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The growth of data networks – What are the contemporary priorities and risks

As the needs of data networks receives a shot in the arm courtesy of our lives moving online in 2020, the march of digitisation has leapt forward a few yards. With advancements have come certain challenges as new vulnerabilities and areas for improvement become clear.

Laurence Russell, News & Social Editor, Satellite Evolution Group

2020 saw expectations for digital experiences leap forward, nurturing working and purchasing habits that stretched existing systems to their limit and forced others to evolve. As staying home became the norm for professionals, consumers, and stakeholders worldwide, these habits became learned in a way we aren't likely to forget. Those sitting on the fence were toppled into the information age once and for all as those already relying on online systems invested themselves deeper.

This culture has lit the fire under our feet, inflating the demand for scaled end-to-end digital transformation to bring our world ever more online. Transparency Market Research's

recent report tracking the data management market, published in June 2020, claims the market is set to almost quadruple in the next seven years, growing from US\$6,000 million in 2019 to over US\$20,000 million in 2027 at a CAGR of 16.5 percent over the forecast period.

With HTS and LEO fleets becoming more commonplace, capacity, throughput and pricing are looking more competitive than ever as trends like IoT, and cloud networks grow in reputation and investment. All this is to say that it feels as though the goalposts have been well and truly lain, and it has now fallen to enterprises to theorise and prove business cases.

Hughes leads the pack with self-healing networks

Hughes is one such enterprise, recently recognised by top

industry research firms Gartner and Frost & Sullivan, premiering as a challenger in Gartner's 2020 Magic Quadrant for Managed Network Services, outranking other prestigious providers in five use cases, and a market leader in growth and innovation in Frost & Sullivan's 2020 Frost Radar, hitting their top three besides AT&T and Verizon. Both awards stressed Hughes' capacity to deliver outstanding customer experiences and commitment to innovation, particularly in its development in AIOps.

When we asked Dan Rasmussen, Senior Vice President at Hughes, how the company managed to stand out, he told us: "In differentiating ourselves from the competition, it really came to using our technical abilities to make the customer experience better. You have a lot of managed services companies out there that don't have that kind of concerted priority. We stand out by putting the customer first and ensuring that we shape their experience to be the best."

In a world of ballooning use cases, diverse buyers, and

complex processes in dire need of simplification, there is a great deal of ground to cover in the conversation of optimising end-user experience. Not only as a healthy area for technological growth in a rationalist sense but as a crucial driver for growing the market.

Hughes' AIOps feature was a powerful driver in their recent accolades. Integrated into their HughesON Managed Network Services, AIOps' algorithms predict and pre-empt action to avoid service disruption, absorbing and contextualizing petabytes of proprietary network data for anomalies, then assessing the risk-reward of potential corrective actions before autonomously applying solutions and tracking ensuing performance to ensure a return to steady-state parameters. The so-called 'self-healing' technique maintains return on investment for data network availability without user input, side-stepping issues before they occur.

"The Hughes AIOps innovation targets WAN edge systems, such as routers, SD-WAN devices and firewalls,"



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Dan explained at the launch of AIOps' commercial availability, "because a failure in those systems can be catastrophic for a site and cost hours of network downtime. We estimate that the 70 percent success rate for autonomous correction across the sites under our management has saved approximately 1,750 hours of network downtime in the first seven months of use. In the other 30 percent of cases, the system provided early diagnoses of potential hardware failure or chronic site issues so they could be addressed pre-emptively."

The state of cloud

The cloud is another vital pillar of the data revolution. The exponential capacity of cloud accommodates for the dizzying degree of data volume and diversity contemporary companies and innovative new business cases deal in. Market Insight Reports sees the global cloud computing market to grow at a CAGR of 10.1 percent from 2020 to 2025, reaching an estimated worth of US\$7,652.2 million.

The boons of remote working have been keenly felt this year, alongside the growing appreciation for the assurance of database backup. At the AWS re:Invent Virtual Conference, Amazon Web Services CEO Andy Jassy suggested a common speedbump for customers was in the process of the cloud transition, and the worry of performance loss or security risk.

AWS planned to answer the stumbling block with the rollout of a number of services including their own automation offering in AWS Proton, designed to allow the systematization of container and serverless application development and deployment, allowing for easier management of high complexity processes, saving costs by reducing manpower and speeding up existing processes.

However, cynics argue it's still quite difficult for clouds to talk to one another, as many use different syntaxes and network configurations. Though cheaper processing power

may well be possible, it can often be at the risk of committing to a very proprietary service unfriendly to its competitors and difficult to transition away from. As each provider strives to widen the market share for themselves, their deliberate incompatibility with one another frustrates users.

