Henry Ford Community College
Technology Investment Fund
Project Funding Request

Fifteen copies of this application form must be received by the Vice President/Controller's office by 4:00 p.m. on either **the first Friday after Labor Day** (Fall semester) **or the third Friday in January** (Winter semester) in order to be eligible for funding. Applications will only be accepted on this form. Applications must include an Executive Summary which will be shared with the Campus Community. ***(Attach additional sheets for any section needed.)***

Date of Application: January 2013	**Project Type: [X] New [ ] Upgrade/Expansion**	
Project Director: Sandro Silvestri **Department/Division:** Administrative Data & Voice Communications	**How many students will *directly* benefit from the project?** All faculty, staff, students	**Total TIF Funds Requested:** $262,000

Problem Statement

Define the problem/idea. *(What do you want to do? Why?)*	Since 1999, DVC has provided a centralized data storage capability that provides a redundant, stable environment storage environment. The current Storage Area Network (SAN) was purchased in 2007 and continually expanded to meet the ever growing storage needs of the college. Unfortunately, the Magnitude 3D 4000 will reach end-of- life effective 12/31/2013. As a result, expansion modules are no longer available and annual maintenance will be discontinued. With current Magnitude 3D 4000 is running short on storage space and expansion modules are no longer being supplied by the vendor, the college is faced with the prospect of running out of space in the current SAN. The college's SAN is the central repository for all college data. All network drives (G:, H:, K:, etc) are all hosted on the SAN so faculty, staff, and student files all reside on the SAN. HANK data is also hosted on the SAN, which provides a high speed storage environment for a transactional Oracle environment. All of the college's server boot volumes, including VMWare environments are hosted on the SAN. As a result, the college's SAN infrastructure is central to the ongoing operations of the institution. This proposal is to replace the Magnitude 3D 4000 SAN infrastructure with an X-IO ISE based system. The new system will contain additional storage capacity, tiered storage to reduce costs, enhanced management and replication tools to ensure data protection, reduced electrical, cooling and floor space requirements. By replacing the 4000 in the main datacenter, the required footprint will go from 26 Rack Units to 3. The electrical power consumption will go from 4 – 208V Circuits, 26.5 Amps (5,553 Watts) to 2 – 208V Circuits, 3.6 Amps (700 Watts MAX). BTU generation will go from 18,808 BTU's/hr to 2,400 BTU's/hr at max. The reduction of heat generation will also reduce our main data center cooling requirement thereby providing additional power consumption savings. While the X-IO ISE SAN infrastructure provides considerable cost savings with regard to power consumption, the ISE SAN also does not have an annual maintenance charge. Annual support is provided as part of the initial purchase thereby saving the college about $30,000 a year in maintenance charges. X-IO will also provide the college with $108,325 in trade-in and educational discounts (guaranteed until Feb 28, 2013). This proposal requests funding to allow for the replacement of the current SAN with a state-of-the-art X-IO ISE SAN. The total cost of the proposed project is estimated at $262,000. The project includes all equipment, software, and outside technical expertise required to migrate to the new SAN.

Evidence for Project Validity
(What is the current situation?)

What resources do you have/use	DVC personnel will work on the project.

now?	
Why can't you use your existing resources to do this project?	General funds are used to support IT Infrastructure.
What evidence do you have that this project will be successful? *(Cite specific information.)* • Current research • Examples from other schools or teachers • Letters of support from experts in the field • Your own past experience.	This is an expansion and upgrading of an infrastructure component that has been in use since 1999.

Relevance to Technology Investment Committee Guidelines *(Address only those that apply.)*	
INNOVATION:	This is an infrastructure proposal and, while it will be used by the entire college community, is not strictly related to instruction. When fully implemented, the SAN will support the entire college community.
Is the proposal innovative to the field of Instructional Technology?	
Is the proposal innovative to HFCC?	This will provide a significant improvement in the speed and capacity of the college's storage infrastructure.
Is the proposal innovative to the specific discipline?	N/A
NEED:	N/A
Is the proposal essential for the instructional design?	
Does it create new programs or courses with the potential for increased student enrollment?	N/A
Is it necessary to remain competitive with post-secondary institutions?	Yes. A state-of-the-art technical infrastructure is required to be competitive in the current higher education market.

