



# What the networking industry can learn from the COVID-19 pandemic

**Richard Brandon**, VP of Marketing at RtBrick, discusses why broadband is a critical resource, especially in the midst of the current pandemic...

Since the days of sending digital photographs to one another to our more recent passion for streaming our favourite TV shows online, we have found more and more ways to use up the bandwidth that our broadband providers deliver to us and provide greater demands on their networks.

What we've witnessed in recent months is truly unprecedented, with networks in almost every country around the globe coming under strain, and online TV providers reducing the quality of their streams to try and mitigate congestion. What is clear now is that despite the huge investments from carriers, we still don't have enough broadband capacity to cope when the population turns to the network as its primary means of operating. This pandemic has left people around the world increasingly dependent on their high-speed broadband connections for their public information, their education, their work, their entertainment, their shopping and their sense of community. And the infrastructure is struggling to cope.

## In the midst of the crisis

It is unrealistic to rethink and rebuild our broadband networks given we're in the midst of a global crisis, dealing with personal challenges and those of our friends and neighbours. But once the dust has settled, and life returns to something closer to normal, what lessons will have been learnt for our networks?

Assuming that this peak in network traffic will never happen again seems optimistic. Next time, the traffic requirements may be even higher, with higher quality TV, more video calls for work and more sophisticated e-learning platforms in demand.

The answer seems simple. Invest in more internet capacity. However, the telecoms market is already a tough place to operate. Carriers are burdened with high spectrum licensing costs; operating costs continue to grow and a demand for investment in new infrastructure has to be funded from somewhere. Most operators would agree that ARPU (Average Revenue Per User) is unlikely to significantly increase anytime soon, so how can we square that circle?

A second issue is the length of time it takes to deploy new

infrastructure. Using today's systems, it takes months, if not years, to increase the amount of infrastructure in a network to react to unanticipated traffic demands.

## The solution: cloud-native

The answer to fixing these cost and time constraints can be found in the giant 'cloud-native' companies, who operate vast quantities of IT infrastructure at a much lower cost point than the telcos. Unlike telecoms providers, these cloud-natives build their infrastructure using open off-the-shelf hardware, running independent software, and deploy new capacity using zero-touch-provisioning systems that can scale to meet demand in days, rather than months.

The answer for operators is analogous to the way the cloud-natives build their data centres, and is known as network disaggregation, which in simple terms means deploying network software separately from the hardware. This shift has been enabled by the arrival of so-called merchant silicon. Silicon vendors now have equivalent capabilities on their high-volume, low-cost networking chips that the traditional network equipment vendors used to have in their customised systems. This merchant silicon is being used to build a new category of powerful low-cost 'bare-metal' switches from companies such as Edgecore and Delta Networks, often constructed on the same outsourced assembly lines that manufacture the traditional router systems. These switches are a fraction of the cost of conventional telco switches and routers, but just as powerful.

It's going to be too late to implement this approach in time for this pandemic, but it's not too late to learn the lessons of how reliant our society becomes on the internet during such times, and evolve our networks accordingly. By adopting a cloud-native approach for our networks, we could more than double the broadband capacity for the same cost, and just as importantly migrate to an architecture that allows us to turn up capacity at short notice. For now, we have to do what we can with the tools we've deployed, but as soon as we get the opportunity to turn our broadband networks into cloud-native networks, we need to take it. [P](#)