avassa

Avassa for Edge
Case Description

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In this case, we'll look at a case description for the preceding challenges, key drivers, and accomplished benefits of an implementation of Avassa for Edge. A regional enterprise sought a robust platform to efficiently manage on-site edge applications. Having navigated through the complexities of on-prem infrastructure and applications without centralized management and automation, they transitioned to an all-cloud approach with thin local clients in the edge locations.

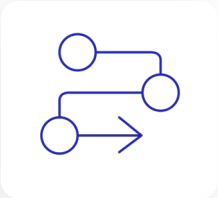
However, they soon realized the limitations of this strategy, which hindered the evolution of the operational excellence, on-site staff and customer experience, and robustness of the business.

Their mission? Finding a solution that could simplify the complexity and cost for on-site edge application management and operations. Also, they wanted to robustly future-proof the operational aspects and allow their edge platform to scale with ease and at a high pace.

Their result? Using the Avassa Edge Platform, they where able to streamline operations and reduce both complexity and cost. They are able to cater to the needs of numerous application teams and scale with ease.

Challenges

The company initiated a project to address the following challenges and based on the following drivers:



Increasing demand for sophisticated on-site applications

Compliance with data regulations prohibiting certain data from being pushed to the cloud.

Escalating cyber threats, requiring a distributed fault-tolerant solution to prevent all sites from being affected by an attack on the cloud provider, so that each location is autonomous

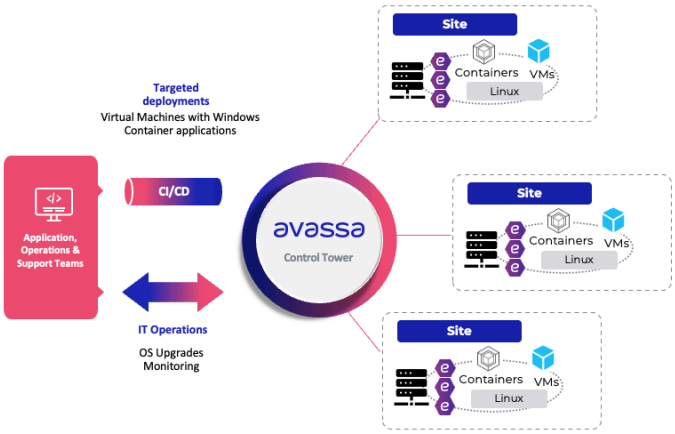
Imperative for efficient operations to avoid reverting to extensive on-site IT operations for manual upgrades with USB sticks and on-site maintenance.

An underlying challenge is the hybrid mix of older Windows applications and modernized Linux container applications

The enterprise was looking for a solution that could easily reduce complexity and cost for on-site edge application management and operations. Furthermore, they wanted to future-proof the operational aspects and allow their edge platform to scale with ease.

Avassa for Edge implementation description

Each store was outfitted with a compact rack of general-purpose compute and Red Hat for Edge Operating System, with the Avassa Edge Enforcer integrated into the golden image rollout. This allowed the central operations team to deploy necessary applications on-site, comprising a blend of Virtual Machines for Windows applications and containers for Linux applications. Avassa's orchestration platform managed both VM and container orchestration, ensuring full autonomous self-healing of applications within each location's three-node rack.



With a unified orchestration solution the organisation could centrally manage the applications across all remote sites. The Avassa built-in features to place applications on the available on-premise hosts made it very efficient for the IT operations teams to have a fully automated software rollout. The larger sites had several hosts which could make use of the Avassa built-in features for self-healing. Furthermore, the enterprise made heavy use of the Avassa built-in distributed secrets manager to make sure sensitive data was kept secure.

Avassa's edge-native edge monitoring capabilities like application and site health, alerts and host monitoring was integrated towards the organisations central IT operations tools. The context-aware monitoring capabilities gave the IT operations team a direct insight into how all applications at all sites behaved. The proactive Avassa alerts was integrated to automated incident management processes and tools.

The Avassa OS upgrade functionality, seamlessly integrated with Red Hat OS Image management, ensured uniformity in the underlying OS version across all stores. Built-in Avassa features like device discovery and ingress networking configuration automated in-store setup tasks, simplifying the attachment of cameras to hosts and scheduling of containers. Client applications in the site could effortlessly access deployed applications through automatically configured endpoints.

Key benefits of implementation

The enterprise has now rolled out edge applications to the majority of the sites and is already seeing several benefits.

The major benefits included:

- Enhanced business availability: autonomous on-site edge clusters.
- Streamlined operations: comprehensive visibility into each location's infrastructure and application health, with remote troubleshooting and automatic application roll-outs. Integration of VM and container orchestration within a unified platform reduced management complexity.
- Future-proof platform facilitating the deployment of advanced on-site edge experience applications.
- Cloud and network outages had led to downtime of business a number of times.

> **"With the Avassa platform, we are able to deploy and operate our applications at the edge with ease, using the same mechanisms we already have in place for centralized cloud delivery. This delights our engineers since the edge becomes a simple extension of the tooling and patterns they have grown to love in the cloud."**
>
> Team leader

Get in touch

avassa.io

info@avassa.io

+46-734 02 16 81

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