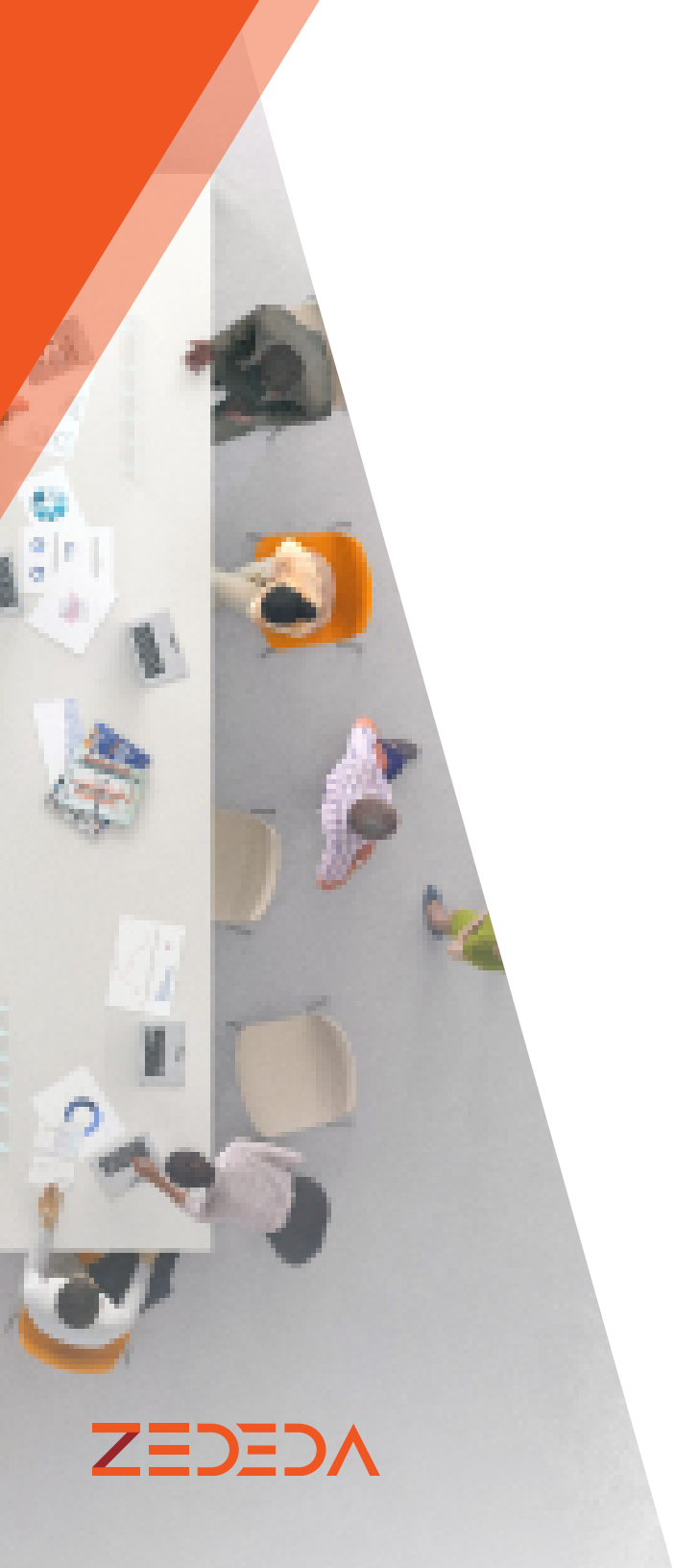
ZEDEDA

EBOOK

The Five Critical Considerations for Edge Managment and Orchestration

Five Reasons Why Cloud-Native Edge Management and Orchestration has Become Critical



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Introduction

Data is exploding at the edge of the network (resulting from more devices, machines, sensors and applications) and digital transformation is causing organizations to pivot their business and technology strategies. IDC predicts that by 2023, over 50% of new enterprise IT infrastructure will be deployed at the edge rather than corporate infrastructure; by 2024, there will be an 800% increase in the number of applications at the edge.[1]