Does it provide skills that are transferable to the workplace?	N/A
Does it prepare students for transfer to upper-level curriculum?	N/A

Relevance to Technology Investment Committee Guidelines (continued) *(Address only those that apply.)*	
Does it keep the course or program current in the related technology?	N/A
NATURE OF PROPOSAL:	N/A
Is the proposal a component of curricular revision?	
Is it the next logical step in the evolution of the course/curriculum?	N/A
Will it help attract students to HFCC?	N/A
Will it support HFCC community outreach/public relations activities?	N/A
Will it support student retention activities at HFCC?	N/A
Will it become an integral part of the course, program or curriculum?	N/A

Resources		
Where will the project hardware be installed?	The main unit if the SAN will be located in the data center (LTC). The secondary unit, for data redundancy and protection, as well as storage for lesser used files, will be located in the main network room at DHC.	
Who will do the job? • **List the personnel** • **List their duties**	DVC personnel and vendor personnel.	
Who will use the hardware?	All faculty, staff, and students will make use of the provided storage.	
Who will conduct any necessary project-hardware training?	DVC staff will be trained by the vendor so that the SAN can be properly supported.	
Who will handle any spring and summer semester duties related to hardware installation?	DVC personnel	
Do you have commitment from your administration for personnel support? *(Be specific, include documentation.)*	Yes.	
Is release time required to complete this project? **If yes, has it been approved at this time by your Associate Dean?**	**[ ] Yes [X] No** **[ ] Yes [ ] No**	*TIF does not fund release time. If you are requesting release time, it must be approved by the appropriate administrators prior to proposal submission.*

Evaluation *(How will you know if it worked?)*	
How will you demonstrate to the college that this was an effective use of funds? *(How will you evaluate the goals listed as Expected Outcomes?)*	If the system is installed and all data and services are transferred with little or no disruption, the this will be a success.
How will you determine the success or shortcomings of the project?	System performance will be used to determine the success or failure of the project.
Budget **(You must also include an itemized budget statement.)**	
What do you need to complete this project? *(Be specific about equipment, software, and training.)*	X-IO ISE SAN Data Core Controllers Fiber Channel switches Misc cables Vendor installation services
What is the TOTAL COST? *(You must attach an itemized cost analysis with this proposal.)*	**Total Cost - $262,000**
How recent is your quote?	Quotes were obtained within the last 90 days.
Are changes to the college infrastructure necessary to support this project?	**[X] Yes [ ] No** *This is an infrastructure proposal.*
What other monetary commitments exist? *(Department/Division/ External) Please be specific; include documentation wherever possible.*	Ongoing support will be covered by the general funds.
If other sources of funding are not	

available, why? • **Doesn't have the support?** • **Not viewed as feasible?** • **Not a priority?** • **Other?**	

Strategic Plan

Include with your application a document that indicates the ways in which your project addresses the goals and objectives of the Henry Ford Community College Strategic Plan. Also, indicate how your project addresses your Division or Department plan. Be as specific as possible.

This project addresses the following Strategic Goals & Objects:

Develop and manage College resources to enhance the fiscal health and operations of the College.

a.) Continually evaluate new and existing technologies and make enhancements that increase effectiveness.

g) Ensure that the College's physical facilities, equipment, and technological infrastructure support fulfillment of the College's Mission.

If your proposal is Non-Instructional (Library Services, Learning Lab, Counseling, Placement Services), please skip this section and complete the information in the Non-Instructional section.

Instructional Proposals

Complete this section if this is an Instructional Proposal, directly impacting student teaching and learning.

Expected Outcomes *(Project Objectives)*	
What is your current teaching method? How will this project fit into your current plan?	
How will this improve student learning? *(List specific goals.)*	*As a result of this project students will:*

Instructional Proposals (continued)

State how the project addresses the Seven Principles of Good Practice in Undergraduate Education. *(Address only the relevant criteria.)*	
Supports student-faculty contact	
Supports cooperation among students	
Supports active learning	
Supports prompt feedback	
Supports time on task	
Supports high expectations	
Supports diverse talents and ways of learning	

SIGNATURES:

**Project Director	Date	*Associate Dean/Department Head	Date	*Vice President	Date
**Director of Building & Grounds	Date	**Director of Data & Voice	Date		

* For notification purposes only
** For project feasibility

Non-Instructional Proposals

Complete this section if this is a Non-Instructional Proposal, related to college areas that serve and support student instructional progress. *(Non-Instructional areas include Library Services, the Learning Lab, Counseling, and Placement Services.)*

