

Research Computing / Additional Information



# Services and Pricing Structure



Created by Chris Kurtz

Last updated: Aug 30, 2022 by Ian Shaeffer • 3 min read

## Services and prices are subject to change.

Research Computing is a unit of the Research Technology Office of KED.

Research Computing supports research and instructional activities for ASU and follows the mission of KED and ASU.

## Table Of Services

- Table Of Services
- Project-Based Storage
- Physical Server Co-Location
- Virtual Machines
- HPC Private Partitions
- Dell Pre-Approved Compute and GPU Node Examples

## Project-Based Storage

High-speed storage directly mounted to our HPC Supercomputers.

Storage	Protocols	Purpose	Free Starting Amount	Cost per additional TB per year
Project-based	NFS, SMB,	Long term project	100GB	\$50

Storage	Globus DTN	file storage		
---------	------------	--------------	--	--

## Notes about Storage

- Users may purchase project storage by submitting a ticket or by emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).
- HPC research groups can receive a 100GB directory mounted directly on our supercomputer for free by submitting a ticket or by emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).
- Customer purchased or managed storage arrays are not allowed.

## Project Storage Backup Policies

- Snapshots are taken at the array level nightly
  - Snapshots are done on the array which is resilient, but not redundant
  - Data is not copied to a second array by default
  - Snapshots are kept for a maximum of 2 weeks
- All data is kept on-site and is not replicated to secondary storage by default
- Cloud backups can be accommodated with prior notification. Please contact RC support to arrange cloud backups

## Physical Server Co-Location

Server Size	Cost for One Year (per server)	Network Connections included
1U	\$700	1x 1Gb copper
2U	\$750	1x 1Gb copper
3U	\$800	1x 1Gb copper
4U	\$800	1x 1Gb copper

4U	\$700	1x 1Gb Copper
----	-------	---------------

**Please contact Research Computing (RC) for greater than 4U through a ticket request or emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).**

### Notes about Co-Location

- Additional Network Connections above 1Gb are available please contact Research Computing for more details.
- Physical co-location servers are un-managed by Research Computing. That is the servers must be managed by the customer and must include timely security updates.
- Failure to apply patches will result in the system being taken offline.

### Virtual Machines

VM Size	vCPU	Memory	Disk	Cost per Year	Network Connections included
Small	1	4GB	100GB	\$700	1x 1Gb
Standard	4	8GB	250GB	\$950	1x 1Gb
Large	8	16GB	500GB	\$1250	1x 1Gb
XL	16	32GB	1000GB	\$2100	1x 1Gb

**Please contact Research Computing (RC) with inquiries by submitting a ticket request or by emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).**

## Notes about Virtual Machines:

- Additional network connections, vCPU, memory, and disk may be available separately.
- The base OS is installed, windows or Linux
- All licensed software must be purchased by the customer (including any windows licenses)
- Virtual machines (VM) are un-managed by Research Computing. The VM must be managed by the customer and must include timely security updates.
- Failure to apply patches will result in the system being taken offline.
- Please contact Research Computing (RC) by submitting a ticket request or by emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).

## VM Backup policies

- Snapshots are taken at the VM host level nightly
  - Snapshots are saved on the back-end iSCSI storage array which is resilient, but not redundant
  - Data is not copied to a second array by default
  - Snapshots are kept for 1 week with a monthly snapshot kept for 1 month
- Databases require specialized backups or they may not be consistent. Contact RC support if you will need to back up a database
- All data is kept on-site by default and is not replicated to secondary storage by default
- Cloud backups can be accommodated with prior notification. Please contact RC support to arrange cloud backups

## HPC Private Partitions

ASU Research Computing (ASURC) will support faculty purchased vendor hardware within the Agave high-performance supercomputer, including supplying rack space, power, cooling, and networking. Faculty can purchase from a set of pre-approved compute nodes (see below). These nodes are created into a private partition on the supercomputer that is

available to the faculty member and supporting group.

Idle private partitions will be open to use by the ASU community through the wildfire queue. Jobs submitted to the wildfire queue on private partitions will be guaranteed to run without preemption for a period of at least 4 hours. Private partitions may be reserved by the owning faculty for immediate priority access for up to three 1-week periods per year.

ASURC will support faculty purchased hardware for as long as feasible; however, beyond the warranty period of the hardware, the faculty is responsible for any hardware and labor costs necessary to maintain the hardware. If beyond the warranty period, Research Computing deems that it is not technically feasible to support hardware, it will be removed from the supercomputer.

## Dell Pre-Approved Compute and GPU Node Examples

Compute Node Types	Processor	Core Count	RAM	GPU Type	GPU Count	Price
Standard Intel	Intel Ice Lake	56 cores	256GB	N/A	N/A	\$11,829.44
High Memory	Intel Ice Lake	56 cores	1,024GB	N/A	N/A	\$20,094.62
Standard AMD	AMD EPYC	64 cores	256GB	N/A	N/A	\$18,127.52
GPU Option 1	AMD EPYC	64 cores	1,024GB	40GB A100	4	\$66,119.28
GPU Option 2	AMD EPYC	64 cores	1,024GB	80GB A100	4	\$73,559.28

***Please contact us for the most up-to-date pricing and for additional configuration***

***options.***

### **Notes about Pre-Approved Compute Nodes:**

- Additional configurations and quotes can be generated via a request to the ticket system or by emailing [rtshelp@asu.edu](mailto:rtshelp@asu.edu).
- Note: Compute node purchases are tax-exempt. Research Computing will provide appropriate tax exemption forms with each quote.



---

Arizona State University