ZEDEDA

PARTNER SOLUTION BRIEF

Edge Orchestration for Azure IoT

Enabling end-to-end security, deployment, management, and monitoring for Azure IoT solutions.

Edge Orchestration for Azure IoT Deployments at Scale

Summary

The diversity of hardware and software cluttering the distributed edge landscape keeps many edge projects from scaling effectively, plus it's important to architect with an open foundation to maximize flexibility for the long term.

Solutions also need to support legacy infrastructure and software investments in the field, as well as the needs and skill sets of both Operations Technology (OT) and IT organizations. ZEDEDA's simple-to-use cloud-based, open orchestration solution provides the ideal foundation support for scaling for distributed edge computing with any hardware, any combination of Docker containers, Kubernetes clusters and virtual machines (VMs), while connecting to any on-prem system or cloud.

ZEDEDA has worked with Microsoft to directly integrate with Azure IoT in order to address all the challenges that organizations face as they scale their Azure IoT deployments. This joint solution enables customers to run existing legacy applications (e.g., Windows-based) in VMs alongside cloud-native containerized applications while harnessing the power of the Azure IoT hyperscale cloud to organize, monitor, query, and orchestrate changes across massive fleets of edge computing nodes.

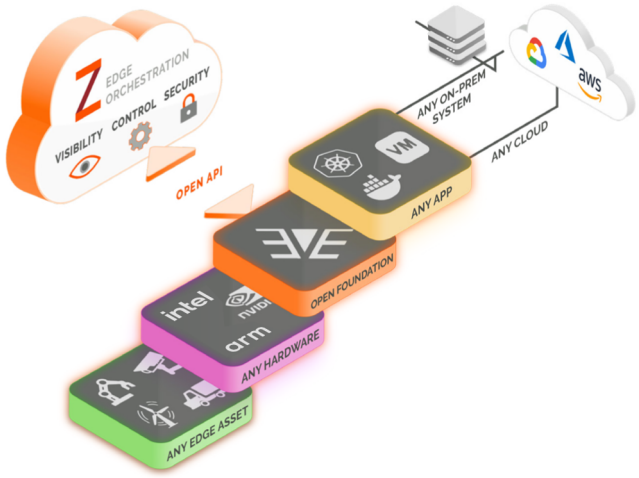
Microsoft + ZEDEDA: Better Together at the Edge

The integration of ZEDEDA's cloud-based distributed edge orchestration with Azure IoT makes it possible to simplify the deployment of Azure IoT projects to get beyond PoC stage and scale production rapidly across thousands of nodes.

ZEDEDA and Microsoft are making it easier to get value from data at the edge, by solving the challenges of provisioning and securing devices and applications, full deployment lifecycle management, and accelerating the collection and transmission of data to the Azure cloud to enrich with advanced analytics and machine learning.

30% of workloads will be deployed at the edge by 2025 vs 1% today. Source: Gartner

60% of IoT initiatives stall at the Proof of Concept (PoC) stage. Source: Cisco



ZEDEDA Solution Stack

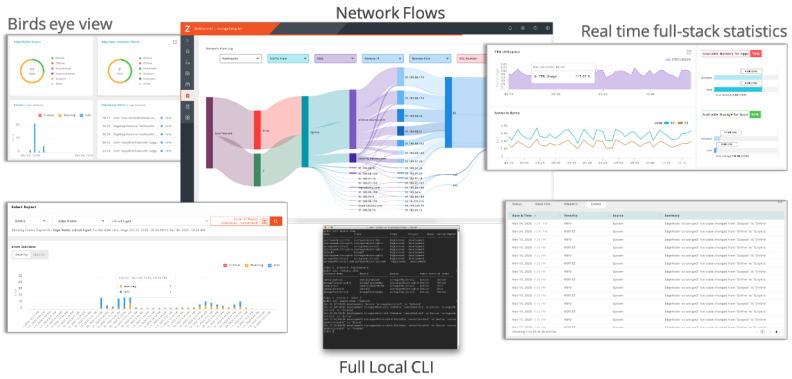
Your Foundation for a Multi-Cloud Strategy

The market has attempted to address the inherently diverse nature of the edge with a dizzying landscape of proprietary platforms. However, the ultimate value of digital is interconnecting ecosystems to foster new experiences and revenue streams. Key to realizing this goal over time is to invest today in open, trusted infrastructure that is aligned to several core principles.

ZEDEDA provides the ideal foundation for this by enabling a multi-cloud strategy rooted in an open edge, decoupling infrastructure from applications and domain knowledge so customers can have a consistent management and security experience regardless of vertical and use case. ZEDEDA's better-together integration with Azure IoT enables customers to accelerate with this leading cloud platform while maintaining complete flexibility as their needs evolve.

