



**VERTIV WHITE PAPER**

# From Enterprise to Edge: Speeding Deployment and Management of Complex IT Infrastructures

How the Vertiv™ Avocent® ADX Ecosystem  
Streamlines Remote IT Management

## Digital Transformation Pressures Require a New Approach to IT Management

The ongoing pandemic has rewritten the rules of business. Market volatility, fast-changing customer behaviors and the drive to remote work have all accelerated the race to digital — and there is no looking back. According to a recent McKinsey survey, organizations have accelerated the digitization of customer interactions, supply chain processes, and internal operations at a rate of three to four years. Product innovation has happened even faster. Organizations have compressed seven years of digital innovation into a single year,<sup>i</sup> broadening and transforming their product portfolios.

Simultaneously, some companies have released hundreds of thousands of square feet of commercial office space in top-tier cities such as San Francisco, San Jose, and Seattle (Pinterest and REI among them), indicating a long-term commitment to hybrid work models, where fewer staff work on site at any time.<sup>ii</sup>

At the heart of the storm are IT teams, including data center managers, IT operations managers and infrastructure engineers. As an IT leader, you and your team are working harder than ever to support your organizations' drive to remote work and the fast-paced virtualization of products and services. You also need to strengthen business continuity by ensuring continuous uptime of key infrastructures.

In years past, network outages may have harmed a specific site, harming productivity and local business operations. Now, network outages can take an entire workforce down, literally stopping business operations in its tracks, impacting customers and causing revenue losses. Since digital business has created a brutally competitive market environment, ensuring continuous network uptime and throughput is an important part of your IT team's value proposition.

## Digital Business and Remote Work Stress IT Management Processes

How vast are the challenges your IT team is currently facing? Let's take a closer look:

- **IT infrastructures are growing:** You are likely managing a complex, sprawling IT infrastructure that now includes on-premises and colocated sites, public and private clouds, and a growing edge presence. During the pandemic, 46% of all organizations increased hybrid cloud investments<sup>iii</sup> to enable remote workforces, scale digital services and push computing resources closer to users for a better experience. The race to the cloud has become a sprint.

- **Edge site demand is higher than ever:** The demand for data center equipment and edge sites is growing fast with edge spending slated to reach \$250.6 billion in 2024.<sup>iv</sup> Some even think edge demand will shrink the core. That is creating tremendous opportunity for your organization. "However edge is defined, the compute, storage, and networking cornerstones gird data creation, analysis, and management outside of the core.<sup>v</sup> A future is unfolding where extraordinary value and opportunity for essential products and services from a myriad of technology ecosystem stakeholders is being created," states IDC.<sup>vi</sup>
- **IT management is becoming more complex:** IT teams need secure, remote access to a wide array of equipment including production, development and test servers; non-essential servers; administrative desktops; storage devices; networking equipment; remote rack power distribution units (rPDUs), remote uninterruptible power supplies (UPS) and sensors; rack door locks; cameras; and more. These devices are increasingly packaged with vendor tools, increasing management complexity. Your team may struggle to keep pace with tool proliferation in an industry that favors speed, simplicity and scale.
- **IT site access is not guaranteed:** During the pandemic, most IT work has been done remotely. IT teams may or may not have access to sites such as colocated facilities, while all facilities have likely reduced the number of staff on site. In addition, it is typically not feasible or desirable to send IT staff or local providers out to edge sites on a moment's notice.
- **Manual processes don't scale:** IT teams are managing more devices and sites than ever, while user experience and business requirements have skyrocketed. Any team that is using manual processes is likely experiencing challenges keeping up with demand. In addition, the possibility of manual errors increases as staff responsibilities grow. Misconfigured devices could create security gaps, while inattention to alerts could lead to critical equipment damage or failures.

## How Management Platforms Help You Accomplish Your Goals

Your IT infrastructure is transforming in real-time. You need a robust, scalable management platform to support that shift if you want to do any of the following:

- **Get ready for 5G wireless:** 5G will increase speeds by a factor of 10X,<sup>vii</sup> enabling processing of vast amounts of edge data with minimal latency. That makes it possible for you to power Internet of Things (IoT) applications and capitalize on automation and analytics driven by artificial intelligence (AI) and machine learning (ML) more easily.

