Maximizing the Edge Computing Opportunity with Centralized IT Management

Plan for Fast-Paced Growth Now with Vertiv™ Avocent® ADX Ecosystem

Overview

Edge computing is having its all-star moment. Recently, organizations have embraced edge capabilities to meet increased network demand, enable digital product and service delivery, and provide a better experience to users. In addition, edge is colliding with multiple trends, such as 5G wireless networking, the Internet of Things (IoT) and artificial intelligence (AI), enabling the ultra-fast processing of vast data workloads and creation of powerful analytics and connected experiences. These developments will only add to the value of edge computing over time.

Managing the Diverse Edge Sites that Power Your Business

As you stand up edge sites, you're likely excited about the opportunity to unlock new sources of value. However, you may be rightly concerned about creating network sprawl and losing visibility into – and control over – your growing edge site presence. More edge sites and devices can mean more management headaches, as well as increased security risks, unless they are managed strategically and consistently.

Your IT organization needs a different management approach to enable all of this growth. Vertiv™ Avocent® ADX Ecosystem enables your IT teams to manage both data center assets and edge sites on the same platform, increasing your visibility and control with automated processes. IT can streamline processes, remotely monitoring, updating and troubleshooting the devices that power your business. Let's take a closer look at the challenges and opportunities that await you with edge computing and how Avocent® ADX Ecosystem helps meet your business and technical needs associated with growth.

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Providing Business Users with 4K Streaming Access

Avocent® ADX Ecosystem provides 4K streaming access, equipping employees such as IT equipment testers, software R&D teams, game developers and more, with high-resolution imagery and rich color. Empower staff with secure access to on-premises applications, while avoiding the cost, logistical and security issues associated with distributing high-end workstations to home offices. Staff who use 4K streaming keep their productivity high, while avoiding work and eye strain due to working with low-quality imagery or latency issues.

Edge Computing Challenges Centralized Management Platforms Can Address

Edge sites aren't local: Data centers are typically strategically sited to boost business performance and are run by both onsite and remote staff. Edge sites, on the other hand, are located wherever your users are. They may be unmanned and hard to reach or even run as dark sites, yet they're vitally essential to delivering critical services. If your edge sites go down, they could take employees offline or eliminate digital product and service delivery to part of your customer base.

As a consequence, your IT team will absolutely rely on remote access capabilities to manage sites. Avocent ADX Ecosystem is that platform, enabling your team to monitor, control, configure and upgrade devices and troubleshoot any issues that occur remotely, without the need to visit sites and interact directly with devices.

Edge sites are diverse: According to STL Partners, there is much debate about how to define edge data centers. In addition to their proximity to users, the commonalities that bind them are that they enable next-generation applications and provide lower latency, higher security and greater control over data.[i]

The diversity of edge sites creates management challenges. Your edge sites likely have heterogeneous infrastructure from multiple vendors and may range from an on-premises edge site, with one rack and latency of 2-5 milliseconds, on average, to a regional edge site, with 100-plus racks and latency of 50 milliseconds, on average. You're also likely exploiting OpenBMC or Redfish devices to gain new capabilities and enable easier hybrid cloud management, meaning that you need integrated firmware management.

Avocent ADX Ecosystem serves as a robust, vendor-agnostic platform you can use to scale edge site and device management. Vertiv™ Avocent® Core Insight (ACI) helps your developers integrate and customize management firmware for hardware platforms. It provides a rich set of applications for API management, monitoring dashboards, remote access and security.

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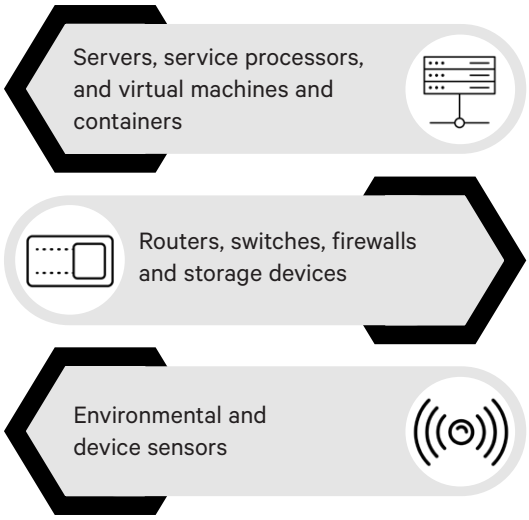
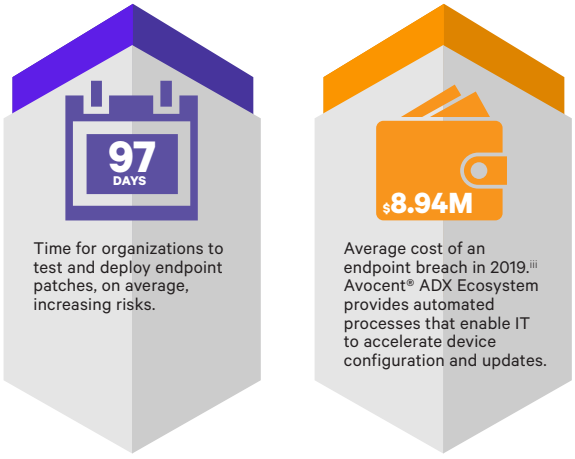


