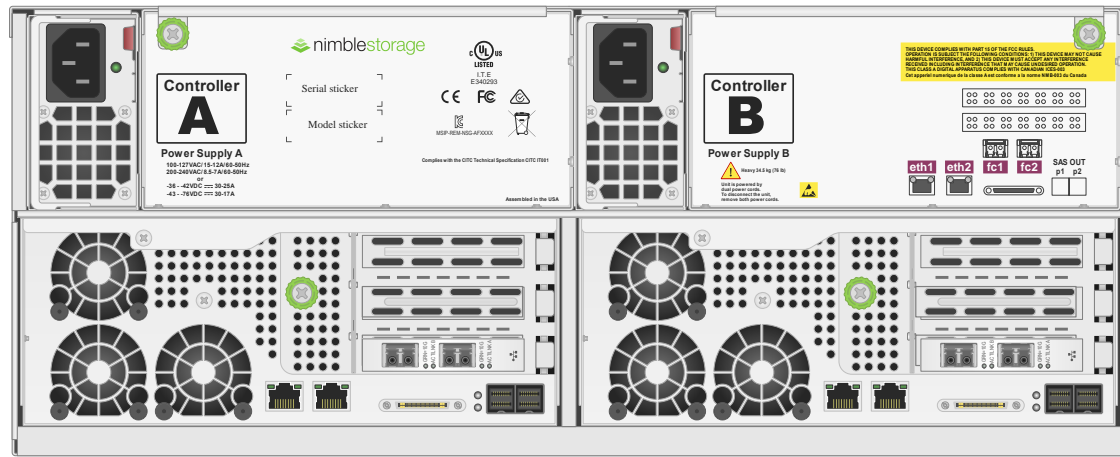
##### Weighted Factor Breakdown:

<b>FACTOR</b>	<b>WEIGHT</b>
Cost of Services	30
Capacity to achieve desired service levels	25
Company Experience	15
References	15
Project delivery methodologies	15

Upon selection, the company will work with district staff to begin project plan development and define deployment timelines. All products and services will be expected to be delivered at the price indicated in the RFP. All contracts and supporting documentation will be approved by both parties before any costs are incurred or work is performed. All contracts will be reviewed by district counsel, any contract terms that are not acceptable by the district may be grounds for dismissing the selected vendor. In the event the primary selection cannot provide the products or services, an alternate company will be selected. All companies will be notified within seven days of selection.

