epsilon

EXPECT THE UNEXPECTED: BUILDING ADAPTABILITY INTO NETWORKING

SCALING TO MEET SURGING DEMAND DURING UNEXPECTED EVENTS WITH ADAPTABLE NETWORKING

INTRODUCTION

Building adaptability into networking has never been more important. An organisation's ability to scale, pivot and adjust its network reach and bandwidth has shown to be essential for business continuity.

Throughout the early 2020, the COVID-19 pandemic has exposed the downside of traditional networking models. Organisations are experiencing dramatically changing user behaviours and unexpected surges. The shift to remote working, increased content consumption and growing reliance on cloud-based applications and services are putting strain on the network infrastructure.

For organisations of all kinds, both service providers and enterprise IT, the challenge is to rapidly adapt to new demand while preparing for it to change as quickly as it arrived. It is possible that a global crisis has provided a step change in managing global connectivity as more organisations can no longer afford to be locked into inflexible long-term contracts and slow service delivery.

How does a digital media company deal with increased traffic in their customer service call centre while handling peak usage of their digital services and online customer support?

How can a service provider continue to support their enterprise customers' connection to the cloud and manage the sudden increase in network traffic?

The knock-on effect is becoming obvious. Without a flexible foundation in networking, the applications and services that depend on it cease to function and can negatively impact the end user experience.

User behaviours are hard to predict and do not necessarily change gradually over time. As the popular adage goes, failing to plan is planning to fail. What can organisations do to ensure that their network infrastructure is always ready to adapt to the evolving business environment and deliver a seamless transition to a new normal?

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WHAT HAS CHANGED?

Since the beginning of 2020, quarantines and lockdowns across the globe revealed the need for many organisations to invest a lot more into their network infrastructure. This sudden surge in bandwidth demand has shown that the network can only be ignored for so long.

The fallout from COVID-19 highlighted the need to accelerate networking transformation for critical business applications and services. Ultimately, there will be times where the traditional approach to networking simply isn't good enough to support the digital operations. This includes inflexible contract terms, unscalable bandwidth, limited network footprint and interconnections.

Cloud Activity

Remote working is driving more traffic to the cloud as it has become the primary tool for businesses to keep their operations up and running. This has driven more attention toward dedicated cloud connectivity. Both digital service providers and enterprises are bolting on more cloud services with the increase in consumer and business applications usage. The demand is so high that cloud service providers like Google Cloud reported an impressive 52% revenue growth in Q1.

Internet Traffic

Similarly, rapidly growing content consumption has challenged telcos, over-the-top (OTT) providers, content streaming services and IT service provider to scale up at internet peering exchanges (IX) across the globe. With the increase in internet usage and eyeballs consuming content on a daily basis, these businesses need to ensure their internet route is not congested or experiencing hops.

Voice and Conferencing

One of the biggest surprises of the COVID-19 pandemic has been the importance of voice calling. It has added pressure on the network with increase in inbound traffic volume as well as demand for more bandwidth capacity to support Voice over IP (VoIP). The traditional voice market has seen steadily declining traffic and price erosion for nearly a decade. In a time of crisis, minutes have spiked and both mobile network operators (MNOs) and fixed line service providers have had to accommodate unusual traffic volumes.

However, these traditional voice traffic volumes are also unlikely to last as remote workers adapt and explore low or no cost OTT options. In response to the massive influx, OTT and unified communications (UC) companies have significantly added more bandwidth capacity and some even asked users to stagger conference calls to ensure that network congestion doesn't hurt the overall user experience.

All of these factors point to the need for a networking model that is ready to scale up and down rapidly with the flexibility to change at a moment's notice. Organisations need to be prepared to pivot without continually overpaying for services that they don't necessarily need while being able to bolt on new capabilities onto an existing service.

