

# THOUGHT LEADERSHIP



## Hearing Symphonies – Why the Internet needs Orchestration

Internet connectivity has become the central fabric of our modern economy. Its availability – and that of the applications that depend upon it – is as much a given as other utilities that we take for granted: electricity, water, gas, etc. Yet why?

The demand for business applications is growing at a rapid pace. Indeed, according to Gartner, its demand between 2017 and 2021 grew [five times faster than the IT capacity](#) to deliver it. And these different applications will have different performance requirements.

Moreover, with all the advances in Internet connectivity and technologies – cloud adoption; wireless Internet; edge computing; 5G; cellular satellite – the reality is that the majority of businesses will find themselves with an increasingly complex set of connectivity options and choices to make to ensure application performance.

As Nick Sacke, Head of Products and IoT, Comms365, explains, businesses today need to be able to deliver a symphony of applications – and the Internet is the orchestra that must perform it. Without careful management, maintenance, continuous orchestration – and crucially, contingency – there is a real risk that at that crucial moment, all they will hear is silence.

### Demand vs Expectation and Performance

Business and consumer reliance on Internet connectivity is taken for granted, yet tolerance for poor application performance is decreasing.

According to the [2021 App Attention Index](#), 76% of people said their expectations of digital services increased over the pandemic, with the range of digital services consumed also increasing. However, the same report cited that 83% of people reported having encountered problems with applications and digital services during 2020 / 2021 – and 61% of people state their expectation of digital services has changed forever and they won't tolerate poor performance anymore, with 60% of people also blaming the application or brand, irrespective of issue.

At a consumer level, the consequences of poor performance might include reputational damage; losing customers to an alternative service or provider or abandoning the service altogether – all of which clearly have a significant impact on the business. Yet, the last few years have also seen a huge increase in digital transformation in areas such as manufacturing, healthcare and public services / critical national infrastructure, where application performance becomes critical. Not only is failure at the point of delivery unacceptable, but businesses – and service providers – may be subject to regulatory fines, or worse.

Clearly, businesses, whether they operate a B2C or B2B model, can no longer allow a lack of connectivity or underperforming internet services to be a point of failure in operational performance.

### Complexity has Increased

At the same time that the range and criticality of digital services has increased, so has the complexity of the network infrastructure on which those services are delivered.

From retail and financial services to healthcare and government, virtually all sectors are experiencing a massive transition to cloud computing to deliver the speed, agility, and operational resilience organisations need to keep up with growing digital needs of customers and stakeholders. Cloud computing, whether it's fully cloud-native or hybrid, is here and will continue to be crucial in the future.



In addition, we are witnessing the evolution of new technologies, such as Edge computing, 5G and cellular satellite: in effect, applications today can be housed anywhere and data/services delivered through multiple networks and technologies, designed not only for areas with good connectivity, but particularly to meet the equally demanding needs of those organisations still grappling with poor or intermittent bandwidth and performance.

Moreover, compounding the complexity of connectivity and networking technologies, is the fact that different applications have different connectivity performance requirements. Businesses need to be able to prioritise the applications that are either mission critical (i.e. data that needs to be delivered immediately) or services that are not tolerant to network delay (e.g. voice, video) - through, for example, fast lane internet - whilst still safeguarding other essential services.

But how? The vast majority of businesses will not have large IT teams or budgets to invest in full-stack observability tools to monitor network and application performance. They may not even be equipped with the processes to fully align their digital transformation with the key performance indicators (KPIs) that are integral to the business' ongoing overall goals.

This is where service providers need to come to the fore; to aggregate and bring together those disparate technologies and networks to create a reliable, high-quality and flexible service because there is no single, complete solution for every situation.

## Network Resilience

Bonded Internet combines software-defined networking technologies and techniques into a solution that provides an internet networking infrastructure that makes for an optimised experience; obtaining the high-performance experience that everyone requires, in terms of stability and speed for users, as well as data traffic prioritisation of applications for network management and control within organisations.

Optimising internet connectivity and application reliability by using solutions such as Bonded Internet enables a business and/or service provider to select and prioritise specific traffic types over the network. Bonded Internet allows virtually any type of internet connection - from multiple carriers - to be used as connectivity, including 3G, 4G, 5G, FTTC, Ethernet, or any combination of these, using Software-Defined Networking (SDN) technology. Combining wireless and wired connectivity access types in this way increases reach and boosts reliability and resilience, essential to a good user experience.

Moreover, using quality of service (QoS) rules, organisations can select and prioritise specific data traffic types, which is essential to support performance of critical applications.

## Conclusion

Businesses today should not assume that the internet is just going to work the way they want without intervention. And there is little tolerance from users, customers, partners or - indeed - regulators for a lack of application availability and poor performance. However, if properly 'tuned', the internet user experience can be enhanced and optimised.

Similar to how an orchestra can perform a complex symphony optimally if all the elements are fine-tuned to come together in harmony, organisations could look in a similar way at their business applications: without the careful management, maintenance, continuous orchestration - and crucially, contingency - of their internet connectivity services, there is a real risk that at that crucial periods, they will experience discordant notes and even breakdown of the internet 'symphony', disappointing and frustrating users.

[www.comms365.com](http://www.comms365.com)  
[sales@comms365.com](mailto:sales@comms365.com)  
01234 865880