Expected Outcomes *(Project Objectives)*	
What will this project accomplish that you can't accomplish now?	While we currently have hallway emergency phone, they are rapidly becoming obsolete, increasingly non-functional, and need to be replaced.
How does the project enrich or support the learning, teaching, or communication technology needs of students? *(List specific examples.)*	N/A

SIGNATURES:

**Project Director Date

*Associate Dean/Department Head Date
Sandra Silvestre
12/12/2012

*Vice President
Date 12/13/2012
Marjorie C. Swan

**Director of Building & Grounds
Date

**Director of Data & Voice Date

* For notification purposes only
* * For project feasibility

Henry Ford Community College

Technology Investment Fund
Project Funding Request

Executive Summary

DATE OF APPLICATION	PROJECT TYPE
January 2013	**X New** **☐ Upgrade/Expansion**
NAME OF PROJECT DIRECTOR OR PRESENTER	**DEPARTMENT/DIVISION**
Sandro Silvestri	Administrative Data & Voice Communications
COST OF PROPOSED PROJECT	**NUMBER OF STUDENTS SERVED ANNUALLY**
$262,000	All faculty, staff, & students

SUMMARY

This proposal is to replace the Magnitude 3D 4000 SAN infrastructure with an X-IO ISE based system, which will reach end of life on 12/31/2013.

The new system will contain additional storage capacity, tiered storage to reduce costs, enhanced management and replication tools to ensure data protection, reduced electrical, cooling and floor space requirements. By replacing the Magnitude 3D 4000 in the main datacenter, the required footprint will go from 26 Rack Units to 3 ru. The electrical power consumption will go from 4 – 208V Circuits, 26.5 Amps (5,553 Watts) to 2 – 208V Circuits, 3.6 Amps (700 Watts MAX). BTU generation will go from 18,808 BTU's/hr to 2,400 BTU's/hr at max. The reduction of heat generation will also reduce our main data center cooling requirement thereby providing additional power consumption savings.

While the X-IO ISE SAN infrastructure provides considerable cost savings with regard to power consumption, the ISE SAN also does not have an annual maintenance charge. Annual support is provided as part of the initial purchase thereby saving the college about $30,000 a year in maintenance charges. X-IO will also provide the college with $108,325 in trade-in and educational discounts (guaranteed until Feb 28, 2013).

771447-000	Cisco - MDS 9148 48-Port Switch, 16 Active Ports (SFPs sold separately)	$7,920	43%	2	$4,514.40	$9,028.80
771332-000	Cisco - 8Gbps FC SW SFP+, LC	$312	43%	32	$177.84	$5,690.88
770246-000	Cisco - AC Power Cord North America 110V 9020, 9120, 9140, 9216	$0	0%	4	$0.00	$0.00
771452-000	Cisco - SMARTNet Onsite 24 x 7 x 4hrs, MDS 9148 48-port Switch - 1 Month	$84	43%	24	$47.85	$1,148.30
000219-000	Initial Fibre Channel Switch Installation (Cisco or Brocade)	$3,000	0%	1	$3,000.00	$3,000.00
000281-000	Additional Fibre Channel Switch Installation (Cisco or Brocade)	$800	0%	1	$800.00	$800.00

Config Total $19,707.88

Datacore for DR Site

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
801222-000	Datacore - HP DL380G8 Server Bundle - Large 50TB per node	$74,664	43%	1	$42,558.48	$42,558.48
410182-001	Datacore - 50TB Bundle - Annual Support	$6,547	43%	1	$3,731.79	$3,731.79
000319-000	Datacore Installation by Xiotech per node - On-Site	$4,200	0%	1	$4,200.00	$4,200.00

Config Total $50,490.27

Fibre Channel Switch for DR Site

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
840134-000	15' Ethernet Patch Cable	$35	43%	1	$19.95	$19.95
771447-000	Cisco - MDS 9148 48-Port Switch, 16 Active Ports (SFPs sold separately)	$7,920	43%	1	$4,514.40	$4,514.40
771332-000	Cisco - 8Gbps FC SW SFP+, LC	$312	43%	16	$177.84	$2,845.44
770246-000	Cisco - AC Power Cord North America 110V 9020, 9120, 9140, 9216	$0	0%	2	$0.00	$0.00
771452-000	Cisco - SMARTNet Onsite 24 x 7 x 4hrs, MDS 9148 48-port Switch - 1 Month	$84	43%	12	$47.85	$574.15
000281-000	Additional Fibre Channel Switch Installation (Cisco or Brocade)	$800	0%	1	$800.00	$800.00

