

# Bringing the Benefits of Linux Containers to Operational Technology

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Linux container technology was introduced more than a decade ago and has recently jumped in adoption in IT environments. However, the OT (operational technology) environments, typically made up of heterogenous embedded systems, have lagged in the adoption of container technologies, due to both the unique technology requirements and the business models that relied on proprietary systems. In this article, I explore recent innovation in open-source offerings that are enabling the use of containers in OT use cases, such as industrial control systems, IoT gateways, medical devices, Radio Access Network (RAN) products and network appliances.

Enterprise IT leaders have adopted 'cloud-native' computing architectures because of the innovation velocity and cost

benefits derived by the approach. To leverage containers, developers segment applications into modular micro-services that enable flexible development and deployment models. These micro-services are then deployed as containers where the service itself is integrated with the required libraries and functions. On containerization, these application components have small footprints and fast speeds of deployment. The applications become highly portable across compute architectures due to the abstraction away from the hardware and the operating system.

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