



A Memorandum of Understanding  
between  
The USU Office of Research and Graduate Studies (RGS),  
Robert Spall (USU Department Head, MAE), and  
The University of Utah Center for High Performance Computing (CHPC)

October 1<sup>st</sup>, 2015

**PURPOSE**

This Memorandum of Understanding is to establish an agreement between RGS and the CHPC regarding the services that will be provided in exchange for purchasing equipment at the CHPC.

**AGREEMENT**

The CHPC will provide limited research computing support, as outlined below, for the Utah State University. High performance computational and support services provided through this agreement will directly support High Performance Computing needs of researchers in the Utah State University Department of Mechanical and Aerospace Engineering (USU MAE).

The costs to the USU MAE research group will total \$27,166.56 (four nodes @ \$6,276.64, as per a quote provided by Anita Orendt on 9/30/2015, plus an additional \$515 per node for the Infiniband port). These costs include reimbursement for the following CHPC purchases:

- 1) CHPC will deploy 4 nodes, each equipped as specified in the attached quote, with full warranty and expected life of at least 5 years. Once the warranty period (5 years) ends, CHPC will continue to do basic maintenance. If there is a hardware failure CHPC will obtain a quote for repair and consult with Dr. Spall to determine if making the repair is the best option. CHPC reserves the right to retire nodes that are out of warranty in the event that maintaining them exceeds available resources.

CHPC will to provide USU MAE researchers with the standard services provided to users of CHPC resources, including hardware support, consultation and problem tracking help.

USU MAE will be designated as the CHPC PI for these nodes. Robert Spall will serve as the primary contact, and will have oversight of the user allocation associated with these nodes.

To address issues or problems that arise during the use of these hardware components contact CHPC through the following mechanisms:

- E-mail (strongly preferred) to [issues@chpc.utah.edu](mailto:issues@chpc.utah.edu)
- Tom Cheatham, Director: 801-585-3791; [tec3@utah.edu](mailto:tec3@utah.edu)
- Anita Orendt, Faculty Outreach, [anita.orendt@utah.edu](mailto:anita.orendt@utah.edu)

DocuSigned by:  
*Robert Spall*  
Date: 10/1/2015  
1288D5DAC1A14C5...  
Robert Spall  
Department Head, Mechanical and Aerospace Engineering  
Utah State University

DocuSigned by:  
*Mark McLellan*  
Date: 10/1/2015  
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Mark R. McLellan  
Vice President & Dean,  
Office of Research & Graduate Studies  
Utah State University

DocuSigned by:  
*Tom Cheatham*  
Date: 10/2/2015  
81B92317D50E43B...  
Tom Cheatham  
Director  
Center for High Performance Computing  
University of Utah



Quote #: 714166409  
 Customer #: 86239242  
 Contract #: WN30ACA  
 Customer Agreement #: MA1137  
 Quote Date: 08/26/2015  
 Customer Name: UNIV OF UTAH

*QUOTATION*

Date: 8/26/2015

Thanks for choosing Dell! Your quote is detailed below; please review the quote for product and informational accuracy. If you find errors or desire certain changes please contact your sales professional as soon as possible.

## Sales Professional Information

<b>SALES REP:</b>	DEEDEE RAMIREZ	<b>PHONE:</b>	1800 - 7246614
<b>Email Address:</b>	<a href="mailto:DeeDee_Ramirez@Dell.com">DeeDee_Ramirez@Dell.com</a>	<b>Phone Ext:</b>	5139370

GROUP: 1 QUANTITY: 1 SYSTEM PRICE: \$6,205.86 GROUP TOTAL: \$6,205.86

Description	Quantity
PowerEdge R430 Server (210-ADLO)	1
PowerEdge R430/R530 Motherboard (329-BCBR)	1
Declined recommended ProSupport service - Call your Dell Sales Rep if Upgrade Needed (996-8029)	1
Dell Hardware Limited Warranty Plus On Site Service (997-2924)	1
Basic Hardware Services: Business Hours (5X10) Next Business Day On Site Hardware Warranty Repair 5 Year (997-2928)	1
On-Site Installation Declined (900-9997)	1
US Order (332-1286)	1
PowerEdge R430 Shipping (340-AMJF)	1
Riser with Two x16 PCIe Gen3 LP slots (x16 PCIe lanes), R430 (330-BBEF)	1
On-Board LOM 1GBE (Dual Port for Towers, Quad Port for Racks) (542-BBCO)	1
Mellanox ConnectX-3, Single Port, VPI FDR, QSFP+ Adapter, Low Profile (540-BBIZ)	1

iDRAC8, Express (385-BBIK)	1
3.5" Chassis with up to 4 Cabled Hard Drives, Emb SATA (321-BBNC)	1
No Bezel (350-BBBW)	1
Performance BIOS Settings (384-BBBL)	1
No RAID with Embedded SATA (1-4 SATA HDD) with Cabled Chassis (780-BBPZ)	1
No Controller (405-AACD)	1
Intel Xeon E5-2680 v3 2.5GHz,30M Cache,9.60GT/s QPI,Turbo,HT,12C/24T (120W) Max Mem 2133MHz (338-BFFJ)	1
Upgrade to Two Intel Xeon E5-2680 v3 2.5GHz,30M Cache,9.60GT/s QPI,Turbo,HT,12C/24T (120W) (374-BBGQ)	1
16GB RDIMM, 2133 MT/s, Dual Rank, x4 Data Width (370-ABUG)	8
2133MT/s RDIMMs (370-ABUF)	1
Performance Optimized (370-AAIP)	1
1TB 7.2K RPM SATA 6Gbps 3.5in Cabled Hard Drive (400-AFXX)	1
Electronic System Documentation and OpenManage DVD Kit for R430 (343-BBDT)	1
No Optical Drive Internal for 4 HD Chassis (429-AABH)	1
ReadyRails Sliding Rails Without Cable Management Arm (770-BBBC)	1
Single Cabled Power Supply 450W (450-AEGW)	1
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America (492-BBDI)	1
No Operating System (619-ABVR)	1
No Media Required (421-5736)	1
DIMM Blanks for System with 2 Processors (370-ABXP)	1
Cooling Fan (370-ABXV)	1
135W Heatsink for PowerEdge R430 (374-BBIJ)	1

135W Heatsink for PowerEdge R430 (374-BBIJ)	1
High Performance Computing Cluster Information SKU (463-7922)	1
HPC BIOS Setting (331-1435)	1

<b>SOFTWARE &amp; ACCESSORIES</b>	<b>GROUP TOTAL: \$70.78</b>		
<b>Product</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total</b>
VPI Mellanox FDR InfiniBand QSFP passive copper cable, 3m, Customer Kit (470-ABIW)	1	\$70.78	\$70.78

<b>*Total Purchase Price:</b>	<b>\$6,276.64</b>
<b>Product Subtotal:</b>	<b>\$6,276.64</b>
<b>Tax:</b>	<b>\$0.00</b>
<b>Shipping &amp; Handling:</b>	<b>\$0.00</b>
<b>State Environmental Fee:</b>	<b>\$0.00</b>
<b>Shipping Method:</b>	<b>LTL 5 DAY OR LESS</b>

(\* Amount denoted in \$)

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