As many organizations realize they must innovate and invest in edge computing technology solutions to keep pace with the changing landscape, there are also other critical factors to consider. In this eBook, you'll discover the top five reasons why organizations are seeking purpose-built, cloud-native edge management and orchestration:

1. **Missing Comprehensive Security**
2. **Rising Management Costs**
3. **Applications Are Constantly Changing**
4. **Legacy Software Roadblocks**
5. **The Need to Scale**

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1. Missing Comprehensive Security

Data backup and protection risks, cloud adoption risks, perimeter defense risks – are just a few out of the many edge computing security threats that could impact your organization. Investing in edge management and orchestration solutions that aren't purpose-built for the cloud – and legacy edge computing software – also leave significant security gaps, resulting in security breaches, unprotected data and applications, noncompliance, and increasing costs.

In order to overcome these security challenges, many organizations are **evaluating security strategies** and looking to edge management and orchestration solutions. According to TechTarget, organizations "must incorporate the right strategies and tools to anticipate, prevent and overcome common edge computing security risks and realize the value of edge technology."[2] Consider a **SaaS-based, completely cloud-managed infrastructure** solution that already includes a **comprehensive security model for the edge**. And, doesn't require any integration or configuration to deliver security, visibility, and compliance

"ZEDEDA provided a secure solution for device management and application deployment while future-proofing MachineEdge for new innovations."

PEOPLEFLO

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2. Rising Management Costs

"By 2024, there will be an 800% increase in the number of applications at the edge."[3] But, along with this increase in the number of applications, comes a rise in operational costs to manage and maintain them. Many organizations end up realizing how burdensome and expensive it is to manage all of their edge and remote applications (and environments).

Due to the significant cost increases, organizations are seeking more cost-effective edge management and orchestration solutions that won't impact their budget and productivity. IDC's Worldwide Edge Spending Guide states that this year's total investment in edge computing is expected to be $176 billion, with a 2025 target of nearly $274 billion. Choosing an innovative, agile, edge management and orchestration solution that saves costs will ultimately enable your organization to stay future-proofed.

"With ZEDEDA we have an automatic process that's faster, less prone to error, and future-proofed. We can manage nodes remotely, easily update them, and have the peace of mind of knowing that if software failure happens, we can deal with it."

PV HARDWARE

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3. Applications Are Constantly Changing

Along with the demand to scale and the rise in management costs, also introduces the need to meet application update requirements. Applications, especially new applications related to AI inference and machine learning, require constant updating. They also require massive resources for training, but only restricted resources for the actual inference. And, when organizations have thousands of applications to manage, there is a significant need to easily and continuously develop and deploy them at the edge, just like in the cloud.

With an agile, secure, simple edge management and orchestration solution, your teams **don't have to overspend resources and bandwidth** on managing and monitoring application updates. Organizations **can reduce overall maintenance hours** typically consumed by OS upgrades or general software upgrades – enabling further stable appliance recovery and creating more **time for innovation**.

"ZEDEDA provides a cloud-based solution, orchestrating the software lifecycle of our IoT devices deployed worldwide. This enables frequent and secure updates of new advanced software, which are required for our customers who operate, more than ever, in an agile business."

BOBST

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""ZEDEDA enabled us to focus on delivering value to our customers while providing a mature orchestration solution for the distributed edge, saving us years of development time and getting MachineEdge ready for the market."

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4. Legacy Software Roadblocks

Many organizations have legacy software investments that they struggle to leave behind as they invest in new cloud-native applications. But, keeping these legacy software investments presents multiple challenges, especially when you want to stay agile, innovative, and outperform your competitors. Here's why:

Legacy data center solutions are resource-intensive. Unfortunately, they're cost-prohibitive and not purpose-built for the edge. They don't meet the unique security requirements of the distributed edge or scale down to more constrained, on-premises edge deployments.

Existing device management solutions are developer and embedded focused, lack security, and can't run legacy apps alongside cloud-native edge apps.

