Schneider Electric and Interxion partner to deliver new Dublin data centre

Availability, efficiency, growing customer communities of interest and operational excellence are the drivers for Interxion and their new DUB3 data centre

Introduction

Interxion is a leading principal supplier of data-centre, colocation and connectivity services to some of the world's leading businesses. Interxion is serving a wide range of customers, operating 49 data centres in 13 cities throughout Europe, three of which are located in Ireland.

Located at Grange Castle in west Dublin, its DUB3 data centre, which was opened in December 2016, is a 2,400sq meter single-storey, fully concurrent maintainable facility with various fault-tolerant infrastructure features.

Interxion have been in operation in Ireland since 2001 and have continued to upscale. As client demand continued to grow for its colocation services, it announced the new facility in February 2016. DUB3 provides direct access to a connected community, allowing clients to interconnect with other organisations to cut costs, improve the quality of their service and create value.

To ensure maximum energy efficiency, DUB3 was designed with a focus on energy-saving, modular architecture, incorporating cooling, as well as, maximum efficiency components. Interxion chose a greenfield site for its new data centre, which would run on 100% renewable energy. Following the completion of a rigorous process to assess environmental impact and security risks, construction started in mid-February 2016.

As a long-term partner working with Interxion on many global data centre projects, Schneider Electric contributed various components of physical infrastructure from its power, cooling and software solutions portfolio, ensuring rapid construction, delivery, and seamless integration between all critical components throughout DUB3's design and deployment stages.

Ireland holds a prominent market position

"The Irish data centre market is unique," explains Tanya Duncan, MD of Interxion Ireland. "We are seen as a gateway country for large international companies who need a local presence for their European operations. As such, the local market is very large for the size of the country and the service providers are very knowledgeable in the way that they build and operate their data centres."

The key for Interxion to differentiate its service-offering from competitors is through operational excellence according to Duncan. "We have to be able to guarantee service delivery to the highest standards. We have to remain flexible, with the capacity to scale up quickly as our customer's requirements expand.We cannot afford to be a constraint on their growth plans' she says. "Dublin is the interconnection hub and we are committed to helping

our customers connect to their partners, suppliers and end users. Innovative businesses need a connectivity provider who have the knowledge to help them switch and scale as their business needs evolve."

The DUB3 facility provides premium data centre services to Interxion's clients who range from local Irish companies to larger international corporations and the Cloud platform providers, across a wide range of business sectors. According to Karl Mulhall, Operations Manager of Interxion Ireland, the new facility is designed to support a total IT power load of 5MW, when fully populated. This, he says, is driven by the demands of their customers.

"Cloud providers are asking for higher densities at rack level," he said. "Our first data centre in Ireland operated at $1kW/m^2$, our second at $1.5kW/m^2$, and more recently, DUB3 now operates at $2kW/m^2$. This allows us to put racks rated at between 10 and 15kW throughout the raised floor area."

Uninterruptible, resilient power

Schneider Electric has traditionally worked with Interxion as one of their leading-suppliers of critical infrastructure components. This is consistent in many of the companies operations across Europe, and helps to guarantee efficient and reliable operation of their data centres.

Maintaining full service to the customer operation in the event of an outage is a vital requirement, therefore the choice and deployment of uninterruptible power supply (UPS) systems is of paramount importance.

At DUB3, Interxion are utilising Schneider Electric modular UPS systems to provide continuous power to the IT racks within the new data centre. These are 1.6MW units arranged in a hexa-load design, which was developed by Interxion's in-house engineering team and has in recent years been deployed across multiple sites.

The hexa-load design allows four modular UPS systems to always offer 2N power redundancy to an entire rack by sharing the load in such a way that a failure of any one system causes the load to be shared by the other three while each are operating at 75% capacity.

"Interxion's ability to scale quickly and the operational excellence we provide are key selling points for our customers," says Mulhall. DUB3 is designed with failsafe tolerant infrastructure at critical areas to ensure we can support our customers stringent service level agreements.

Our primary concerns have, and always will be the needs of our customers and to maintain our reputation as a reliable colocation service partner. The loss of reputation that would follow from any serious downtime would be far worse than a financial penalty."

The modular nature of the Schneider Electric UPS products is also an advantage, according to Mulhall. "Customers are becoming more demanding with regard to speed of deployment," he says. "We have to roll out new capacity and have it up and running within very tight timeframes. Modular systems like the Symmetra UPS allow us to grow in step with our customers' requirements."

Flexibility of response also influences the choice of cooling architecture at DUB3. The facility has a raised floor with a cold aisle containment configuration because it provides greater

flexibility when populating the IT halls, in accordance to the changing requirements of the company's diverse customers.

Energy efficiency is a cool focus

When the outside ambient temperature exceeds all options for free cooling at DUB3, adiabatic coolers work in conjunction with external chillers. The cooling infrastructure, provided by Schneider Electric, includes computer room air conditioners (CRACs), containment systems and Data Centre Infrastructure Management (DCIM) software.

Cooling efficiency is a major challenge for all data centres and each new Interxion facility in Dublin has been designed to be progressively more efficient than the last. The Power Usage Effectiveness (PUE) metric, namely the ratio of the overall electrical energy usage of a facility divided by the energy utilised by IT equipment, has decreased with the evolution of technologies available in the market today, and the design of each facility.

Security is a critical consideration

In addition to delivering detailed customer reporting on the availability of power, climate control and various other aspects of data centre visibility required by clients, the integrated DCIM solution provides an exceptionally high level of security.

One of DUB3's key features is that its StruxureWare for Data Centers™ DCIM system has to protect against cyber-attack and external threats, something that the company has engaged in heavily with Schneider Electric.

"DCIM software these days is inherently complex." continued Karl Mulhall, Operations Manager of Interxion Ireland. "Over the last eight years we've worked closely with Schneider Electric to create a strong, secure and user-friendly system."

100% Renewable Energy

"Renewable energy is becoming more and more important to our customers." said Tanya Duncan, MD Interxion Ireland. "Energy is such a big part of the operating expense, we have to ensure we're always running as efficiently as possible, and therefore we have contracts in place with utility providers for energy from 100% renewable sources."

"As a company, Interxion also need to deploy the most energy efficient components in our data centres," she continued. "Partnering with Schneider Electric enables us to ensure we're at the forefront of energy efficient technology, whether that's in our CRAC units, our UPS systems or our cooling solutions, everything that minimizes power usage is of benefit to us all."