

# Oracle Roving Edge Infrastructure

Accelerate Cloud Workloads Beyond the Bounds of the Datacenter

Technology infrastructure has been continually transforming and moving to the edge. Applications and workloads are being run on various types of cloud environments - private, public, hybrid, or multi-cloud. At the same time, more and more intelligent and connected devices are being deployed at the edge of the network. Volumes of data is generated by the internet of things (IoT) and other mobile devices at the edge must be processed at the edge to perform real-time data analytics for actionable insights.

*A robust edge infrastructure can help organizations drive forward to a digital future that promotes innovation, further optimize cloud capabilities, and creates efficiencies.*

## Extend Cloud Capabilities to the Edge

*Meet the demands of performance, reliability, and security*

Oracle Roving Edge Infrastructure delivers cloud compute and storage at the edge of networks and in disconnected locations, enabling low-latency processing closer to the point of data generation and ingestion, resulting in more timely insights into your data. At the heart of Oracle Roving Edge Infrastructure are Roving Edge Devices (REDs) which are ruggedized, portable server nodes that physically bring core IaaS and PaaS services to remote locations. Extensible into groups of 5 to 15 nodes, these clusters offer increased capacity and durability.

Whether in a disconnected battlefield environment or with intermittent ship or airborne communications, Oracle Roving Edge Infrastructure can independently store, collect and process large datasets to accelerate tactical decision-making for today's modern missions, even in the most remote and austere environments.

## Key Benefits

- Delivers tactical edge compute and storage in remote and austere environments.
- Low-latency intensive data processing capability
- Ability to run time-sensitive custom apps in locations typically lacking consistent network connectivity
- All-environment optimized device –ruggedized, portable, and scalable
- Block volume and object storage (61 TB per node), 40 cores, 512 GB RAM, Embedded GPU, and high-speed networking for high performance output.
- Unified customer experience across OCI and Oracle Roving Edge Infrastructure make adoption, control, and management effortless.
- Roving Edge Infrastructure is a cost-effective edge solution that extends OCI functionality for Oracle Cloud and other applications.

## Roving Edge Device (RED)

Roving Edge Devices bring mission performance to the edge with a mix of computing, storage, and platform software, all running in a ruggedized enclosure. A combination of CPU cores, memory, storage, and high-speed networking guarantees high-performance output from each node. Further, each device can support AI/ML processing with an embedded Graphic Processing Unit (GPU).

- **CPUs/RAM/GPU**  
2U server with 40 OCPUs,  
512 GB RAM  
Embedded NVIDIA GPU
- **Block Volumes / Object Storage**  
61 TB NVMe per node for block and object storage.
- **Security**  
Tamper-evident seals  
Built-in Trusted Platform Module
- **Size & Weight**  
20" x 17" x 3.5" (2U server)  
<88 lbs. with a ruggedized case



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## Integrated Software and Hardware

Oracle Roving Edge Infrastructure provides core infrastructure and platform services that allow customers' Oracle Cloud workloads to be executed on Roving Edge Devices (REDs). REDs are purpose-built portable ruggedized servers shipped with a cloud-based software stack.

To deploy onto Roving Edge Devices, users develop, test, and validate their workloads and applications in the Oracle Cloud environment, and then transfer them to RED nodes. Customers can use existing licenses to build and move images with Oracle Database or Analytics to their RED nodes for field processing.

Once deployed, customers can synchronize object storage between the RED and cloud when a network connection is available.

### Oracle Roving Edge Device

Oracle Roving Edge Device is a compact and portable server node that brings Oracle Cloud Infrastructure capabilities to remote locations, even when completely disconnected. Encased in a 3U military grade (MIL-STD-810) ruggedized shock mount case, each device weighs less than 88 lbs. and is electromagnetic shielded to limit emanations and interference. Designed to be scalable and stacked in clusters, you can opt to scale-up based on your compute, storage, or space needs or constraints. Clusters are available in configurations of 5 to 15 nodes.

### Configuration

Oracle Roving Edge Infrastructure extends your OCI tenancy by allowing you to deploy your cloud-based workloads to the edge while using standard IaaS and PaaS services. Each deployment is custom built and configured by you to address your specific mission needs by provisioning the images and data you select from your OCI tenancy. Simply use the OCI console to make your selections, and your configuration will be provisioned and shipped to you. You can also opt to pick up your device(s).

## Unified Customer Experience

### *Easy to Adopt, Control, and Manage*

Easy to manage and control, Oracle Roving Edge Infrastructure acts as an extension of your Oracle Cloud Infrastructure (OCI) tenancy and selected region.

When in the field, Oracle Roving Edge Infrastructure offers the same look and feel as the OCI console which makes it effortless to adopt and deploy, providing you with a consistent and unified experience.

Further, you can easily synchronize data between object storage in your Oracle Cloud tenancy and RED node(s) whenever network connectivity is available.

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Outside North America, find your local office at [oracle.com/contact](https://oracle.com/contact).

## Oracle Roving Edge Infrastructure Services

Oracle Roving Edge Infrastructure allows your OCI workloads to execute at the edge, bringing applications and performance closer to where data is generated. You can also synchronize your data with the cloud as necessary.

**Cloud Capabilities** Built to run mission-critical, time-sensitive cloud applications at the edge, Oracle Roving Edge Infrastructure provides an ecosystem of Oracle IaaS and PaaS services outside of the data center. Oracle Roving Edge Infrastructure allows you to run virtual machines from your cloud tenancy and provides both Block and Object Storage.

**Virtual Networking** Consistent with the OCI experience, you can define and run virtual cloud networks (VCNs) and subnets for your workloads and assign public IP addresses for your virtual machines.

**Data Synchronization** Perform on-demand bidirectional synchronization of object storage between your edge node and OCI tenancy. Additionally, when connected, you can check for and download system updates.

**On-Device Console** Offers the same look and feel as the OCI console, making it easy to adopt and manage, and providing you with a consistent and unified cloud experience.

### Resources:

[Oracle.com/cloud/roving-edge-infrastructure](https://oracle.com/cloud/roving-edge-infrastructure)

[Oracle.com/cloud/roving-edge/FAQ](https://oracle.com/cloud/roving-edge/FAQ)

[Oracle.com/cloud/cost-estimator](https://oracle.com/cloud/cost-estimator) (select – Edge Computing)