

The Office of Research Computing (ORC), a unit within the Office of Research Innovation and Economic Impact (ORIEI), is responsible for supporting George Mason's research computing enterprise. Currently, ORC employs 3 FTEs and 3 GRAs to provide user support; an additional 5 FTEs are provided by Mason's central IT unit to support system operations. ORC provides centralized research computing resources that are available to any Mason researcher:

- A high-performance compute cluster (HOPPER) comprised of: 164 compute nodes with a total of 10,496 cores, 35 GPU nodes with a total of 152 NVIDIA GPUs (A100, H100 & B200), and an HDR InfiniBand™ low-latency network.
  - A 3PB all-flash VAST™ high-performance filesystem for “scratch” use and I/O intensive workloads.
  - A 10 PBT general-purpose file system – 1TB + 1TB per PhD student or postdoc quota provided free of charge, additional storage available for an annual fee.
  - High-performance Data Transfer Nodes.
  - Interactive web-based access provided by Open OnDemand (OOD).
- An OpenStack cluster equipped with 21 Nvidia A40 (48Gb) GPUs to support GPU-enabled Virtual Desktop Instances (VDIs) for visualization, rendering, or GPU compute workloads.
- A Secure Research Cluster (SRC) to provide support for projects requiring CUI and ITAR-controlled data.
- A Data Visualization and AR/VR Lab (aka Vis-VR Lab):
  - 24' wide x 9' tall touch screen “Video Wall” with ThinkHub™ software.
  - Windows, Mac, and Linux content servers.
  - Video conferencing support.
  - Two AR/VR Teaching Spaces/Pods with Display Screens and Virtual Reality Headsets.
- GitLab - A web-based Git Repository manager
- Survey Tools:
  - RedCap
  - Qualtrics

Additionally, ORC provides consultation services to expertly advise researchers on selecting systems for their workloads, optimizing workflows and code bases, and actively engaging in collaborative research. Office hours are held Monday-Thursday by a team of graduate assistants, who also provide support for system use via ORC support tickets. A variety of relevant workshops and training are provided regularly each semester.

ORC can also facilitate access to national computing resources via the NSF-funded ACCESS program, and also the provisioning of resources in national cloud services such as Microsoft Azure.

ORC leverages Mason's network connectivity to provide access to Internet2 via the Mid-Atlantic Research Infrastructure Alliance (MARIA).