Homegrown solutions are costly to build and maintain. They often don't meet the unique security requirements of the edge and can't scale. Since they are normally designed for a specific use case, they aren't standards-based, flexible, extendable, or adaptable to changing requirements at the edge.

On the other hand, with a purpose-built, cloud-native edge management and orchestration solution, the above challenges are eliminated. Consider letting go of legacy software, and making an innovative, future-proof investment in edge management and orchestration.

5. The Need to Scale

Due to the massive explosion of data at the edge, organizations face various challenges when moving these large amounts of data to the cloud for processing. Significant local processing requirements are stringent – and factoring in bandwidth, latency, autonomy, security, and privacy – only make **operational expenses** skyrocket. It is also difficult for the cloud to **meet these requirements at scale**, given the availability of bandwidth in these distributed environments.

Gaining the most value from your data, means being able to scale without worrying about limitations. By processing data at the edge with the right cloud-native edge management and orchestration solution, purpose-built for the edge, your organization can enable teams to properly centrally manage and orchestrate nodes, security, and applications.

"Our goal was to scale and increase from 10 to 40-50 boxes a month, but it was challenging without the right management and visibility to envision scalability for the future. Now with ZEDEDA's solution, we don't need to worry about limitations"

SWITCH AUTOMATION

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ZEDEDA for Cloud-Native Edge Management and Orchestration

When you're considering next steps and aiming to tackle edge management and orchestration challenges head on, it's important to find a solution that is purpose-built for the cloud, agile, future-proofed, secure, cost-effective, and able to scale without limitations.

ZEDEDA, the leader in management and orchestration for the distributed edge, delivers an open, cloud-native edge management and orchestration solution, simplifying the security and remote management of edge infrastructure and applications at scale. ZEDEDA is offered as a service and includes 24/7/365 support for the open source EVE-OS. ZEDEDA is available to enterprise customers, SIs and OEMs, with flexible deployment options.

With ZEDEDA, your organization will gain:

- **Zero Limits** – for edge infrastructure options, guest operating systems, applications, network configurations and clouds
- **Zero Touch** – for deployments of edge infrastructure and applications, simplifying installation and bringing the experience of the cloud to distributed locations
- **Zero Trust** – security model addressing the unique, perimeter-less security challenges of edge infrastructure deployed outside of traditional data centers

Key Takeaways

Whether you're in the initial process of identifying business-critical needs and adjusting strategies, or already searching for an edge management and orchestration solution, it's essential to be mindful of the top reasons why so many more organizations are investing in edge computing software – purpose-built for the cloud. Consider **comprehensive security, rising management costs, constant app changes, legacy software roadblocks, the need to scale**, and other significant factors that drive the demand to innovate and keep pace with digital transformation and data acceleration.

Want to Learn More?

Start empowering your organization with agile, cloud-native edge management and orchestration. **For more information** check out zededa.com

Sources:

[1] *"Benefits of the Open Edge: What It Is and Why It Matters Now More Than Ever," IDC Spotlight*

[2] *"Edge computing security risks and how to overcome them," Tom Noelle, TechTarget*

[3] *"Benefits of the Open Edge: What It Is and Why It Matters Now More Than Ever," IDC Spotlight*

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About ZEDEDA

ZEDEDA makes edge computing effortless, open, and intrinsically secure – extending the cloud experience to the edge. ZEDEDA reduces the cost of managing and orchestrating distributed edge infrastructure and applications, while increasing visibility, security and control. ZEDEDA delivers a distributed, cloud-native edge management and orchestration solution, simplifying the security and remote management of edge infrastructure and applications at scale.

ZEDEDA ensures extensibility and flexibility by utilizing an open partner ecosystem with a robust app marketplace and leveraging an open architecture built on EVE-OS, from the Linux Foundation. EVE-OS is a lightweight, open-source Linux-based edge operating system. ZEDEDA delivers instant time to value, has thousands of nodes under management and is backed by world-class investors with teams in the United States, Germany and India. For more information, visit www.zededa.com.