Config Total $8,753.94

Shipping **$774.69**
Total **$261,460.52**

Terms and Conditions

Please reference the quote number at the top of this quotation in your purchase order. Offer valid 30 days from quote date. Payment terms are net 30.
Taxes, duties, shipping and similar costs not included unless otherwise stated above.
ISE storage blades and associated datapacs are supplied with a 5-year hardware warranty.
This quote and any sale of the Products and Services described herein is subject to Xiotech's standard Terms and Conditions of Sale, which are included herein by reference, and which may be found at http://www.xiotech.com/TandC/20100603.

MAG to ISE Promotion -- Additional Terms & Conditions

This package includes professional services for data migration for the one-time migration of data to the new ISE.
Any future maintenance the customer has paid for on the Magnitude 4000 will be credited against maintenance on the new system, up to 3 years.
The current annual software/HW Response maintenance charge for the ISE-2 is $2,016. The customer may purchase up to five years of pre-paid maintenance at the time of this contract.
The customer will ship the Magnitude 4000 to the following address:
X-IO Technologies
9950 Federal Drive
Suite 100
Colorado Springs, CO 80921
ATTN: Mike Elkington
The **Retrieval of Customer Unit** service is provided at an additional charge to package and ship back one Magnitude 4000 to X-IO. The customer may decline this service.
If the customer fails to ship the Magnitude 4000 to X-IO, the customer agrees to pay the amount equal to the Discounts listed above.

Date	**October 9, 2012**
Opportunity	**685191**
Quote ID	**5483224-2**
Customer	**Henry Ford CC**

Quotation name **MAG to ISE Promo w/ Datacore [Primary Quote]**

Magnitude 4000 Upgrade to ISE Promo - ISE system and Migration (Primary & DR Site)

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
801229-000	Magnitude 4000 Upgrade to ISE Promo - ISE system	$118,000	35%	2	$76,700.00	$153,400.00
000283-000	Data Migration	$13,000	0%	2	$13,000.00	$26,000.00
000315-000	Initial ISE Install behind Datacore - On-Site	$3,000	0%	2	$3,000.00	$6,000.00
210123-000	ISE Manager License - per ISE	$2,250	35%	2	$1,462.50	$2,925.00
					Config Subtotal	$188,325.00
			Customer Parts Trade-In Discount		Discount	-$94,325.00
			One-Time Discount		Discount	-$14,000.00
					Config Total	$80,000.00

ISE Additional Parts & Maintenance (Primary & DR Site)

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
840056-005	2m LC-LC duplex fiber-optic patch cable	$90	43%	4	$51.30	$205.20
840133-000	5' Ethernet patch cable	$25	43%	4	$14.25	$57.00
020188-000	ISE-2 Storage Blade Software Maintenance - 1 month	$90	0%	24	$90.00	$2,160.00
020189-000	ISE-2 Storage Blade Premium Hardware Response - 1 month	$78	0%	24	$78.00	$1,872.00
	Existing Magnitude 3D 4000 maintenance credit					-$3,541.00
					Config Total	$753.20

Datacore for Primary Site

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
801222-000	Datacore - HP DL380G8 Server Bundle - Large 50TB per node	$74,664	43%	2	$42,558.48	$85,116.96
410182-001	Datacore - 50TB Bundle - Annual Support	$6,547	43%	2	$3,731.79	$7,463.58
000319-000	Datacore Installation by Xiotech per node - On-Site	$4,200	0%	2	$4,200.00	$8,400.00
					Config Total	$100,980.54

Fibre Channel Switches for Primary Site

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
840134-000	15' Ethernet Patch Cable	$35	43%	2	$19.95	$39.90

771447-000	Cisco - MDS 9148 48-Port Switch, 16 Active Ports (SFPs sold separately)	$7,920	43%	2	$4,514.40	$9,028.80
771332-000	Cisco - 8Gbps FC SW SFP+, LC	$312	43%	32	$177.84	$5,690.88
770246-000	Cisco - AC Power Cord North America 110V 9020, 9120, 9140, 9216	$0	0%	4	$0.00	$0.00
771452-000	Cisco - SMARTNet Onsite 24 x 7 x 4hrs, MDS 9148 48-port Switch - 1 Month	$84	43%	24	$47.85	$1,148.30
000219-000	Initial Fibre Channel Switch Installation (Cisco or Brocade)	$3,000	0%	1	$3,000.00	$3,000.00
000281-000	Additional Fibre Channel Switch Installation (Cisco or Brocade)	$800	0%	1	$800.00	$800.00

