Nominee: Schneider Electric

Nomination title: Schneider Electric's portfolio of single rack, micro data centre solutions deliver resilient, hyper-converged technologies to meet the ever-growing demands of the IoT and edge computing

It's no secret that racks and enclosures are the building blocks of every IT environment. As companies move to take strategic advantage of trends like digitalisation, cloud computing, hyper convergence and the growth of Internet of Things (IoT), businesses continue to see an increase in the adoption of virtualised applications, which are in turn changing the landscape of data centres.

Indeed many data centres that were once home to a multitude of rack enclosures may now only consist of a single rack solution; hosting critical IT equipment and providing secure network connectivity to the cloud. And with the inevitable increase in data traffic produced by connected devices, there is now a growing requirement for data centre physical infrastructure to be located closer to the source of data.

Schneider Electric's portfolio of single rack micro data-centre solutions including NetShelter CX and SmartBunker™, allow the rapid and cost-effective deployment of secure IT infrastructure to any location, unhindered by challenges of distance, space constraint or environment. They are available in a variety of standardised formats, all pre-tested and pre-configured at the factory.

They are delivered to the customer as a fully standardised, single rack enclosure complete with simplified management, integrated power, uninterruptible power supply (UPS), power distribution, software (DCIM), environmental monitoring and cooling to support a self-contained, secure computing environment.

Single cabinets containing racks, software, power 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 location and deliver localised computing resources to reduce network latency for time-critical applications, or increase bandwidth for multimedia data-intensive applications.

Whether deployed inside a network closet, a secure server room, or as a single micro data centre, on-premise IT operations rely on racks and enclosures for support, organisation, and management of the IT chain. With the increase of connected devices, today's racks and enclosures are expected to support a greater number of connections and greater variety of applications, which also has implications for the overall levels of security and resilience required.

It's important to highlight that single rack micro data centre solutions must be as reliable and efficient as their larger centralised counterparts, whilst remaining easy to manage, guaranteeing service uptime as well as low operating costs. These single rack solutions now benefit from similar levels of security and technology as their larger cousins.

Older network enclosures may be open to a greater number of people, and cable management is less stringent with cable clutter and obstructions to airflow within racks—leading to cooling

problems and increased human error. In such cases there may be little redundancy in the critical power and cooling systems, or indeed monitoring by specialist DCIM (Data Centre Infrastructure Management) or network management software.

More recently, many new edge computing and micro data centre solutions now benefit from the same level of security and technology as their larger counterparts. Developments in Schneider Electric's prefabricated and hyper-converged spaces have become key to ensuring that the most critical edge solutions now come with some level of standardisation in the rack component and include higher levels of security, remote access and environmental monitoring.

It is here that Schneider Electric's technological advances in standardisation have indeed set a new benchmark for single rack micro data centre solutions, ensuring business continuity for both the end-user and the most business critical applications.

Why nominee should win

• **Single rack micro data centres are deployed as a complete solution with integrated power, uninterruptible power supply (UPS), power distribution, management software (DCIM), environmental monitoring and cooling to support a self-contained, secure computing environment.**

• **Whereas older single rack network enclosures are often unorganised and unsecured, the latest technological advances in standardisation have meant that the same solutions now benefit from the highest levels of security and resilience, similar to those usually found in larger data centres.**

• **They allow computing resources to be deployed cost-effectively, quickly and reliably to the Edge of the network to meet modern business challenges including the IoT, high bandwidth applications, reduced latency and support the availability of services.**

• **They can be customised to fit specific space constraints, built to withstand the specific environmental hazards of each end-user application and are pre-tested to industry standards before installation for assured integration, functionality and reliability.**

• **They ensure business continuity for both the end-user and the most business critical applications.**