- **Increase automation to scale services:** By automating device management processes and shortening their deployment times, you can increase business agility. Additionally, by automating firmware updates, configuration changes and status reporting, you'll save time, improve efficiency and be able to deploy your IT team on higher-value tasks. When you do more with existing staff, you'll generate a greater return on investment (ROI) for your business.
- **Deliver a better user experience:** It's easier than ever to improve the end-user experience with faster video performance, ending substandard video, glitches and online meeting and collaboration tool failure. Support remote workers' need for high-quality 4K (3840 x 2160) video resolution at 30 hertz (Hz) refresh rates in such industries as banking and trading, video game development, security and more. The right IT management tool helps employees access and use on-premises applications easily. Your staff can then work at peak levels without experiencing eye or work strain that harms their performance.
- **Ensure infrastructure resilience:** Leverage always-on, always-connected tools for out-of-band device management. Enable rapid recovery from any outages, especially at remote sites. Using the right IT management platform also allows you to utilize cellular access to connect to sites where Ethernet is down or doesn't exist.
- **Enhance security of your IT infrastructure:** Prevent unauthorized access to devices and tightly control the operations authorized users can perform on them. Ideally, your management platform will allow you to meet customer requests for open firmware access with a secure, hardened OpenBMC-based solution.

## How the Vertiv™ Avocent® ADX Ecosystem Solves IT Challenges

The good news is that new IT management platforms provide the data visibility, device access and automated processes you need to increase speed, accuracy and scale. Yes, with the right management tools, your current IT team can handle more users, devices and locations than before without sacrificing quality or responsiveness.

The Vertiv™ Avocent® ADX ecosystem is uniquely designed to help you solve the challenges of — and exploit the potential of — an era of remote work and digital business. This robust, scalable solution includes a management platform, rack manager, interface modules and a serial console.

Your IT team can use Avocent® ADX ecosystem to monitor and control your IT infrastructure remotely and securely. You will be able to support user and device growth flexibly and rapidly, including use cases where workers need 4K streaming access. In addition, embedded Linux firmware enables your IT team to make critical improvements that will enhance your operational efficiency over time.

## Conclusion

Business demands are growing fast, necessitating a different approach to IT management. But fortunately, you can tap the power of Avocent® ADX ecosystem to support your organization's data center and edge growth.

By harnessing the visibility and automated processes of this centralized, open-source tool, your team can streamline IT management, strengthen security, support users, and provide the uptime and responsiveness your organization requires. Learn more about [Avocent® ADX ecosystem](#).

<sup>i</sup> Laura LaBerge, Clayton O'Toole, Jeremy Schneider, and Kate Smaje, "[How COVID-19 Has Pushed Companies Over the Technology Tipping Point and Transformed Business Forever](#)," Survey, McKinsey, October 5, 2020

<sup>ii</sup> See Katie Dowd, "[Pinterest pays \\$89.5 million to terminate San Francisco office lease](#)," Article, SF Gate, August 30, 2020; "[Why REI Is Selling Its Brand-New Headquarters](#)," Article, Mercury News, April 12, 2021

<sup>iii</sup> "[Study Shows Hybrid Cloud Steps Up to Meet Business Needs Amidst COVID-19](#)," News Release, PR Newswire, November 18, 2020

<sup>iv</sup> "[Worldwide Spending on Edge Computing Will Reach \\$250 Billion in 2024, According to a New IDC Spending Guide](#)," Press Release, IDC, September 23, 2020

<sup>v</sup> Scott Fulton II, "[Will Growth at the Edge Shrink the Core?](#)," Article, Data Center Knowledge, August 12, 2020

<sup>vi</sup> "Worldwide Spending," IDC, *ibid*.

<sup>vii</sup> "[5G and Edge Computing: Why Does 5G Need Edge?](#)," Research Brief, STL Partners, undated



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