RECOGNIZING THE FIVE HIDDEN COSTS OF GUARANTEEING POWER AT THE NETWORK EDGE

Introduction

The network edge is no longer a simple closet for data storage and networking gear. Distributed, decentralized architecture is now critical to the computing environment, says Janakiram MSV in his recent Forbes article.[1]

The proliferation of the Internet of Things (IoT) and cloud services has created new expectations of edge computing.[2] Consumers expect always-on availability, with almost instantaneous response as a key driver. This fuels a burgeoning need for local edge centers that can process data closer to the user.

And the edge continues to grow, both in size and importance. MarketsandMarkets forecasts the global edge computing market to grow from USD 1.17 billion in 2016 to 6.72 billion by 2022.[3]

Because of their proliferation, prominence and position, today's edge computing spaces are business critical and IT managers are increasingly pressed to protect them.

Critical edge environments require reliable IT solutions and infrastructure.

Reliability means availability. And availability begins with power. Your computing performance depends on reliable, UPS-provided, backup power at the network edge. But that costs money. And expenses extend well beyond the point of sale. Many of those costs are hidden.

Consider these five areas where costs are not so obvious:

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01   Deployment, installation and start-up

First your UPS has to get to your destination, and because we're talking about the edge, that can mean multiple locations with varying levels of support and technical knowledge. Installation and start-up of your UPS and its internal batteries can be pricey and time consuming. Labor costs escalate. And when numerous deployments are required across multiple locations, costs can exponentiate. Then, before start-up can be successfully executed, each new UPS must be configured, and its accessories launched and tested.

To get up and running quickly and cost-effectively, choose a back-up power system that is installation-ready – including batteries, software and accessories. Also, make sure you select a supplier who offers lifecycle support of the system. Ideally, include software and hardware support for your mission-critical UPS and power distribution assets in this space.

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02 Existing battery and equipment disposal

What to do with your old UPS and its batteries?

Proper decommissioning, removal and disposal of outdated UPS equipment needs to be timely, efficient and environmentally safe. That can be expensive.

And like all batteries, those used in UPS applications react to wear and tear. Battery life and capacity will degrade over time. So those batteries need to be removed, replaced and properly disposed. There are regulatory, legal and financial issues to consider here, too. Proper disposal of even the smallest single UPS, with or without batteries, can cost more than $100. Multiply that across numerous deployments and costs tally quickly.

You must either partner with certified recyclers who possess the resources and technical expertise to manage UPS removal and disposal, and who are compliant with local, state and federal environmental regulations, or make certain your new UPS provider offers these services.

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03   Operational inefficiencies: failure to properly size your UPS

Operational efficiency is an important consideration for edge sites, and mounting operational expenditures are the proof. Inefficiencies of any kind can add up quickly, such as problems of latency across long distances or highly transactional workloads, which often don't perform well.

Now think of the expanding volume. Consider the situation common among large financial or healthcare systems that can have from 300 to 500 edge deployments.[4] With that as a multiplier, even small inefficiencies can quickly accumulate into costs of great significance.

Proper UPS sizing may be the most important first step toward optimal operational efficiency. You need to ensure the load on your UPS is not so small that the unit operates inefficiently. To do that, each UPS system's true capacity must be carefully calculated. And you need to take into account the power factor rating to really know the capacity of that UPS. Otherwise, you can't be sure of the load it can bear.

For example: A system might have been rated for 20 kW, but if it has a power factor of only 0.8 it can provide only 80 percent of its rating. Whereas a UPS with "unity" (or 1.0) power factor will provide 100 percent of its rated capacity. So, make sure you know the precise power factor of every UPS you

consider. And select a true on-line UPS that delivers continuous, high-quality AC power to IT equipment with no break when transferring to battery. Choose an option that protects your critical IT equipment from inevitable power disturbances that can result from blackouts, brownouts, sags, surges or noise interference.

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04 Monitoring and management

You know the value of your distributed computing environment, so it stands to reason that you want to protect it and monitor your investment and its function. To do that, you need to see what's happening, from anywhere.

You need to invest in technology and systems that can remotely monitor and manage your IT equipment at remote locations. And ensure you're investing in intelligent control systems that provide insight into critical status so you can anticipate and prevent problems before they can cause costly disruptions.

Invest in UPS network communications, environmental site monitoring and DCIM-ready devices that will deliver the intelligent control you need to ensure IT performance at the network edge. While it might cost a bit more upfront, your investment in a solid monitoring strategy can lead to valuable long-term savings.

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05   Service and support

Service to distributed network locations, particularly in remote spaces, can be onerous – and costly. Some hidden costs in service contracts reside in what parts and labor are included as standard expenses. Then, you have to factor in the added costs of on-site emergency support. When an emergency occurs, you need rapid response to prevent, or at least limit, costly unscheduled and unnecessary downtime.

Look for a partner who can provide 24x7x365 support. A plan that covers 100 percent of labor, travel and parts will protect your investment and your bottom line.

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ALL OF THIS CAN BE OVERWHELMING. BUT SOLUTIONS ARE CLOSER THAN YOU MAY THINK.

Minimize the hidden costs of powering the network edge by selecting the right partner. Right from the start.

▶ **CLICK HERE to learn how Vertiv provides the power protection businesses need.**

1. Janakiram MSV. *Demystifying Edge Computing – Device Edge vs. Cloud Edge,* Forbes, September 15, 2017

2. Shi, Weisong. *Edge Computing: Vision and Challenges,* IEEE Internet of Things Journal, Vol. 3, No. 5, October 2016

3. Top Market Reports: *Edge Computing Market by Component, Application, Organization Size, Vertical, and Region - Global Forecast to 2022,* Marketsandmarkets, October 2017

4. Kennedy, Brian. *Four questions to ask when powering IT at the network edge,* Cabling Installation and Maintenance, June 2016

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