

Earth Resources Observation and Science Center Hosting Services

The Earth Resources Observation and Science (EROS) Center has a long history of leveraging technology in support of Earth science and business applications including data management, processing, virtualization, and complex solutions to visualize and distribute data. It is the aim of EROS to offer operational excellence and service as a key component to the Federal Cloud-Smart directives and Department of the Interior (DOI) data center optimization goals.



Facility Specifications

- 28,357 square feet of raised floor space
- 10,953 square feet of expansion capability
- Power densities
- Three computer rooms
- Logistic services available with warehousing, preparation area outside of data center space, and equipment placement

Service Offerings

Facilities as a Service (FaaS) provides physical rack space and floor space for housing critical data center infrastructure.

Infrastructure as a Service (IaaS) provides a virtual machine with customer-requested Central Processing Unit (CPU), memory, and storage resources on which the customer can deploy applications and custom software configurations.

Platform as a Service (PaaS) provides the capability for customers to run applications on a USGS-managed Windows or Linux virtual machine instance. USGS manages and patches the underlying operating system, infrastructure, network, and storage; the customer has delegated access to manage and configure applications.

Desktop as a Service (DaaS) provides desktop operating systems that run inside virtual machines on servers at the EROS Center.

Power

- Uninterrupted Power Supply (UPS) and generator backup power
- Metering of power and environmental conditions 24/7

Shared Access Capability

Wide Area Network

- 5-Gigabit-per-second (Gbps) internet connection
- 10-Gbps DOI intranet connection
- 10-Gbps research (for example, Internet2) connection
- 10-Gbps Research, Education, and Economic Development (REED)/Great Plains Network (GPN) connection

Platform as a Service—Virtual

- Redundant, 25-Gbps data center fabric connection

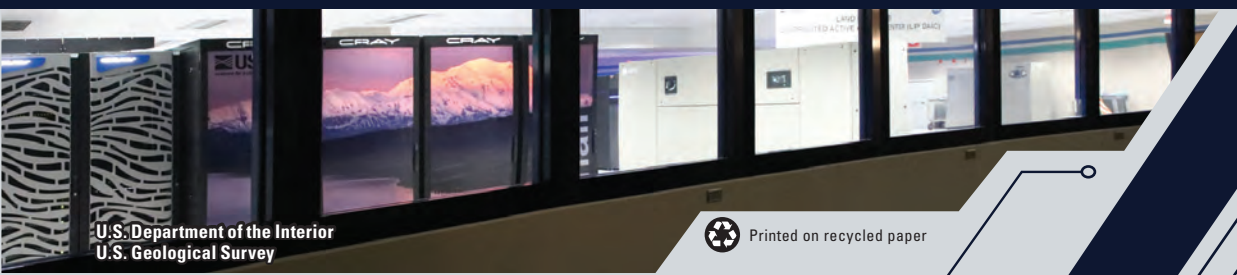
Facilities as a Service—Physical

- 1-Gbps Local Area Network (LAN) connection

Current Customer Testimonials

"The network move to EROS is a success!!! Thanks to you and your team. We are very impressed with your professional work and services!!! We're not used to getting pampered."
~ U.S. Geological Survey (USGS) Water Mission Area (WMA), Enterprise Technology Office (ETO)

"I want to thank each and every one of you at EROS for all your help in standing up these appliances in the first place. It was a pleasure from start to finish." ~ USGS Associate Chief Information Officer (ACIO)



Physical Security

- Controlled access at the facility, building, and data center
- Card key building access

Information Technology Security

- 24x7x365 monitored Active Response Center (ARC)
- 24x7 network monitoring
- USGS Trusted Internet Connection (TIC) gateway
- Controlled computer room access
- Security as a Service

Environmental

- Controlled temperature and humidity
- Monitored building management systems
- Fire suppression and smoke detection

24x7 Monitoring/After Hours

- 24x7x365 monitoring available in networking, system administration, and information technology security

Industry-Leading Staff

- Microsoft certified engineers
- Cisco certified engineers
- VMware certified engineers
- Project Management Professional (PMP) certified staff
- Federal Acquisition Certification (FAC) for Program and Project Managers (P/PM)
- Information Technology Infrastructure Library (ITIL) certified staff
- Amazon Web Services (AWS) certified engineers
- Certified Information Systems Security Professional (CISSP) engineers
- Certified ScrumMaster (CSM) staff

Information Technology Service Management

- Cost modeling for accuracy in billing based on actual usage of infrastructure
- Custom application for data center environment available on request; specific costs depend on hardware information (and power usage)
- Other services available via the EROS Service Catalog

Science Operations Support

- High-speed access available to the USGS Denali High-Performance Computing (HPC) environment and the Tallgrass Artificial Intelligence/Machine Learning (AI/ML) environment hosted at the EROS facility

Enhancements

- Enhance FaaS network uplinks to 10 Gbps from 1 Gbps
- Enhance DaaS (Virtual Desktop Infrastructure [VDI]) capabilities for nonpersistent workstations
- Enhance DaaS (VDI) capacity

- Enhance EPC capacity and performance*
- Offer Data Center Information Management (DCIM) as SaaS*

- Enhance EPC capacity and performance*
- Offer distributed computing through containers as IaaS/PaaS*

Fiscal Year 2021

- Enhance EROS enterprise storage capacity and performance
- Offer object storage as an IaaS*
- Enhance EROS Private Cloud (EPC) user portal capabilities enabling self-service actions

Fiscal Year 2022

- Enhance EPC user portal capabilities*
- Enhance EROS enterprise storage capacity and performance*

Fiscal Year 2023

NOTE: Items marked with "*" are tentative objectives and are subject to change based on funding and availability.

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