It seems premiere cloud providers are still squeamish of streamlining systems that might complement one another, though with experts suggesting such an arrangement could deliver remarkable results, perhaps a symbiotic business case may one day emerge.

The new reality of cybersecurity

The subject of cybersecurity goes hand in hand with innovations in data technology. Criminals, bad actors, and even inquisitive foreign states are getting better at accessing and manipulating data, benefitting from some of the same booms in technology that enterprises are. With ample reason to abuse data, businesses large and small need every defence they can to outpace the hacking capability of the black market.

Specialists have predicted that the remote working trend opens vulnerabilities for cybercriminals to exploit, as isolated workers sit outside the company loop. In remote working environments, employees use personal devices, domestic Wi-Fi connections and personal accounts. With many companies seeing no need to re-address their security concerns under the pandemic, several remain unaware of how the world online has fundamentally changed. According to VMware Carbon Black analytics, March of 2020 alone saw a 148 percent spike in ransomware attacks, a first strike in what continued to be an evolutionary year for cybercrime.

As digital transition takes off across the 2020s, galvanised by the effects of the pandemic, enterprises are well-served by providers with an understanding of the sector who can keep data networks simple, effective, and secure.

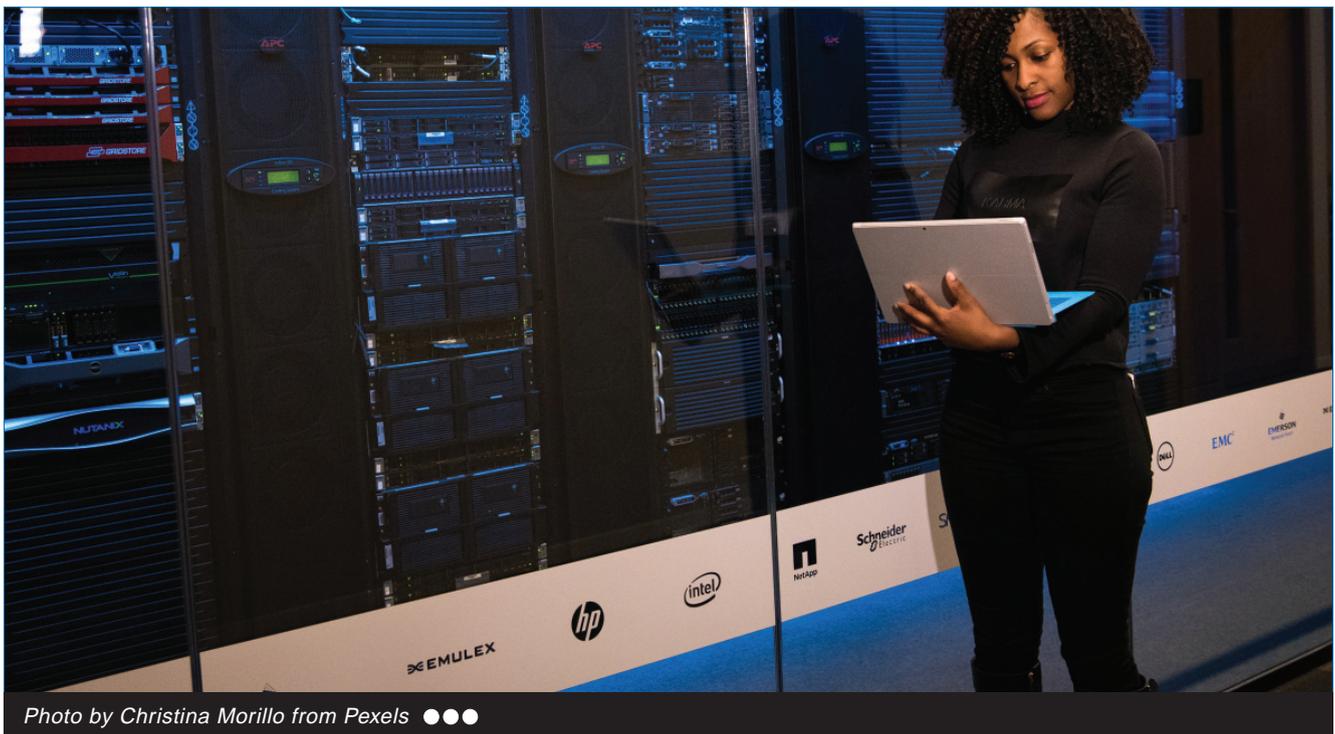


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