Config Total $19,707.88

Datacore for DR Site

Part Number	Description	List Price	% Discount	Qty	Unit Price	Extended Price
801222-000	Datacore - HP DL380G8 Server Bundle - Large 50TB per node	$74,664	43%	1	$42,558.48	$42,558.48
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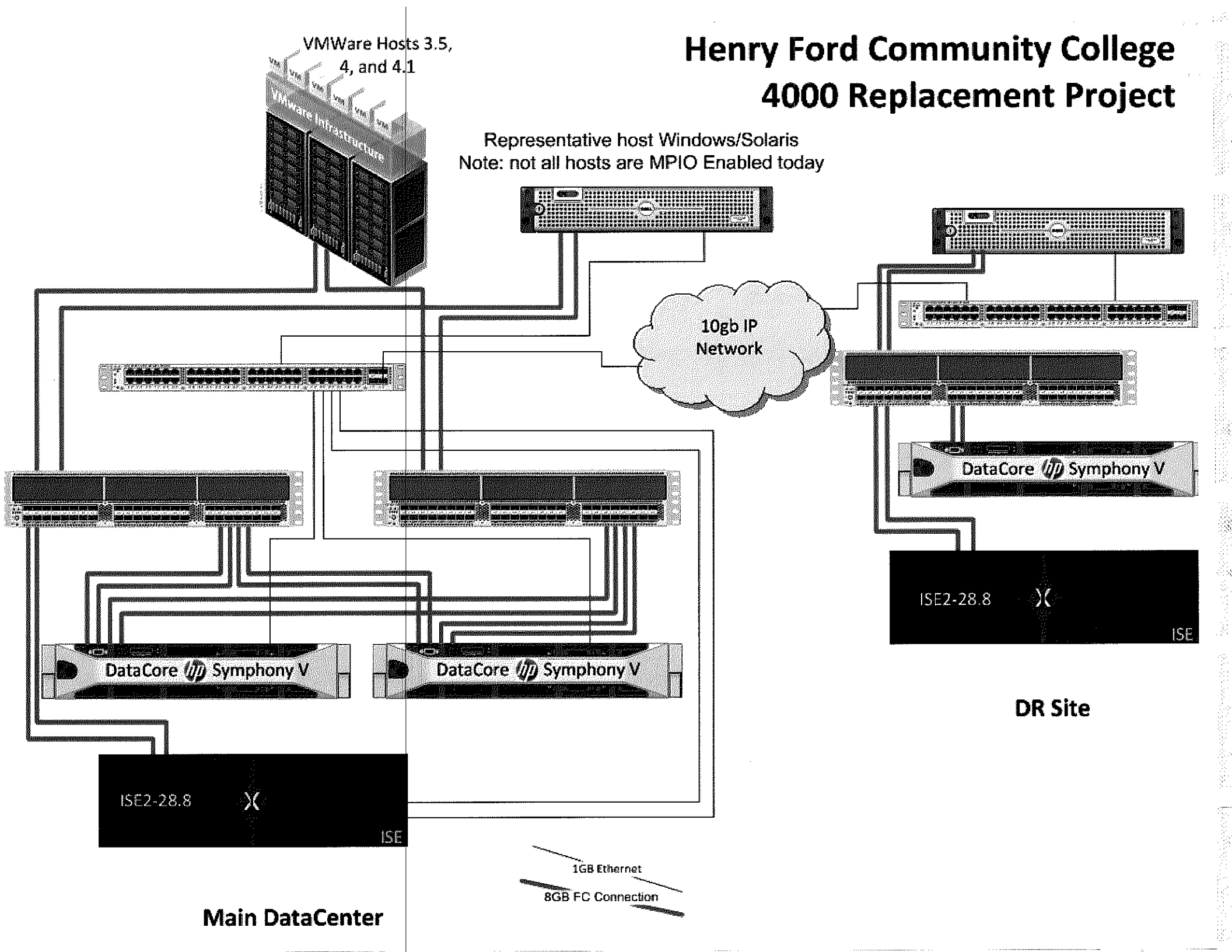
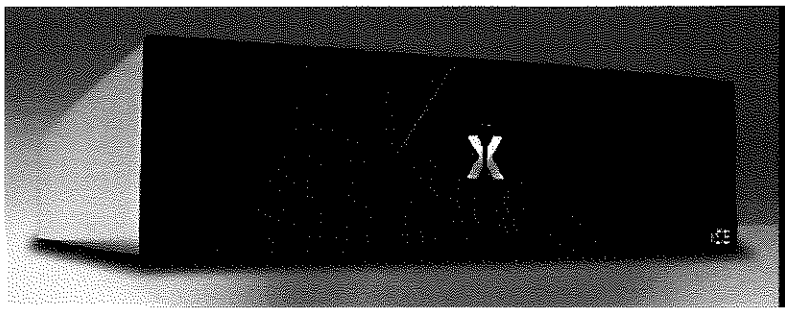
Henry Ford Community College
4000 Replacement Project





