

OCI Containers for Edge Computing

As IoT infrastructures expand to offer various solutions to suit the differing needs across industry sectors, upgrades are required to handle the massive global demand for more processing power at the network edge. This requires more advanced equipment with built-in functionality to process and store data locally- even if connectivity is lost - reducing the amount of data transmitted over cellular networks.



Perle IRG Routers, with native support for OCI Containers, enable users to optimize edge computing processing capabilities by deploying lightweight applications tailored to suit unique or evolving use cases with low latency and real-time responsiveness. One of the main advantages of this solution is the ability to deploy custom third-party applications in a container that runs tasks and performs intelligent actions closer to the source without obstructing the core functionality of the IRG Router. The result is complete integration between the IRG Router and the user's overall solution.

OCI Containers, popularized by Docker, have revolutionized how applications are created, deployed, run, and managed. They provide a lightweight and portable containerization solution that allows developers to package applications easily, along with all the necessary dependencies, configurations, and settings, and run them seamlessly across different environments and host systems.

Users will achieve a more reliable network connection by processing data locally to ensure low-latency communication between IoT devices. The decreased WAN traffic will also relieve the burden on other computing resources - all while adhering to corporate security guidelines and lowering the overall cost of ownership.

Perle's OCI Containers are based on the Docker platform and add native Docker capabilities to all IRG Routers. It supports public and private container registries such as Docker Hub, Amazon ECR, Opencontainers, GitHub, BuildKit, Podman, and Buildah. Perle IRG Routers provide the ideal framework to provision, manage, and run any application or container found, or built, in these registries. Perle customers can now quickly create, test, and implement new applications in their preferred language, including C, C++, Go, Python, and Perl, thanks to the adoption of a widely used platform. And depending on the size and workload of the applications, you can run multiple OCI Containers concurrently.



Here's what you can expect from Perle's Native OCI Container Support:



1. **Isolation for increased security:** Our containers provide a high degree of isolation between your custom application and the host system, ensuring a controlled and secure environment for your valuable data.
2. **Portability:** Deploy your custom applications effortlessly across different hardware platforms, operating systems, and environments. Our OCI Containers make moving applications from development to production easier than ever.
3. **Efficiency:** Our lightweight containers require minimal resources, making them ideal for embedded software products like our IRG routers. Experience enhanced efficiency without compromising on performance.
4. **Standardization:** Containers provide a standardized way of packaging and distributing applications. This lowers the likelihood of compatibility issues, simplifies software development, and reduces maintenance headaches.
5. **Simplified maintenance:** Updating and managing your applications has never been easier. With Perle's Native OCI Container Support, apply patches, security updates, and other changes to your applications without affecting the underlying system.
6. **Faster time to market:** Build and deploy applications at lightning speed, improving your time to market and overall agility. Perle's OCI Containers empower you to stay ahead of the competition.
7. **Tools:** Through the OCI container, admin users can collect router statistics, configure the unit, and manipulate data using RESTful API and Python.
8. **Full inclusion and cost savings:** Our OCI Container support is fully included in the base software of the Perle IRG Routers-no need to purchase additional licenses or subscribe to costly cloud-based service plans. Experience significant year-on-year savings while enjoying the **benefits of cutting-edge technology.**

Perle IRG Routers combine wireless WANs and edge computing into a consolidated platform that empowers users to leverage cellular networking and edge computing to create complete solutions. This results in improved application performance, scalability, security, and resilience, while simplifying network management and reducing operational complexity. Perle's open standard approach demonstrates the power of edge computing and its potential to revolutionize various industries.