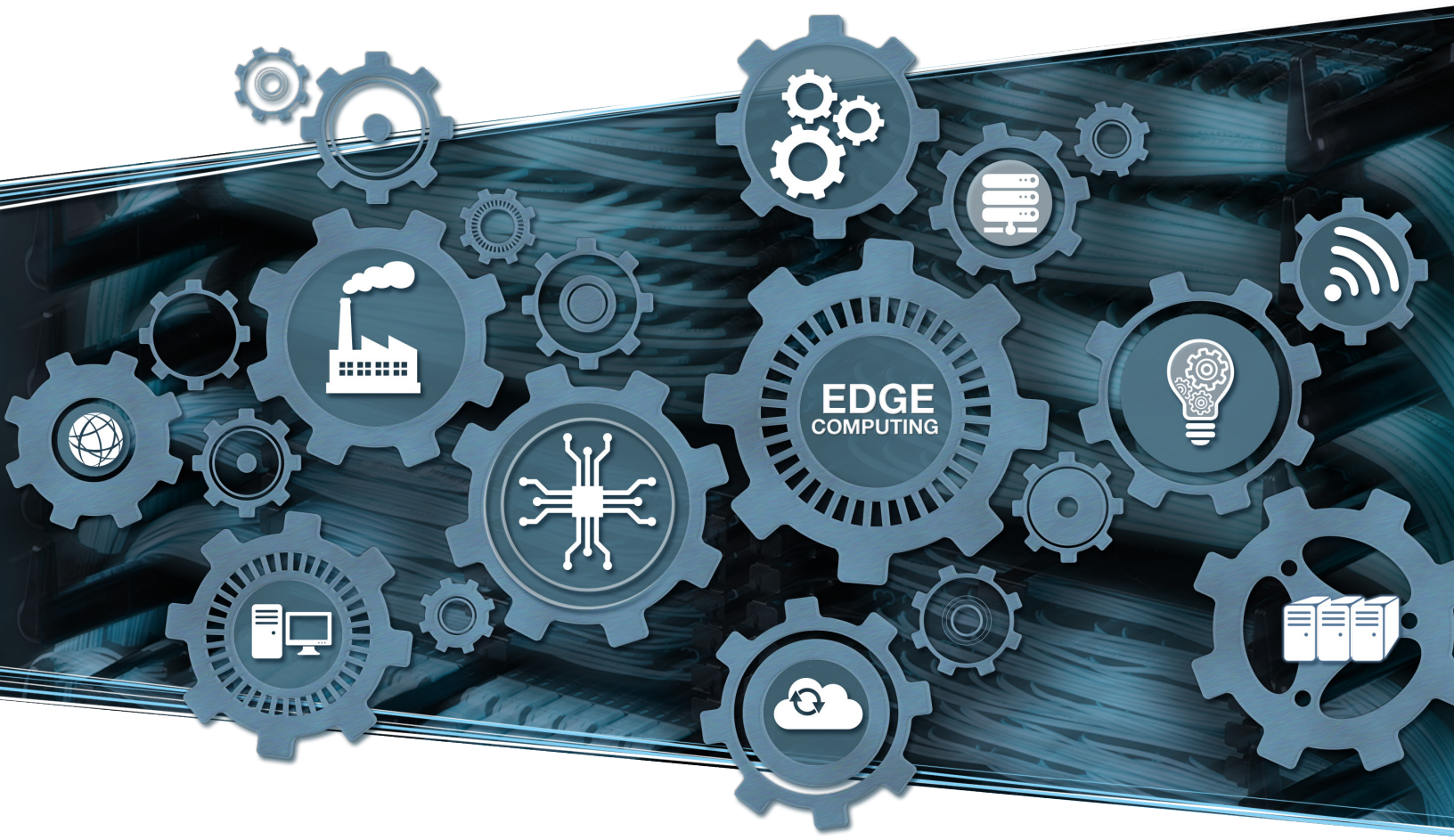
Network Infrastructure is Even More Critical at the Edge



Edge computing moves compute functions closer to where data is generated and analyzed: at the network edge. Edge is an evolution of the network that compliments the cloud, while leveraging a distributed network model. Edge network architectures move compute, storage, and analytics near the point of data generation; proximate to the end users. This evolution of the network realizes numerous benefits, chief among them reduced latency, improved application performance, and optimized transmission costs.

Organizations of nearly every size and shape, regardless of industry or business model, are aware of Edge as a networking concept. Applications for Edge are far reaching, with deployments escalating in applications that are sensitive to network latency, that require enhanced data security, or are bound by regulatory requirements.

