

Net Direct Inc.
564 Weber St. N. Unit 12
Waterloo ON N2L 5C6
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Attn: **Lawrence Folland**
University of Waterloo
200 University Avenue West
Waterloo, Ontario N2L 3G1
Canada

Quote # 1510258	Quote Date 2011-02-11	Page 1 of 5
Revision # 4	Revised Date 2011-02-11	Expiry Date 2010-12-31
Payment Terms Net 30 Days		Currency CAN-\$
Requested By Lawrence Folland		Prepared By William Moore

Request for Proposal (RFP) # 10-036 High Performance Storage and Compute Cluster

Supermicro 847E26 Storage Array 72TB RAW Capacity

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	1		Supermicro 847E26 Storage Array 72TB RAW Capacity	\$31,043.72	\$31,043.72	\$22,105.00	29%	\$22,105.00
CS-847E26-R1400PLB		1	SuperChassis Storage Extra High-Density 4U Storage Chassis					
MBD-X8DTN+-F-0		1	Supermicro XEON 5600 MB QPI 6.4 up to 192GB DDR3 RAM					
AT80614005124A A		2	Westmere 6C X5680 3.33G 12M 6.4GT					
MEM-DR380L-HL03-ER13		18	8GB DDR3-1333 2Rx4 ECC REG RoHS					
HDD-A2000-ST32000444SS		36	Seagate Constellation ES SAS 6Gb/s 2.0TB Hard Drive, 16MB Cache					
AOC-SAS2LP-H4iR		1	Supermicro 6Gb/s SAS 2.0 LSI821 Raid Controller, 4 internal, 4 external					
Ecables		2	Ethernet Cables					
BTR-0018L-0000-LSI		1	Battery Backup for AOC-USAS2LP-H8iR					
Services		1	Assembly & Testing					
BH4712		1	lomega Super Ext DVD 24x					
AOC-STGN-I2S		1	STD Dual-port 10G Ethernet with SFP+ W/ CDR (Intel Niantic chipset)					
Warranty		1	Supermicro Depot Warranty Extension to 3yr					

System has integrated IMPI 2.0 with KVM and Dedicated LAN.
Updated 6Gbps internal/external RAID card supports quoted Seagate drives.

\$22,105.00

Cold Spare Kit for Storage Array

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	1		Cold Spare Kit for Storage Array	\$3,359.01	\$3,359.01	\$2,441.00	27%	\$2,441.00
MBD-X8DTN+-F-O		1	Storage Array Cold Spare MB Supermicro XEON 5600 MB QPI 6.4 up to 192GB DDR3 RAM					
AOC-SAS2LP-H4iR		1	Supermicro 6Gb/s SAS 2.0 LSI821 Raid Controller, 4 internal, 4 external					
PWS-1K41P-1R		1	1400W 1U Gold Level Powersupply W/PM Bus &WX3					
BTR-0018L-0000-LSI		1	Battery Backup for AOC-USAS2LP-H8iR					
HDD-A2000-ST32000444SS		4	Seagate Constellation ES SAS 6Gb/s 2.0TB Hard Drive, 16MB Cache					
Warranty		1	Supermicro Parts Depot Warranty Extension to 3yr					

\$2,441.00

NOTES:
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Compute Nodes

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
6016TT-TF	4	1	Compute Nodes Supermicro 6016TT-TF Twin 1U Intel Xeon 5600/5500 Series Server, QPI 6.4T/s	\$15,162.29	\$60,649.16	\$10,971.00	28%	\$43,884.00
P4X-DPX5680-333-12M640		4	XEON X5680 6C 3.33G 12MB LGA1366 6.40 GT/SEC					
MEM-DR340L-HL06-ER13		12	4GB DDR3-1333 2Rx4 ECC REG RoHS					
T2000-WD2002FYPS		4	WD RE4-GP 2.0TB SATA 3GB/S 64MB 3.5 inch					
Warranty		1	Supermicro Depot Warranty Extension to 3yr					

\$43,884.00

APC 44u Rack Open Frame Rack

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
91200L	1	1	APC 44u Rack Open Frame Rack NETSHELTER 44U 4POST OPEN FRAME RACK SQUARE HOLES	\$489.00	\$489.00	\$437.00	11%	\$437.00

This is a low cost, open frame rack with no doors or side panels.

\$437.00

UPS and PDU for Storage Component

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
SUA3000XLT	2	1	UPS and PDU for Storage Component APC Smart-UPS XL 3000VA 208V Tower/Rack Convertible	\$2,467.00	\$4,934.00	\$1,970.00	20%	\$3,940.00
WBEXTWAR3YR-SP-04		1	Service Pack 3 Year Warranty Extension (for new UPS product purchases)					
AP9571A		1	Rack PDU, Basic, 1U, 30A, 208V, (10) C13					

\$3,940.00

Rack Mount Monitor and KVM Options

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
AP5017	1	1	Rack Mount Monitor and KVM Options APC AP5017 Rackmount LCD	\$1,262.00	\$1,262.00	\$1,068.00	15%	\$1,068.00
PS2USB		1	PS2 to USB Adapter					

APC AP5017 is only available with a 2yr mfg warranty

\$1,068.00

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Request for Proposal (RFP) # 10-036 High Performance Storage and Compute Cluster

