ICER 2020 HPCC buy-in details - Deadline April 7, 2020

ICER has committed to buying more than $1M of compute nodes from a major computing hardware vendor. As part of this commitment, we are offering MSU researchers the opportunity to purchase nodes for their own use. Details of these nodes are listed below.

Buy-in details: MSU requires you to pay the price of the compute hardware only. In return, MSU provides all other infrastructure (racks, networking, software, power, cooling, etc.), as well as a 5-year support contract from the vendor. In return, other users may use your nodes for short jobs when you are not using them.

More precisely, the nodes you buy are owned by you, and nobody outside of the pool of researchers that you designate may run a job of longer than 4 hours on that node. Once someone in your group requests access to your node(s) via the batch queue, they would wait a maximum of 4 hours after which they can queue as many jobs as they like. Those queued jobs would be processed prior to any 4-hour job requests from non-designated users. Once your node(s) are no longer in use by you or your research group, 4-hour jobs can again get access to your node(s).

Node details: The various node options are listed below. All nodes will be connected via a 100G Infiniband network and will have access to ICER's existing parallel file systems. Note that the only GPU option we are offering is a node with 4 NVidia V100S "Volta" GPUs, with the maximum amount of memory per GPU (32 GB).

Node option	Price per node	Node description
CPU-A	$5,571.42	2 AMD EPYC 7H12 processors (64 cores per processor, 2.6 GHz clock speed) - 128 cores per node. 4 GB memory/core - 512 GB memory per node. Nodes include one 400 GB SSD drive.
CPU-B	$8,238.16	As CPU-A, but 8 GB memory/core (1 TB/node)
CPU-C	$17,019.20	As CPU-A, but 16 GB memory/core (2 TB/node)
CPU-D	$52,500	As CPU-A, but 32 GB/memory/core (4 TB/node)
GPU	$30,337.41	**2 Intel Xeon 8260 Processors** ("Cascade Lake") (24 cores per processor, 2.40 GHz clock speed) - 48 cores per node. **4 NVidia V100S GPUs** ("Volta") w/32 GB of high-bandwidth memory and 1.1 TB/s of memory bandwidth.

Purchase details: Please email Kelly Osborn (kosborn@msu.edu), cc'd to Brian O'Shea (oshea@msu.edu) the type and quantity of nodes that you wish to purchase as well as the MSU account number that should be charged. If you wish to split the purchase across multiple accounts, please let us know how the costs should be divided up. **The deadline for purchases at the rates listed in the table on the previous page is Tuesday, April 7th.**

Please note that nodes must be purchased in integer quantities - you cannot buy a fraction of a node. However, it's fine for more than one researcher/research group to split a single node - just make it clear how the purchase should be divided among multiple MSU accounts.

Timeline: We anticipate that we will make the final commitment to our vendor in early April (approximately April 8th). The prices stated in this document are good through the April 7th deadline. While it is possible to buy into the machine after that, it will be during a second round of purchasing and may have significantly higher pricing.

We expect to have the new machine installed during the summer, targeting mid-July. If you order after the initial purchase, expect that those nodes will not arrive until some time in the fall.