Colt explores edge computing to host innovative smart applications

Overview

With cloud infrastructure becoming more distributed, Colt Technology Services sought to understand the innovative use cases and applications that would benefit from being moved further from datacenters and towards the edge. In collaboration with partners, including Red Hat, Colt first identified potential use cases across diverse industries. Then, for each use case, the partners worked together to understand how to move applications to edge deployments, while assessing customer demand for edge computing.

Question: What kind of things are you doing in the innovation space?

Mark Gilmour, Head of Market Incubation and Vice President of Mobile Connectivity Solutions at Colt Technology Services: At Colt, our primary focus is on connectivity to the hyperscale cloud. We've been looking at how the cloud is starting to distribute out and which applications you could move further out towards the edge. We're looking at a range of use cases, including the smart office and in-building sensors.

We're working on an Industry 4.0 use case; it's one of the main drivers in the enterprise market right now. We're also piloting smart building applications in our headquarters in Colt House in London. The pilot includes applications such as water detection. We get a lot of rain in London, and our buildings need to be able to deal with water. We've had the occasional burst water pipe, so this is a real-life application.

The applications are hosted on the Colt edge, on what would be a customer on-premise cloud platform. We're working with partners, including Red Hat, to understand the benefits of putting those applications right out on the edge.

Question: What other industries and use cases have you evaluated?

Gilmour: We're also working on a smart office pilot in Paris. We've extended that to include really innovative real estate. We're looking at a multitude of different applications, from VR and AR to sensors for building and occupancy measurements, which is timely right now as we think about moving into a post-COVID era.

And we're looking at smart retail applications, including exploring whether to house virtual reality (VR) and augmented reality (AR) on a customer edge platform or the network edge. Some of the other interesting things we're looking into in smart retail include point of sale and experiential marketing, and the virtualized infrastructure needed to house the multitude of applications that are required.

Healthcare is another key area—remote diagnosis and the Internet of Things (IoT) within smart healthcare. A lot of use cases come from automating and connecting applications and devices in that area.

Question: What are you looking for from these proofs of concept?

Gilmour: We're first trying to establish whether the technology for taking applications to the edge works, then we're ensuring it fulfills a need.

The next question is, "Is there a business benefit?" Does the smart sensor application really need to come to the edge, or could it be located in a public cloud? Are there real-life latency and processing benefits from bringing the application to the edge?

We're also ruling out use cases that it doesn't make sense to do at the edge. And what about data security? It's all very well and good pushing compute right out to the edge, but if there isn't commercial viability to that, then it just really doesn't make sense.

Question: From a business aspect, are there commercial benefits available?

Gilmour: We've looked on a general scale of in-building voice and data coverage on a cellular network. We've been working with operators to bring the cost point down to enable in-building solutions on a scale that works for enterprise locations rather than shopping malls, airports, or ports or other huge installations that warrant a bespoke in-building solution.

When you bring it down to smaller locations, there are economies of scale to be reached by building at a network edge over several build locations. We're working on making the economics work and bringing it down to a price point acceptable to either a wholesale partner or, indeed, to the end consumer if the need is there.

Question: Is the need there?

Gilmour: I believe the need is there, yes, especially when we consider that 80% of mobile device use is indoors. Another use case that I like is AR for collaboration spaces. It's bringing all of the component parts together to create a service that is cost-efficient and outweighs the benefit of having people physically in the room together. Being able to do that remotely is all part of this smart office approach. It's quite fascinating.

Having spent a year at home, people are questioning the need to travel. Do I really need to go to the office, or are there other effective ways of working? People's willingness to work in a virtual environment has increased. And that's given us in Colt the opportunity to look at more sustainable ways of work.

Question: How do you view the ecosystem, and what are some of the important things you look for when selecting partners?

Gilmour: Our strategic review last year looked at how we think our future business should look and how we should go to market. Then earlier this year, we launched the Colt Partner Hub, which is about building ecosystems in the right area, with the right partners, for the right solutions.

For us, the key thing is to first identify the problem we're trying to solve and then work with specialists in those areas. That creates a much broader ecosystem of players. And we're really reaping the benefits of both in terms of innovation and opportunity, in terms of use cases and applications that can be developed.

An interesting example is a mix between open source technology and system integrators, plus connectivity and applications. Those parts mold together to create something that is more substantive than the sum of the parts.

About Colt Technology Services

Colt Technology Services strives to transform the way the world works through the power of connectivity. The Colt IQ Network connects more than 900 datacenters across Europe, Asia, and North America's largest business hubs, with more than 29,000 on net buildings and growing.

Red Hat Innovators in the Open

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