The Edge Virtualization Engine (EVE) combines a type-1 hypervisor (currently Xen) with a hardened root-of-trust operating system that provides a runtime for edge containers. It is specifically designed to run in IoT and edge devices. EVE provides system architects with new levels of control through virtualization of these edge devices. Since this edge equipment is deployed outside datacenters, EVE securely isolates functions in the virtualization layer to prevent a single functional block from compromising the entire system (similar to the concepts first developed in Qubes OS). EVE virtualizes all resources on a device and allows for granular remote management. It can host multiple applications running in edge containers. It provides high security default settings, and enables remote patching, updates, and application deployment, and much more. EVE’s APIs control assignment of device resources to different workloads allowing more efficient use of resources. System architects can increase device utilization through workload consolidation and application multi-tenancy.

Using EVE as the basis of a fleet of IoT devices, it’s possible for operators to efficiently manage far larger numbers of deployments, spread across wider geographies, while running many applications. Developers can deploy modern cloud-native apps co-located with existing legacy applications running on any operating system.

**Main Concepts**

EVE consists of four major components:

- Type-1 hypervisor
- Operating system services
- Device connectivity and management interfaces
- Edge container runtime

**How to Get Eve**

You can get the source code for EVE from the LF Edge Github Repository. Build instructions are here.
Getting Started Tutorial

Instructions how to use are available here.

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