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infrastructure for a connected world

Infrastructure: More Critical at the Edge

Infrastructure-Enabled Edge

Locating compute functions where the data is generated and used improves performance, but also comes with a unique set of challenges: these deployments tend to be remote, without dedicated IT personnel, geographically distributed, and situated in non-traditional IT environments.

Dependable network infrastructure is foundational at Edge sites. The right infrastructure can resolve those challenges. Reliability, consistency, security, and remote management and control are infrastructure building blocks that enable successful Edge deployments.

Edge is not a single instance, but a multitude of instances across a broad geographic landscape. Consistent preconfigured designs enable efficient deployments across a multi-site distributed architecture and ongoing maintenance of that network.

High quality, standards-based solutions are a critical first step to ensuring site reliability where on-site IT personnel may not be present. When reliable infrastructure design reduces future network issues, that is a valuable, foundational first step.

Edge environments are not traditional IT spaces. Controlling physical access ensures that authorized personnel can access the systems, while the curious passerby and nefarious characters are deterred.

Intelligent infrastructure solutions deliver IT oversight for remote installations. Remotely monitor, manage, and control physical and environmental conditions, limiting the need for on-site visits.

The Critical Nature of Edge Infrastructure

When deploying Edge infrastructure, management of that deployment can be a concern. Scattering IT functions across the globe in a series of Edge-positioned data centers can be a logistical and management nightmare. However, the right infrastructure protects both the financial investment in the Edge solutions, and the management of those deployments. How do you ensure that your Edge installations are right for your organization?

First Things First: Focus on Reliability

Edge deployments span broad geographies and they are commonly remote and lack on-site IT staff; this makes reliability a key objective. The utilization of standards-based solutions that are deployed by trained and certified installers, provides peace of mind that the Edge infrastructure will perform as designed, day in and day out.

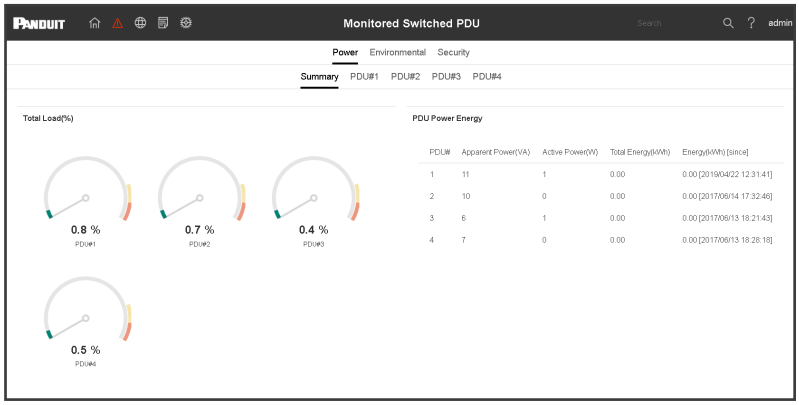
Additionally, because of where they are installed, Edge solutions may be exposed to harsh conditions that could impact network performance. Environmental protection and conditioning needs to be layered on, protecting network equipment from extreme temperatures or exposure to foreign particles, moisture, or solvents. This requires an enclosure or container that is robust enough to withstand whatever comes its way, protecting the equipment and the functions housed inside.

Make it Secure

Edge deployments may be in a container outside of a building, an enclosure in a back room, or next to a piece of equipment on a manufacturing floor. Keyed and biometric scanners that are common in traditional data centers are not likely in these locations. Because of that, it is imperative to select enclosures that offer elevated physical security capabilities, (or the ability to add it) to protect computing functions and data, as well as the equipment investment.

Embed Remote Management Capabilities

While Edge is ideal for remote facilities, the remote nature of the installation makes it difficult, time-consuming, and costly to provide on-site staff to trouble-shoot issues, make repairs, and manage the deployment. Build remote monitoring and management functionality into the solution. Sensors, software and intelligent devices, including power distribution units, make it possible to remotely monitor the installation and manage required changes.



Create Consistency

For organizations with multiple locations, mirroring installations from one location to the next drives a consistency that has a dual purpose: first it makes it easy to scale up and add Edge deployments to new locations; and second, it simplifies effective remote management and support. When every installation is the same, an IT manager on the other side of the globe can remotely troubleshoot and, when required, direct local, non-IT personnel in making adjustments, eliminating the need for costly travel for simple fixes. Preconfigured solutions are designed for easy deployment in one location or 100, delivering a consistent configuration, with all critical systems and connections installed and ready to drop in place.

When Infrastructure Matters, Panduit has You Covered

If an edge solution is in your future, you can count on Panduit. The same infrastructure that supports your on-premise, colocation, and cloud computing functions also supports Edge. Regardless of your application, location, or needs, we can help you navigate the confusion and address the concerns. Edge is more than a buzzword. It's a way to help your business run better.

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