

# Dell Validated Design for Energy Edge

A simplified path to a smarter grid

Validated partners for Energy at the edge:



**ABB ZEE600:** ABB's Ability Electrification Monitoring and Control for distribution substations integrates protection relays, meters, condition monitoring units, PLCs and RTUs, and harnesses their real-time and diagnostics data to drive customer digitalization objectives.



**ForeScout eyeInspect:** A cybersecurity tool that provides complete device visibility with deep packet inspection of all OT network protocols. It also provides comprehensive asset information and logs for automated threat detection, containment, and remediation.

## The convergence of energy transition, decarbonization, and modernization

The acceleration of electrification and the global transition towards greener, intermittent sources of energy is putting stress on the distribution and transmission of energy over the grid. In order to meet these demands, along with other decarbonization and sustainability goals, utility customers require a new, virtualized architecture for electric substation systems. The current applications for protection, automation, and control are built on dedicated, single-use which reduce efficiency, increase operator overhead, and are expensive to maintain, upgrade, and scale.

That's why Dell has partnered with VMware, Capgemini, and Intel on **vPAC**, a virtualized architecture for protection, automation, and control that optimizes and modernizes substations by enabling OT operators to build and manage more intelligence at the edge. Dell Validated Design for Energy Edge builds on this framework to validate key applications to meet customers digitization objectives. By testing and validating ABB's ZEE600 system and ForeScout eyeInspect software, we are streamlining the path for substation operators to adopt virtualized infrastructure and accelerate their digital transformation initiatives.

## Future-ready scalability and flexibility

Dell Validated Designs are built to make it easier for customers to deploy and manage the applications that drive their business. For energy customers, this means we test and validate ABB and ForeScout software to run on vPAC, a highly available platform for substation virtualization. This approach gives customers a future-ready path to scaling intelligent edge applications across their substation footprint as well as adding new applications as the business demands. The first of these applications, **ABB's ZEE600**, integrates substation equipment sensor data into the Electrification Control System (ECS), enabling the intelligent monitoring and managing of loads and optimizing energy management across the grid.

## Enhanced operational efficiency

Operational efficiency is at the heart of Dell's work in the energy sector. That's why we've designed the Dell Validated Design for Energy Edge on the PowerEdge XR12, a ruggedized, utilities-grade platform built to military standards and the IEC-61850-3, delivering high performance at the edge. When combined with ABB software, it's proven to reduce the total cost of ownership of managing electrical systems by automating routine tasks and eliminating costly human errors.

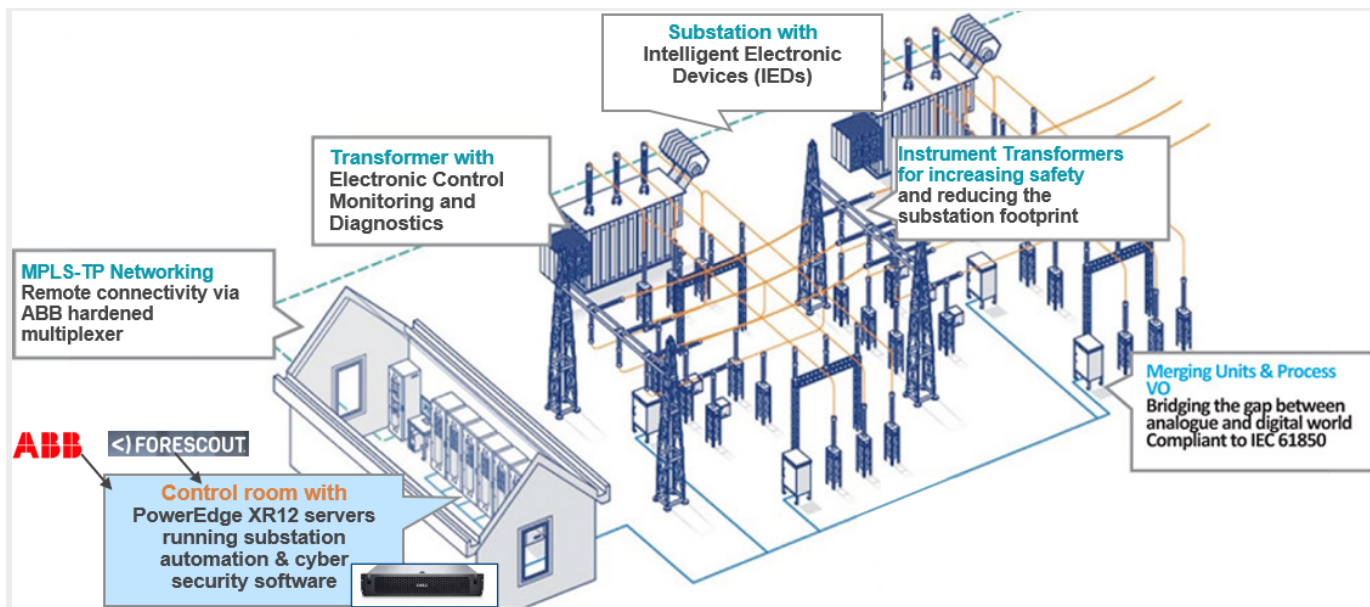


Diagram of typical electrical utility outdoor substation with vPAC & Dell Validated Design for Energy Edge

Digitalization through ABB ZEE600 also streamlines operational insights by providing a single pane of glass for your entire substation asset library. By enabling real-time, near-real time and diagnostics data through an intelligent edge application, operators can realize energy monitoring across their entire environment and achieve greater efficiency through performance optimization. Dell Validated Design for Energy Edge helps customers achieve their business objectives by driving operational efficiency at every level of the technology stack.

### Robust security and resiliency

While substation virtualization is becoming increasingly popular in the industry, it can leave systems vulnerable to cyber-attacks, which can cause significant damage to power systems. That's why we're incorporating multiple layers of cybersecurity and high availability and partnering with **Forescout** to provide even greater levels of OT device management and network monitoring. By layering cybersecurity controls, firewalls, intrusion detection and prevention, and network segmentation, we are providing customers with a comprehensive approach for securing their systems and providing maximum resiliency to maintain uptime of the grid. Dell also offers a comprehensive suite of security software and services, including PowerProtect and our Cyber Resiliency Assessment services, which help customers measure and remedy vulnerabilities and gaps in their overall security profile.

### Partnering with Dell Technologies

At Dell Technologies, we believe in providing you with the proven, validated solutions designed to provide you the digital transformation roadmap for your retail future. Our solutions portfolio and retail expertise helps you reduce the risk, cost, and complexity of designing and deploying new applications by leveraging comprehensive solutions that are aligned to your specific business requirements. Dell Technologies can help guide you through your digital transformation journey, providing you with the right edge solutions equipped to deliver significant improvements in efficiency, while enabling your business to remain agile and innovate.



Learn more about Dell Energy Edge solutions



Contact a Dell Technologies Expert



View more resources



Join the conversation with #Edge