ISE 28.8

Accelerate Database Applications
Enable VDI in the Enterprise
Increase Server Consolidation

ISE Storage Systems

The ISE storage system is an easy to use, high performance fibre channel storage system supporting SAS HDDs. ISE storage provides enterprise-class reliability with self-healing capabilities. ISE storage systems are an excellent solution for Citrix XenServer, VMware vSphere, Microsoft Hyper-V, Exchange 2010, SQL Server 2008, SharePoint and Oracle.

ISE Storage System Unique Features
High performance SAS HDD FC-SAN storage system
Fast Forever architecture supports high performance throughout entire lifecycle
Fully active-active controllers
Linearly scalable performance and capacity
Self-healing storage with head-level sparing and full internal telemetry
Optimized for any workloads including mixed environments
Cloud-based management interface
Lowest power consumption in the industry—700 Watts
Low TCO with zero-touch maintenance and 5-year hardware warranty

Solving a Data Storage Dilemma

Purpose-built for server & desktop virtualization, cloud computing, and other applications with multi-tenant workloads generating near-simultaneous I/O requests to shared storage resources; ISE storage systems are a simple and efficient way to rapidly deliver critical information across the enterprise.

Predictable Performance

As capacity is consumed, ISE storage system performance remains constant at over 90% utilization. ISE performance does not degrade as capacity is used as in the case of traditional frame-based storage arrays.

Fast Forever

ISE storage systems provide high performance throughout the complete lifecycle due to the way they handle vibration, heat dissipation, data placement, and drive reliability. Additionally, the disk drives within ISE storage systems are not treated as individual and disposable components, but rather as a single organism. As such, they work congruently resulting in higher performance and reliability.

ISE storage systems reach reliability levels impossible for standard drives and enclosures, providing more than 100 times the reliability of a regular disk drive enclosed in a typical storage drive bay—significantly reducing service events and their impact on IT organizations.

Manage multiple, simultaneous streaming and random I/O patterns with advanced scheduling algorithms and unique queue priority capabilities.

Performance-Driven Storage

ISE 28.8 is the latest in a new class of storage systems achieving up to 15,000 IOPS in a single 3U, 28.8 TB system. That is over .5 IOPS per gigabyte. ISE 28.8 provides an ideal balance of price, performance, capacity, and reliability. ISE 28.8 outperforms traditional disk systems by delivering 2-3 times the number of IOPS per disk. ISE is designed specifically for performance-driven applications that require enterprise-class reliability.

ISE 28.8 is a Fibre Channel-based 3U storage system with 28.8 TB of capacity after sparing, supporting SAS HDD drives. It provides true split-second active-active failover for high availability.