HP ProCurve 2910al-24G Ethernet Switch

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	2		HP ProCurve 2910al-24G Ethernet Switch	\$11,197.00	\$22,394.00	\$8,554.00	24%	\$17,108.00
J9145A		1	HP ProCurve 2910al-24G Ethernet Switch					
J9008A		1	HP ProCurve 2-Port 10-GbE SFP+ al Module - 2 ports					
J9283B		1	HP ProCurve 10-GbE SFP+ 3m Direct Attach Cable (to Storage Server)					
J9151A		1	HP ProCurve 10-GbE SFP+ LR Transceiver (for this switch)					
U2856E		1	3-year, 4-hour onsite, 24x7 coverage for hardware					

This product has a lifetime limited warranty. This switch has 2 expansion bays for up to 4 10G SFP+ ports. The second bay may also be used to stack the switches.

\$17,108.00

IPMI Unmanaged Switch

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
DES-1024D	1	N/A	D-Link Express EtherNetwork Switch - 24 x 10/100Base-TX - Unmanaged	\$119.00	\$119.00	\$95.00	20%	\$95.00

Lifetime Limited Warranty provided by the manufacturer. IPMI ports on server are 10/100 as well.

\$95.00

Network Accessories and Cabling

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
J9151A	2	N/A	HP ProCurve 10-GbE SFP+ LR Transceiver (for existing switch)	\$4,329.00	\$8,658.00	\$3,235.00	25%	\$6,470.00
22691	20	N/A	CAT5e Cable - RJ-45 Male Network - RJ-45 Male Network - 3.05m - Blue	\$11.00	\$220.00	\$2.00	82%	\$40.00

\$6,510.00

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Net Direct Onsite Warranty Service

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
ONWarranty	1	1	Net Direct Onsite Warranty Service 3yr Onsite Services for MFG Depot Warranty Component Replacement	\$4,000.00	\$4,000.00	\$2,000.00	50%	\$2,000.00

\$2,000.00

Supermicro Equipment Freight Fee

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
Shipping	1	1	Supermicro Equipment Freight Fee Shipping Fees	\$900.00	\$900.00	\$667.00	26%	\$667.00

\$667.00

Setup and Testing

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
Services (days)	1	6	Setup and Testing Full day of Services Hours from Net Direct Support	\$14,400.00	\$14,400.00	\$7,200.00	50%	\$7,200.00
-Includes		1	Install Components in Rack					
-Includes		1	Interconnect with Switches					
-Includes		1	Interconnect all IPMI interfaces to unmanaged switch					
-Includes		1	Verify hardware functioning and ability to work with Ubuntu 10.04 LTS 64bit					
-Includes		1	Setup and test RAID 5					
-Includes		1	Knowledge transfer of UW support staff					

Note: Setting up cluster management is not required. The client will connect the 3 switches to the network.

\$7,200.00

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Request for Proposal (RFP) # 10-036 High Performance Storage and Compute Cluster

Phase 2 Storage - Expansion Shelf

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	1		Phase 2 Storage - Expansion Shelf	\$10,031.50	\$10,031.50	\$7,426.00	26%	\$7,426.00
CSE-847E26-RJBOD1		1	SuperChassis 847E26-R1400JB					
AOC-USAS2LP-H8IR		1	Supermicro Low Profile 6Gb/s Eight-Port SAS Internal RAID Adapter					
HDD-A2000-ST32000444SS		14	Seagate Constellation ES SAS 6Gb/s 2.0TB Hard Drive, 16MB Cache					

This expansion holds up to an additional 45 HS-HDD, 3.5 inch. Only an additional 14 drives are needed to bring the total storage array up to 100 TB net capacity. \$7,426.00

Phase 2 Compute Nodes

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	4		Phase 2 Compute Nodes	\$14,987.77	\$59,951.08	\$11,109.00	26%	\$44,436.00
6016TT-TF		1	Supermicro 6016TT-TF Twin 1U Intel Xeon 5600/5500 Series Server, QPI 6.4T/s					
P4X-DPX5680-333-12M640		4	XEON X5680 6C 3.33G 12MB LGA1366 6.40 GT/SEC					
MEM-DR340L-HL05-ER13		12	4GB DDR3-1333 2Rx4 ECC REG RoHS					
T2000-WD2002FYPS		4	WD RE4-GP 2.0TB SATA 3GB/S 64MB 3.5 inch					
Warranty		1	Supermicro Depot Warranty Extension to 3yr					

\$44,436.00

Phase 2 Setup and Testing

Product No.	Order Qty	Parts Qty	Description	MSRP Each	MSRP Total	Extended Price Each	Discount %	Extended Price Total
	1		Phase 2 Setup and Testing	\$4,800.00	\$4,800.00	\$2,400.00	50%	\$2,400.00
Services (days)		2	Full day of Services Hours from Net Direct Support					
-Includes		1	Install Components in Rack					
-Includes		1	Interconnect with Switches					
-Includes		1	Setup and test RAID 5					
-Includes		1	Knowledge transfer of UW support staff					

\$2,400.00

Total MSRP: **\$152,427.89**

Discount: **30%**

Total: \$107,455.00

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