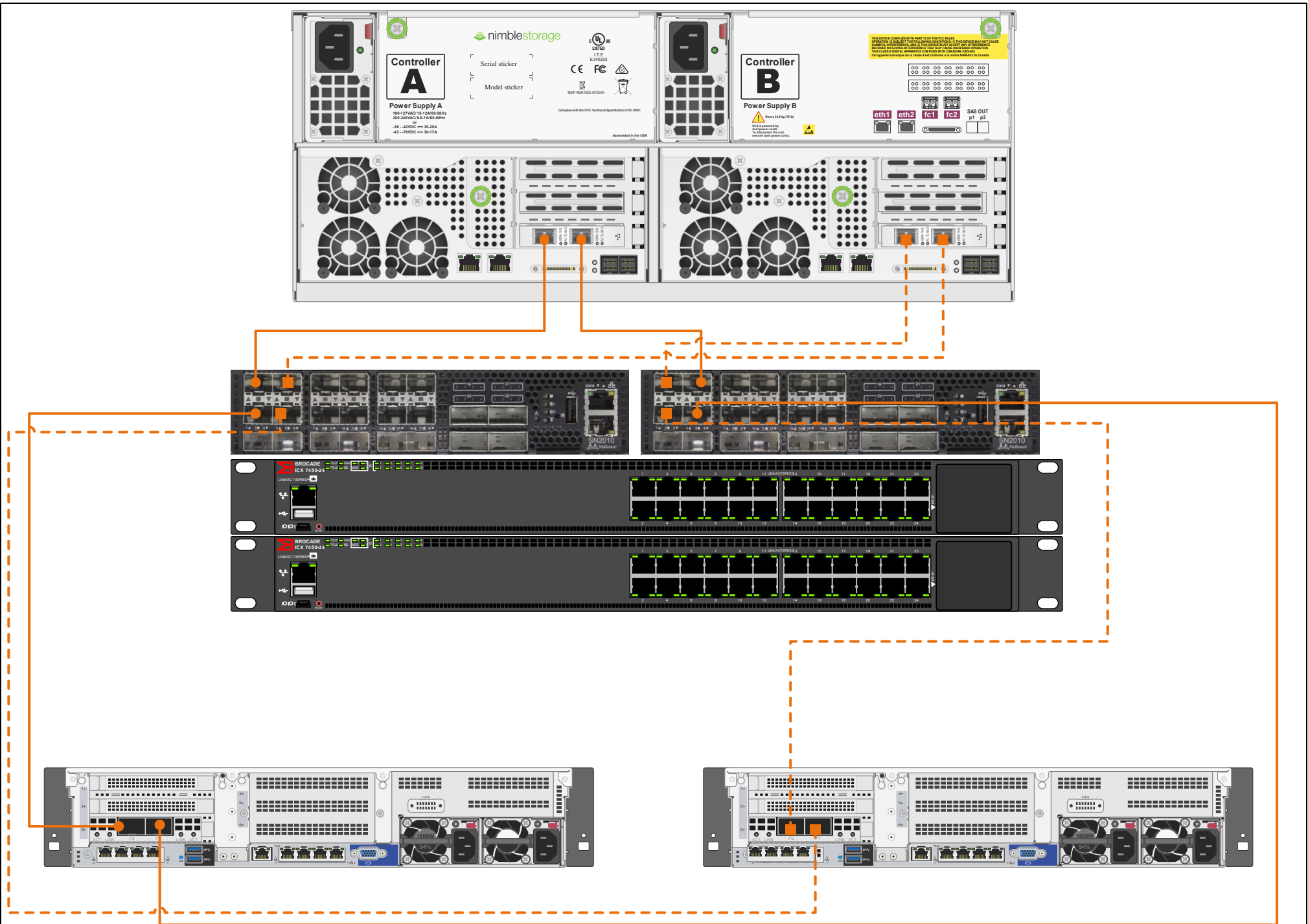


Central Office Storage Architecture

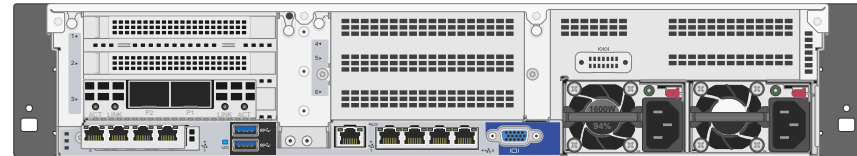