Heat & Vibration	The two greatest causes of Hard Disk Drive (HDD) failures		ISE storage system's mechanical design dramatically reduces heat and vibration
Undetected Data Corruption	Rarely mentioned, but quite pervasive are silent data errors that go unreported and undetected resulting in corrupt data being provided to apps		ISE is one of the first storage technologies to incorporate ANSI T10-DIF that makes it possible to detect and identify data errors including misdirected, lost, or torn writes
Long RAID Rebuilds	If a rebuild is given a low priority to be completed in off hours, it can take days. The RAID group is also subject to higher risk of another failure (except RAID 6)		ISE automatically performs preventive and remedial repair of components to eliminate RAID rebuilds. ISE "heals-in-place"
Service Avoidance	A system of 240 HDDs can expect a failure rate of 40 drives per year*. 67-90% of failures are No Trouble Found (NTF) after run through manufacturer's repair process		Each ISE storage system includes spare redundant capacity to replace a hard drive in the rare circumstance that "heal-in-place" does not solve the problem

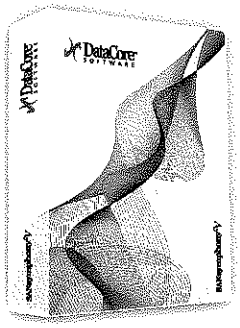
*Carnegie Mellon study that reported FC and SAS drives have a realistic mean time between failure of 52,560 hours, or an annual replacement rate of 16.67%. Study and results presented at 5th USENIX in 2007.

The only 5-Year Warranty in Storage

ISE storage is backed by a no cost 5-year hardware warranty based on its reliability and self-healing capabilities. XIO is the only storage company willing to stand by its reliability claim.

Performance and Capacity		Connectivity and Compatibility		Physical and Environmental	
Performance	Up to 15,000 IOPs	SAN or DAS interconnect	SAN & DAS*	Depth	28.5in/72.39cm
RAID Levels	ISE RAID 10 ISE RAID 5	Internal controllers	2	Width	17.5in/44.45cm
Capacity after RAID ISE RAID 10 ISE RAID 5	 13,054 GiB 20,888 GiB	Ethernet management ports	2	Height	5.2in/13.2cm
Max read bandwidth	1.4 GB/sec	Drive interconnect	6Gb/s SAS	Weight without drives	71lbs/32.3kg
Max write bandwidth	1.4 GB/sec	Operating systems*	AIX, Mac OS, RHEL, SLES, Solaris, Windows Server 2003 & 2008	Voltage	100-240VAC 47-63Hz
Hard drive type	2.5" 10K RPM SAS	Hypervisors*	Citrix XenServer, VMware vSphere, Microsoft Hyper-V	Current	6.6A @ 110V 3.6A @ 208V
				Power (max)	700W
		Please check the compatibility matrix or with your sales associate for availability		Heat dissipation (max)	2400btu/hr

9950 Federal Drive, Suite 100 | Colorado Springs, CO 80921 | 1.866.472.6764 www.XIOstorage.com



SANsymphony™-V
Storage Virtualization Software

Infrastructure-wide features work across unlike and incompatible storage devices

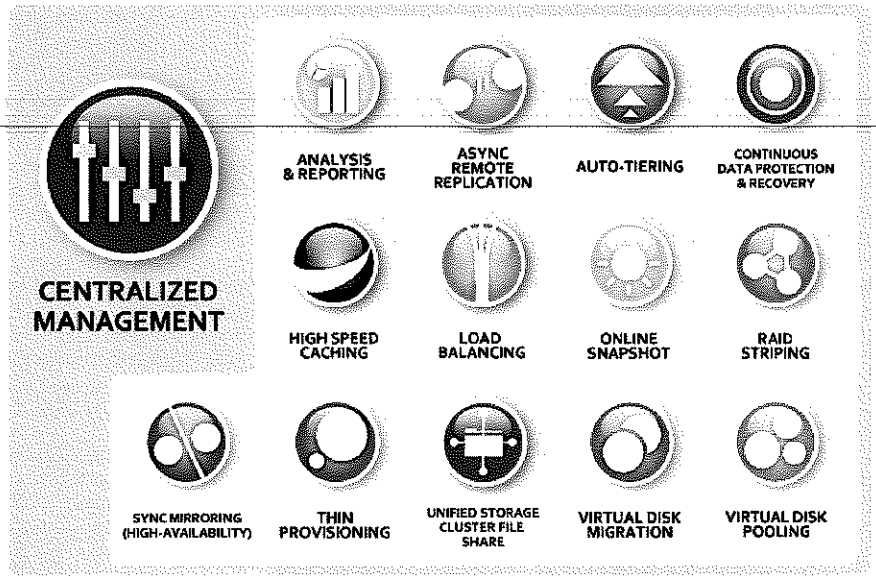
SANsymphony-V software solves difficult storage-related challenges introduced by server and desktop virtualization, cloud computing, general expansion, business continuity, and disaster recovery initiatives. It forms an active, transparent virtualization layer across disk storage devices to maximize the availability, performance and utilization of data centers large and small.