SURGING BY THE NUMBERS

The Internet
In March 2020, DE-CIX Frankfurt set an all-time record for traffic on its internet exchange with more than 9.1 Terabits per second (Tbps). The London Internet Exchange (LINX) recorded peaks of more than 5.26 Tbps throughout the same month, while the Amsterdam Internet Exchange (AMS-IX) set new daily records hitting a peak of 7.94 Tbps.

Video Conferencing
Since January 2020, FreeConferenceCall.com saw account creations increase by 42% in the UK, 3442% in Italy, 68% France, 83% in South Korea, 121% in Spain, 94% in Germany and 393% in Japan. Minutes volumes have grown across its global network with existing users using conference calling more frequently, and a surge in new users.

Voice Calls
Even traditional voice is seeing a resurgence. An AT&T representative told the GSMA's publication Mobile World Live that voice calls on Sunday 22nd March increased 44% compared to a regular Sunday, while Wi-Fi calling jumped 88%. The Financial Times reported that the UK's regulator Ofcom met with the country's minister of digital infrastructure to ensure that the UK's mobile networks can support growth in voice traffic volumes of up to 50%.

KEEPING IT UP WITH NAAS

Software-defined networking (SDN), in the form of network-as-a-service (NaaS), plays a central role in how efficiently an organisation runs their IT today. It enables IT teams to access the network resources and services they need with a flexible model that is ready to serve both short-term and long-term needs efficiently.

Organisations that have not transformed their approach to networking have been shown to be in a poor position when it comes to handling unexpected events like we have seen in the first quarter of 2020. Cloud-centric on-demand networking enables them to not only adapt to the new business climate, but also help to reduce risk and deliver consistent service experience for end users when they need it most.

Digital transformation is also reaching a tipping point where it will account for more than half of all ICT spending by 2023, according to IDC. The aftermath will continue to accelerate digital transformation and this has to be reflected in networking strategies as well.

Grow anywhere with on-demand access to network services

To adapt fast and grow in new markets, businesses need to seriously consider NaaS as a mandatory approach to building and managing their network resources. Having access to voice services and a diverse ecosystem of data centres, cloud and IXs, NaaS becomes the one-stop shop for procuring, delivering and managing global network resources. It provides a seamless connectivity model for all kinds of businesses with on-demand interconnection and fast and automated service provisioning.

Built-in flexibility, scalability and adaptability

An SDN platform that provides the flexibility to scale network services to support new end user demand and the deployment of new applications and services. With on-demand services and automated service delivery, organisational IT teams can buy and deploy network services at the click-of-a-button and quickly scale to unexpected events.

Greater cost-efficiency in the long run

The NaaS model offers a "pay for what you use" model, ensuring business users never have to overpay for bandwidth that they don't use. As the demand spikes or dips, they can scale up efficiently and reduce capacity when demand falls. New services can also be added on whenever there's a need for it. In the long run, this model help organisations to save cost while meeting their customers' needs.

End-to-end control, transparency, visibility and monitoring

Being able to response to rapidly shifting demands with real-time analytics and intuitive network management is an big advantage. SDN platforms offer increased visibility into the performance and enables troubleshooting across the network. Any unplanned outages on the network or fluctuations can be immediately rectified which mitigate the damage and reduce the potential cost.