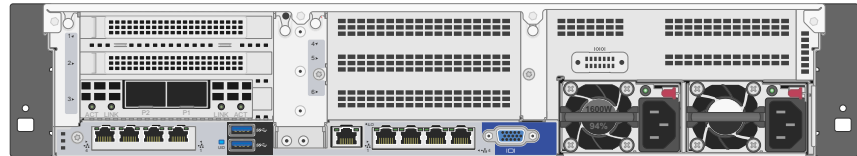
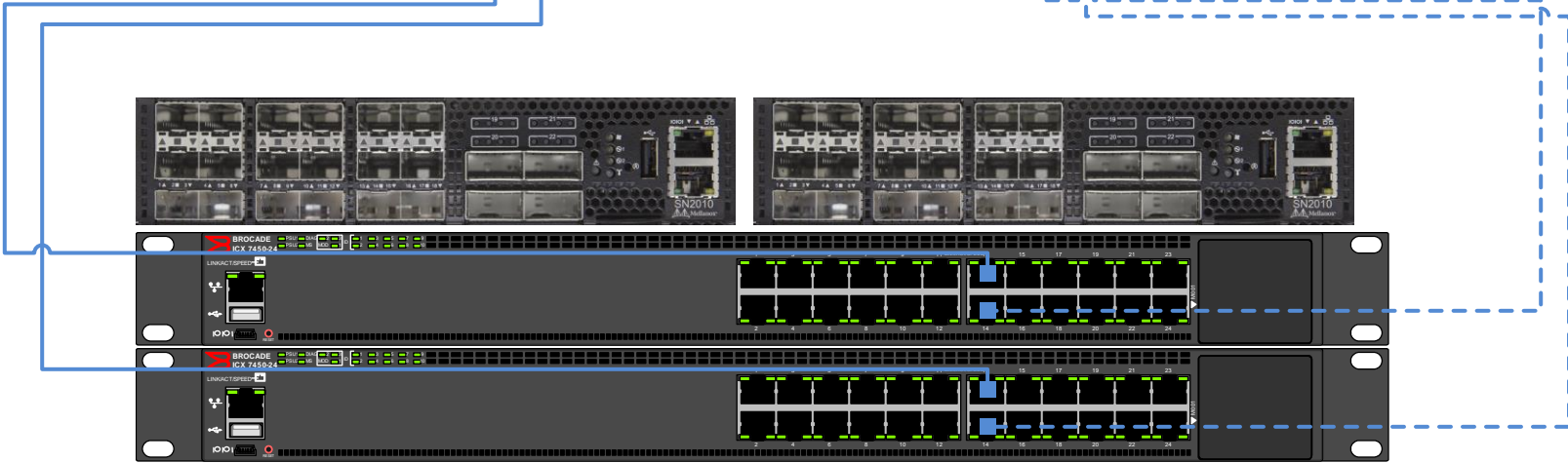
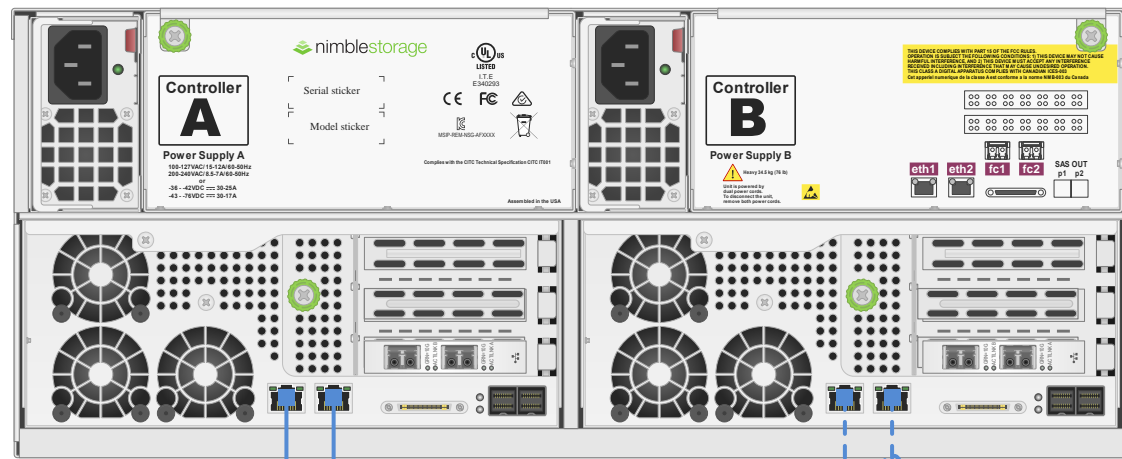