The integrated set of centrally-managed data protection, provisioning, caching, replication and migration functions operates uniformly over different models and brands, assimilating current and future equipment non-disruptively. You'll find that SANsymphony-V cost-effectively speeds up applications, delivers uninterrupted data access and extends the life of your tiered storage investments, while giving you peace of mind.

Solution Highlights

- Makes business continuity and disaster recovery practical for virtual servers, virtual desktops and general IT consolidation
- Eliminates storage-related disruptions due to inevitable maintenance, reconfiguration, upgrades, expansion and failures
- Speeds up application performance by removing disk I/O bottlenecks
- Maximizes use of available disk capacity
- Centralizes and automates storage administration despite variations in equipment

Features at-a-Glance



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Compatibility

Please see www.datacore.com for more recent updates to the list of supported environments

Storage Manufacturers Supported

All of the popular disk manufacturers are supported including:

- Dell
- EMC
- Fujitsu-Siemens
- Fusion-IO
- Hitachi Data Systems (HDS)
- HP
- IBM
- LSI
- NetApp
- Oracle (Sun)
- Promise
- Seagate
- XioTech

Host Operating Systems Supported

- Microsoft Windows Server 2008 R2, 2003 and 2000
- Microsoft Windows 7 and XP
- Apple MacOS X
- Unix
- HP-UX
- IBM AIX
- Sun Solaris
- RedHat Linux
- SUSE Linux

Hypervisors Supported

- VMware ESX, vSphere
- Microsoft Hyper-V on Windows Server 2008 R2
- Citrix XenServer

Disk Packaging Supported

- Internal disk drives
- External JBODs
- External storage systems
- Solid State Disks

Disk Interfaces Supported

Direct-attached and SAN-based connections

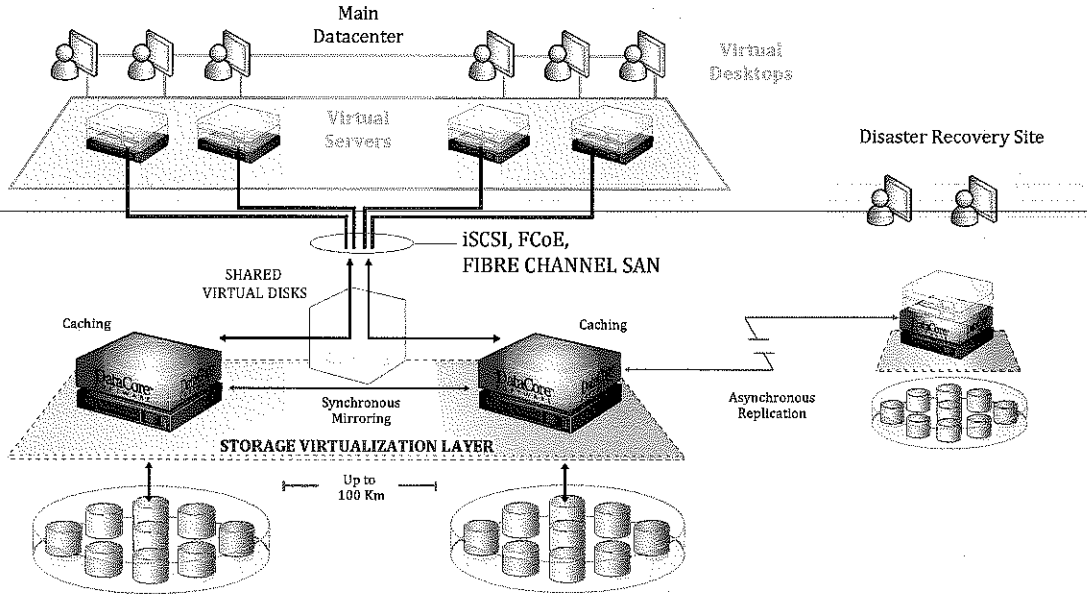
- SAS
- SATA
- iSCSI
- Fibre Channel & FCoE

Network Compatibility

- Synchronous mirroring between nodes over iSCSI and FC connections
- Asynchronous remote replication over IP LANs, MANs and WANs

Prerequisites

- Microsoft Windows Server 2008 R2



For additional information,
please visit: www.datacore.com
or e-mail: info@datacore.com

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