Key Benefits

- Customizable one-click Azure IoT Edge deployment with Azure DPS integration.
- Collect data from various endpoints and transmit to Azure IoT Hub for analytics, AI/ML, etc.
- Deploy, monitor and operate all devices hardware and software from a single dashboard
- Full lifecycle management of Azure IoT Edge nodes at scale
- Zero Trust model ensures device integrity in remote environments
- Built on an open-source foundation (EVE-OS from LF Edge), preventing lock-in and simplifying ecosystem integration
- Support for Kubernetes deployments alongside native Docker containers and legacy Windows/Linux applications



> Azure IoT Edge offers customers the opportunity to transform their operations by bringing analytics and other workloads from the cloud to the edge, but customers often have complex computing environments that can pose challenges for scaling. ZEDEDA enables businesses to easily deploy Azure IoT Edge solutions and manage them in a single pane with their other edge workloads.

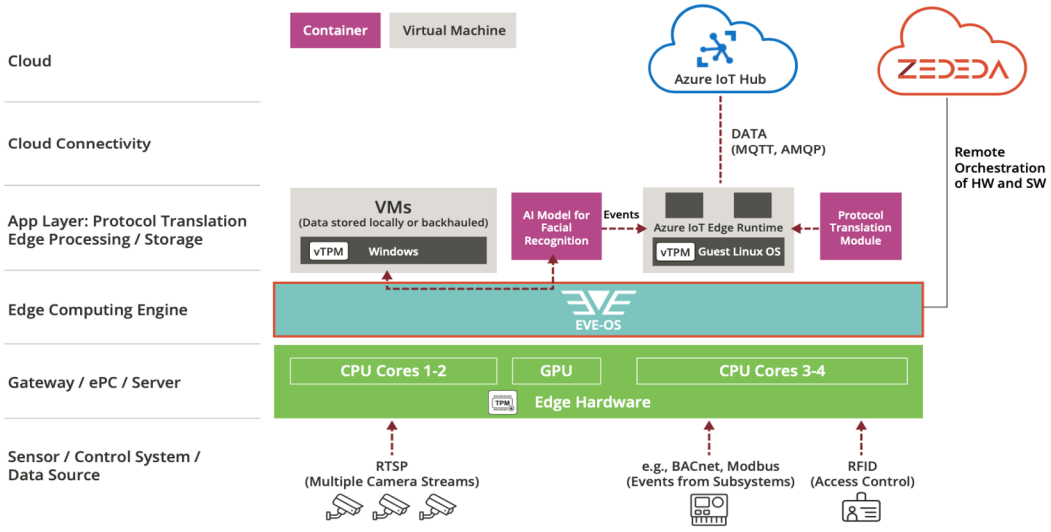
Tony Shakib
General Manager, Azure IoT, Microsoft

Your Easy Button to Deploy Azure IoT Edge

ZEDEDA's Microsoft Azure IoT integration supports two deployment models:

1. Admin deploys the Azure IoT Edge Runtime on choice of edge compute node running EVE-OS with a single click. Once deployed, Azure IoT Edge connects to Azure IoT Hub in the cloud and users can then deploy application modules through Azure IoT Hub directly.
2. Admin defines a project that provisions what each edge node should run in terms of runtime, modules, device twins, module twin configurations, etc. This is a one-time setup, after which customers onboard the edge node, and EVE-OS will "phone home" in an eventual consistency model, for a fail-proof desired state and automatically deploy the entire Azure IoT stack automatically based on the deployment manifest.

In either model, ZEDEDA provides a consistent management and security experience regardless of hardware and software used.



Example Deployment of ZEDEDA Edge Orchestration for Azure IoT

Edge Orchestration for Azure IoT: Case Studies

PEOPLEFLO

PeopleFlo is revolutionizing fluid technology by transforming industrial pump systems from stand-alone devices into smart, secure, synchronized and connected assets.

Improving pump performance, reducing energy consumption by 50%, and cutback CO_2 emissions while improving motor, pump and control valve reliability.

Key Outcomes with ZEDEDA

- Full lifecycle management of entire edge deployment including software and hardware
- Future-proofing for additional solution needs
- Prevented vendor lock-in

Learn more

> When we focused our company on MachineEdge's pump system optimization, we needed solutions to three challenges: updating software external to our Azure IoT Edge modules, holistic device security and device monitoring. ZEDEDA provided a secure solution for device management and application deployment while future-proofing MachineEdge for new innovations.

Michael Thompson
CTO, PeopleFlo

BOBST

BOBST is one of the world's leading suppliers of industrial packaging equipment and services.

Together with ZEDEDA and Microsoft Azure IoT, BOBST is reinventing the art and science of factory automation – improving quality and yield, while reducing risks and costs.

Key Outcomes with ZEDEDA

- Scalable foundation for connected machines deployed globally
- PoC to hundreds of deployed nodes in 5 weeks
- Saved six months on development time

Learn more

> We are shaping the future of the packaging world where every phase in the production process is connected, digitized and automated. With ZEDEDA, we sped up our production readiness in the area of device management by six months, and we received a first working proof of concept within a few days, while becoming production-ready in less than two months.

Serge Morisod
Head of IoT Lab, BOBST

We tie the room together.

An ecosystem built on an open foundation is critical for success in our increasingly connected, data-driven world. ZEDEDA provides a consistent device and app orchestration foundation for our growing ecosystem of technology and services partners. Together with our partners, we can help you accelerate your IoT and Edge projects to solve business challenges.

Contact us at sales@zededa.com to learn more about this solution brief and how we can help you with your digital transformation.

www.zededa.com