Central Office Storage Architecture

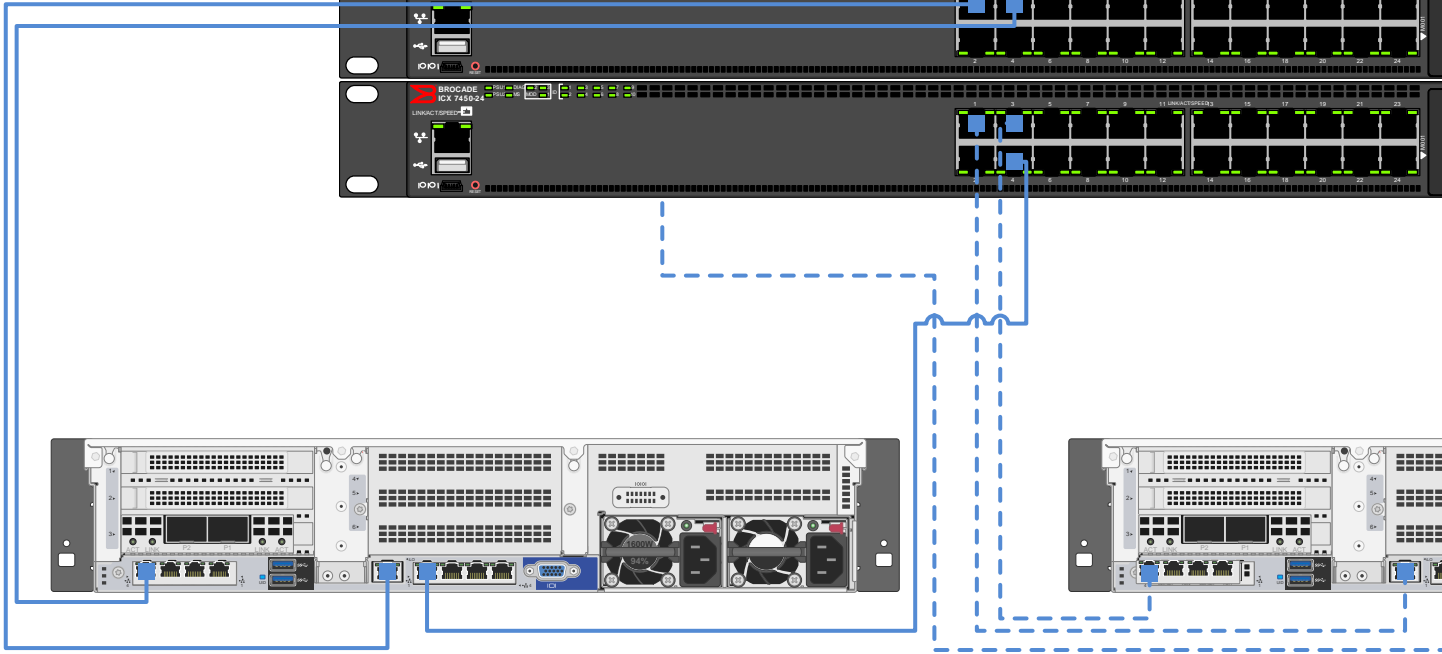
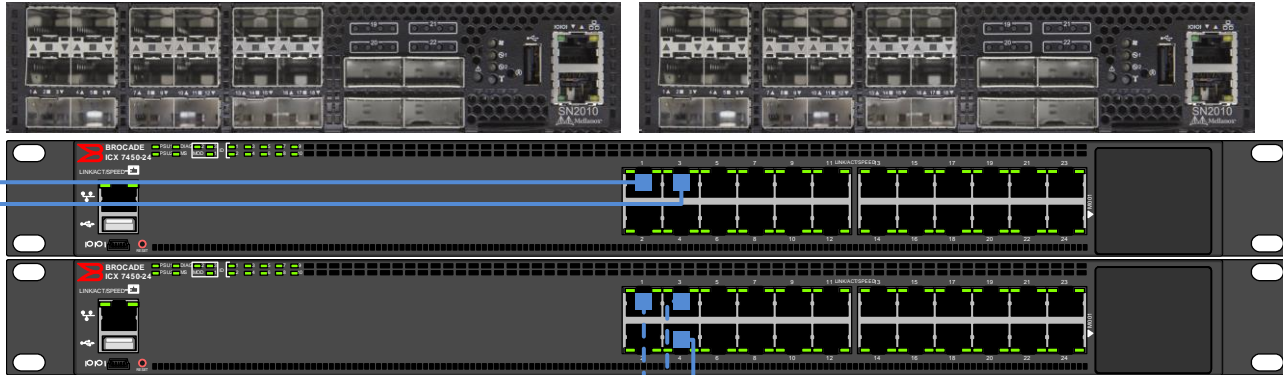
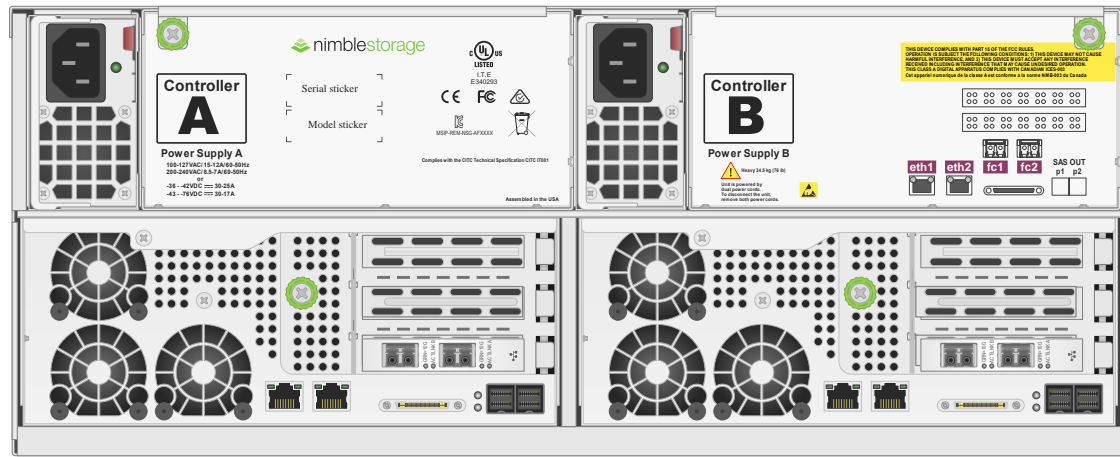




