Nominee: Schneider Electric

Nomination title: Prefabricated and Micro Data Centre Solutions deliver reliable computing from the edge of networks to the edge of the world

Schneider Electric's portfolio of prefabricated and micro data-centre solutions, including SmartBunker and SmartShelter, allows the rapid and cost-effective deployment of IT infrastructure to any location, unhindered by challenges of distance, space constraint or hostile environments.

The micro data-centre products are ideal for Edge Computing deployments, in which fully functional but relatively small data centres are located close to the applications they serve, at the edge of the network rather than at the centre. This concept is being driven by demands for faster response times from internet-ready devices comprising the so-called Internet of Things; the requirement for greater bandwidth demanded by multimedia applications such as video on demand, and the increasing need for data-centre resources to be located in hostile and remote environments where fossil-fuel extraction and mining take place.

The Internet of Things is a fast growing phenomenon in which electrical and electronic equipment of all kinds is coming equipped with Internet connectivity to facilitate service monitoring and automatic software upgrades. With the inevitable increase in data traffic produced by all these connected devices, there is a requirement for data centres to be located close to the source of data so that global networks do not become unnecessarily clogged with traffic that needs a guaranteed minimum response time.

Similarly, the growth in video on demand, an inherently high-bandwidth application, is forcing service providers to locate their data centres close to their customers to guarantee satisfactory delivery. Simply put, this is common-sense traffic management which reroutes time-sensitive data from global networks to the local networks where it is generated and delivered.

The challenge for businesses seeking to deploy smaller data centres to the edge of the network is to do so quickly and reliably to reduce cost and speed time to market. The data centres must nevertheless be as reliable and efficient as their larger counterparts at the centre of the network but must be adaptable, easy to manage and guarantee service uptime as well as low running costs.

To effect the construction of such Edge data centres, Schneider Electric's micro data centre solutions come in a variety of modular formats, all pre-tested and validated at the factory. They offer simplified management using Schneider's leading StruxureWare DCIM software, high levels of security, and all the power and cooling infrastructure necessary for efficient operation.

Examples of how micro data-centre solutions can help solve real-world problems include rapid deployment of localised computing resources to small branch or regional operations. Cabinets containing racks, power supplies and cooling infrastructure can be wheeled into existing office space with no need for expensive refurbishment to install dedicated air-conditioned server rooms. They can occupy spare space in any standard office and deliver localised computing resources to reduce network latency for time-critical applications, or increase bandwidth for multimedia data-intensive applications such as video streaming.

For more remote applications, fully qualified and tested data centres can be delivered in containers from the back of a truck to any available space outside a business premises. These may have additional rugged features to guard against dust and other contaminants, and extremes of heat or cold.

Schneider Electric's Micro Data Centre Solutions are delivered in a single enclosure containing power and cooling equipment, pre-tested and qualified to industry standards. They also come with management software to support a self contained, secure computing environment. The factory-built modules are ideal for customers who need to reduce latency and quickly add capacity while ensuring a secure and easy to manage environment. The solutions offer the option to be supplied as chassis prepared for population, or as ready-to-deploy appliances including IT equipment via systems integration partners.

Schneider Electric's micro data centre physical infrastructure solutions include the enclosure, uninterruptible power supply (UPS), power distribution, management software (DCIM), environmental monitoring, cooling and security – all tested, assembled, packaged and then shipped together in a factory environment.

A key advantage is the combination of flexibility of design and speed of installation. A telling example is the delivery of a portable data centre to the renowned UNESCO World Heritage Site, the Sagrada Familia Church in Barcelona, Spain. As one of the city's most visited tourist attractions there was a need to upgrade its computing resource on site, yet there were specific challenges: because of ongoing construction work the data centre could not be permanently located in one place, it had to withstand the dust and vibration associated with construction work, it had to be

installed with the minimum of disruption to the millions of people who visit every year and it had to fit into very tight spaces.

Schneider Electric provided the Sagrada Familia with a portable data centre which met all of these challenges and was delivered in four months, rather than the expected 10 months that would have been required for a similar data centre built from scratch.

Schneider Electric's portfolio of micro data centre solutions allow reliable pre-tested computing resource to be delivered anywhere in the world, custom-designed for the specific requirements of each application and the environment in which the server and communications room must operate.

Why nominee should win

•   Micro data centre products allow customised prefabricated power, cooling and IT to be delivered to any location at high speed and low cost

•   They allow computing resources to be deployed quickly and reliably to the Edge of the network to meet modern challenges of high bandwidth and reduced latency

•   Ruggedised solutions can be customised to order and deployed at any location, even the harshest of environments.

•   They can be customised to fit the specific space constraints and withstand the specific environmental hazards of each application

•   All micro data centres are tested to industry standards before installation for assured functionality and reliability