Edge assets reduce security risks: As you add more edge sites and enable more users, your network footprint will increase substantially. If managed effectively, edge sites should decrease security risks by decentralizing computing capabilities, while also enabling you to automate and control key actions. Avocent ADX Ecosystem enables you to manage users and sessions, while also limiting the operations authorized users can perform. In addition, you gain a centralized view into your device current state, including issues such as out-of-date patches. Use Avocent ADX Ecosystem automated processes to speed device configurations and updates, decreasing security risks. Avocent ADX Ecosystem also leverages Vertiv ACI to provide premium runtime security, eliminating an entire vector of memory-based vulnerabilities.

Accelerate Patching with Vertiv™ ADX® Ecosystem



Edge Computing Opportunities You Can Exploit with Standardized Processes

Edge computing provides a better experience: As organizations continue to digitize products and services, network congestion has become a significant challenge. In addition, remote workers are using bandwidth-hogging applications, such as video conferencing and 3D CAD design tools, which strain corporate networks. By standing up edge sites, organizations can bring compute processing, application execution and data storage closer to users, reducing latency to deliver a better experience. However, that means that edge sites also need to perform flawlessly in any and every condition.

Avocent ADX Ecosystem enables you to perform secure routine maintenance on your edge devices to keep them functioning as desired. You gain centralized visibility into edge site performance, while tapping out-of-bound management capabilities to keep devices performing as expected when corporate networks are unavailable. In addition, you can update Avocent ADX Ecosystem without taking it offline, strengthening your business continuity.

Edge computing accelerates the power of 5G and the Internet of Things (IoT): Both IoT and 5G are poised to transform industries. So, how will you capitalize on these trends? For example, telecommunications companies will partner with cloud providers to create 5G applications, unlocking new opportunities. Manufacturers are connecting equipment and using sensor data to conduct predictive and preventive maintenance and drive daily throughput. And across multiple industries, organizations can use IoT, 5G and edge computing to enable such use cases as providing remote expertise, guiding remote repairs, enabling real-time sharing and collaboration on 3D CAD design and modeling, delivering training via augmented reality or virtual reality (VR/AR), and enabling virtual tours of products in context.[iv]

As a cloud-native solution, Avocent ADX Ecosystem is built from the ground up to handle endpoint-intensive use cases. Avocent ADX Ecosystem leverages containers, microservices, automation and application programming interfaces (APIs) to provide the flexibility, scalability and integration capabilities you seek, enabling your existing team to tap the latest technology to manage edge sites and devices. You can also deploy Avocent ADX Ecosystem on-premises or on a private or public cloud, to meet your organization's unique business needs.

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Edge computing keeps data local: Consumer data privacy and security are regulatory hot-button issues the world over. In addition, many organizational teams wish to be good stewards of consumer data, while still using data to develop and deliver personalized products and services. Edge computing bridges this seeming dichotomy by enabling organizations to both process and store data locally. For example, retailers and video game developers can use edge computing to enable augmented reality applications, creating rich interactive experiences. Media companies can provide a better video experience by caching content closer to end-users. And healthcare organizations can innovate faster, such as providing patients with wearables or sensor-tagged medication, while still abiding by industry regulations.[v]

Avocent® ADX Ecosystem provides you with the tools to manage growth, maintaining high uptime of the edge sites powering your business. Locate your edge sites where you want to, to deliver an exceptional experience, abide by regulations and protect consumer privacy. Use Avocent ADX Ecosystem to manage, control, configure and update all of these sites and devices to ensure high availability.

Conclusion

Edge computing will help your business transform in exciting ways. Applications abound across industries, meaning that you can flexibly innovate to gain predictive intelligence, transform experiences and streamline critical operations.

To get the most from edge growth, you'll want to implement a centralized platform. Choose Avocent® ADX ecosystem to enable secure, standardized and automated management of your edge network. Support more sites and devices with existing staff, while delivering the responsiveness and uptime your organization seeks to power business growth.

Get started with Avocent ADX Ecosystem today.

[i] *"What and Where Are Edge Data Centres?," Web page, STL Partners, https://stlpartners.com/edge-computing/%e2%80%8bwhat-and-where-are-edge-data-centres/*

[ii] *"What and Where Are Edge Data Centres?," ibid .*

[iii] *Louis Columbus, "How To Build a Business Case For Endpoint Security," Article, Forbes, May 10, 2020, https://www.forbes.com/sites/louiscolumbus/2020/05/10/how-to-build-a-business-case-for-endpoint-security/?sh=3710fca46e3e*

[iv] *"Edge Computing – What Is Edge Computing?," ibid.*

[v] *"Edge Computing – What Is Edge Computing?," Web page, STL Partners, undated, https://stlpartners.com/edge-computing/what-is-edge-computing/*

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