Central Office Storage Architecture



Central Office Storage Architecture



Central Office Storage Architecture

**Vmotion**

VLAN ID: 261  
 Port Group:  
 Load Based Teaming  
 Fail Detect= Link status only  
 Notify Switches = yes  
 Failback = yes

**iSCSI**

VLAN ID: 260  
 Port Group:  
 Load Based Teaming  
 Fail Detect= Link status only  
 Notify Switches = yes  
 Failback = yes

**FT**

VLAN ID: 262  
 Port Group:  
 Load Based Teaming  
 Fail Detect= Link status only  
 Notify Switches = yes  
 Failback = yes

**Virtual Machines**

VLAN ID: 60  
 Port Group:  
 Load Based Teaming  
 Fail Detect= Link status only  
 Notify Switches = yes  
 Failback = yes

**Management**

VLAN ID: 60  
 Port Group:  
 Load Based Teaming  
 Fail Detect= Link status only  
 Notify Switches = yes  
 Failback = yes

**NIOC Calculations**

Management: 5 shares (5/75) \* 10 Gigabit = 667 Mbps  
 vMotion: 20 shares (20/75) \* 10 Gigabit = 2.67 Gbps  
 FT: 10 shares (10/75) \* 10 Gigabit = 1.33 Gbps  
 iSCSI: 20 shares (20/75) \* 10 Gigabit = 2.67 Gbps  
 Virtual Machine: 20 shares (20/75) \* 10 Gigabit = 2.67 Gbps  
 Total shares: 5 + 20 + 10 + 20 + 20 = 75

**dvSwitch01**

dvUplink 01  
 dvUplink 02

**dvSwitch02**

dvUplink 03  
 dvUplink 04

Host A Port 1 (10 GB)  
 Host A Port 2 (10 GB)  
 Host B Port 1 (10 GB)  
 Host B Port 2 (10 GB)

Host A Port 1 (1 GB)  
 Host A Port 5 (1 GB)  
 Host B Port 1 (1 GB)  
 Host B Port 5 (1 GB)

**Physical Switch**

Port #=Switch A, Port X4  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch  
 Jumboframe, MTU=9000

**Physical Switch**

Port #= Switch B, Port X8  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch  
 Jumboframe, MTU=9000

**Physical Switch**

Port #= Switch B, Port X4  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch  
 Jumboframe, MTU=9000

**Physical Switch**

Port #= Switch A, Port X8  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch  
 Jumboframe, MTU=9000

**Physical Switch**

Port = Switch A, Port 4  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch

**Physical Switch**

Port = Switch B, Port 6  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch

**Physical Switch**

Port = Switch B, Port 4  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch

**Physical Switch**

Port = Switch A, Port 6  
 LACP/PagP, STP = Disabled  
 Portfast = Enabled  
 Port Trunking = Enabled  
 Vlan Tagging at Virtual Switch

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Adopted:11/7/2016

Revised: 04/2023

Smithville School District, Smithville, Missouri



2023 – 2024 Network Storage RFP | April, 2023