Automation and control

NaaS' key proposition is in its ability to scale on-demand and network automation. There is no more waiting for a circuit to be turned up or pricing to be shared by an account manager via email. The entire process can be managed through a web-based portal, putting the organisation in control of their connectivity with greater efficiency and agility. A service that would have taken weeks to provision manually on the backend can be actioned in a matter of minutes.
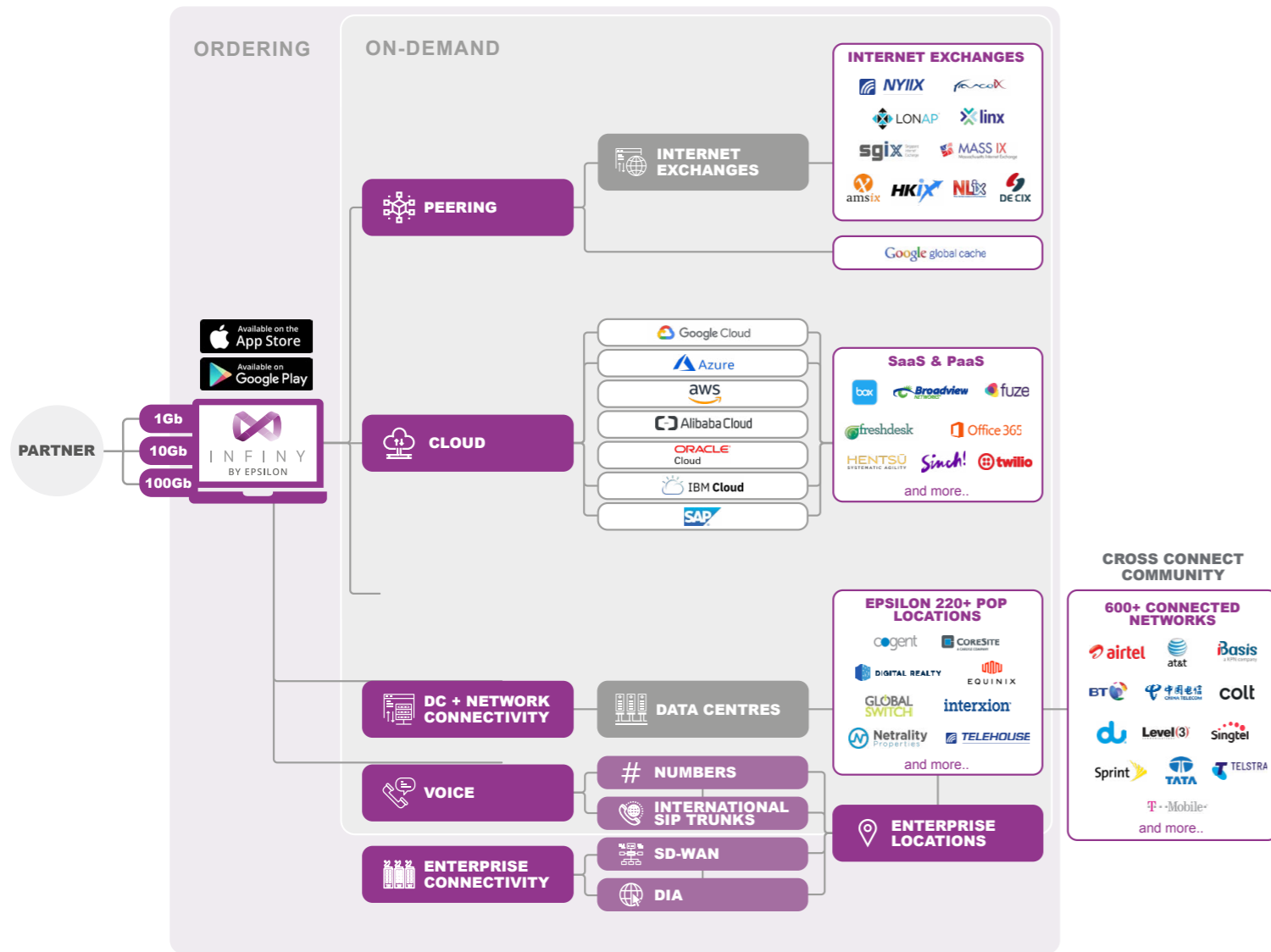
PREPARING FOR AN UNCERTAIN FUTURE

The future might be uncertain, but organisations can bring new levels of flexibility and adaptability to their network infrastructure. The connectivity powering the services has to be just as agile as the cloud. When fast, simple and powerful network solutions are in place, the remote workforce and the customers they serve can continue to enjoy a more seamless digital experience.

The underlying network infrastructure is being shown to be critical for businesses to stay up and running, along with the growing importance of NaaS model and SDN platforms to support this need. Something that's at the back of the mind is now front and centre as businesses are challenged to scale network bandwidth and adding new network resources to keep their staff and customers connected. Be it getting short-term interconnection or large bandwidth capacity, NaaS has proven to be a complement in any digital-centric organisations.

One of the results of our collective experience during this pandemic will be greater preparedness for the future of work that's enabled by robust and flexible networking. This global crisis has drastically changed the way we view our workplaces and interactions via the apps and services available to us, and truly brought our work into the future. Now that users have seen what is possible, there may be no going back. As an industry, it is up to us to keep the world at work and people connected.
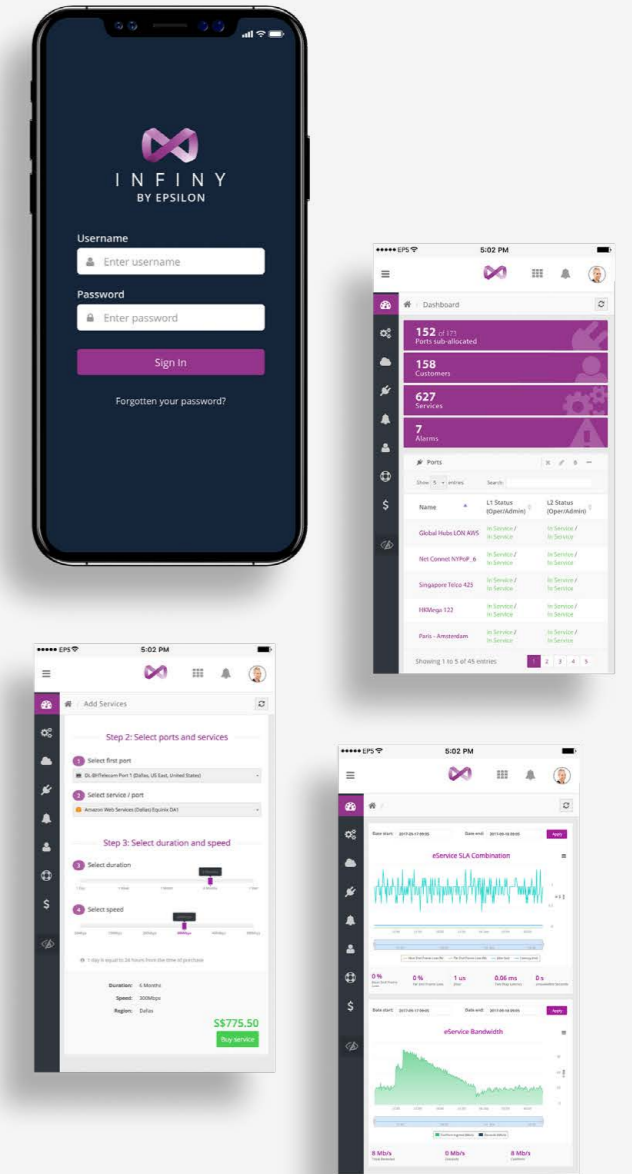
ABOUT EPSILON

Epsilon is a cloud-centric global connectivity and communications network service provider, connecting to 220 data centres in 26 markets. The company's SDN platform, Infiny by Epsilon, combines on-demand connectivity, a web-based portal and APIs to give partners simple and effective solutions. All Epsilon services are powered by a carrier-grade, hyper-scalable global backbone that connects the world's communications and technology hubs. Epsilon is headquartered in Singapore with offices in London, New York, Dubai and Sofia.
www.epsilontel.com

Built on a NaaS model combined with rich heritage in network management, **Infiny by Epsilon** is the ultimate SDN platform that allows you to access an extensive portfolio of global network services. **Get in touch with us to learn more.**