

THE FUTURE OF NETWORKS

How software is driving the next wave of growth

The importance of the network

What your network is

The network is the backbone of the modern 24x7 digital business. Your website, your transactions, your communications...everything in your business relies on it. All the time.

And when network downtime can cost £3,670¹ a minute, your network performance sets the precedent for your company's performance.

What your network does

Your network does more for your business than just join the dots.

It is the golden thread that weaves together your key business elements: from the applications and data your employees use at one end, through the hardware and cabling, to the applications and websites your customers use at the other.

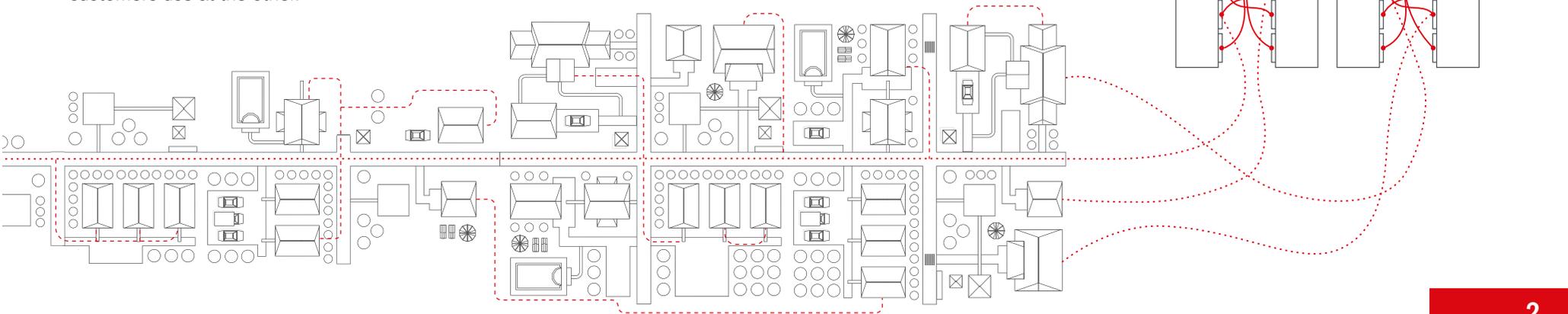
Adapting your network

Market pressure to become more agile has led to technological innovation and disruptive business models springing up left, right and centre.

Virtualisation, DevOps and the cloud have combined to enhance the agility and flexibility of everything from compute and storage to software deployments and disaster recovery.

But, while complex, the networks that serve this infrastructure are nowhere near as malleable and often function as a bottleneck to growth in fast-changing business environments.

In the future, networks will adapt to the needs of the businesses they serve, not the other way around.



1. <http://blogs.gartner.com/andrew-lerner/2014/07/16/the-cost-of-downtime/>

The **problem** with networks

Why are networks trailing?



Too complex

Modifying hardware and implementing policies across traditional networks are potentially disruptive, time-consuming, mainly manual, tasks that discourage network changes.



Too static

The difficulties of changing network setups encourages a very static network architecture that jars with the fluidity of ambitious, innovative businesses.



Too busy

Several trends have placed greater demand than ever on networks. The consumerisation of IT, ubiquitous on-demand cloud services and the mainstreaming of remote working have multiplied the amount of business-critical network traffic.

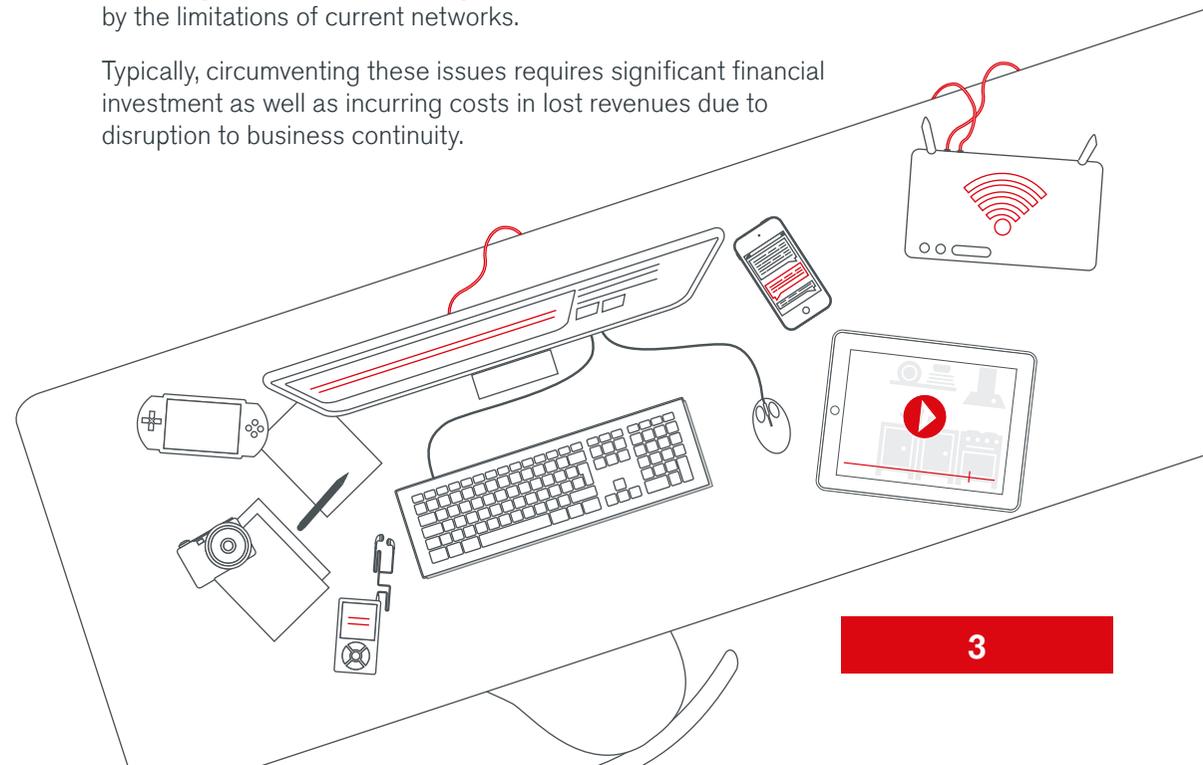
What are the consequences?

Consider some of the pressures on network infrastructure:

- **The multitude of vital digital services – apps and data – now carried over (wide area) networks**
- **The need for higher availability across a broader range of digital services as consumer expectations rise**
- **The need to optimise each connection from the perspective of cost, availability, performance and security**

In trying to meet the networking requirements posed by evolving technology trends, network designers find themselves constrained by the limitations of current networks.

Typically, circumventing these issues requires significant financial investment as well as incurring costs in lost revenues due to disruption to business continuity.



The future of networks

Defining networks with software

Fortunately, new and disruptive technologies are enabling us to use software to abstract away the physical hardware of traditional networks and allow them to be controlled with software.

This allows the network to be programmed independently of the underlying hardware which makes the whole system more agile and flexible, as well as cost effective.

Enterprises can create a homogeneous networking environment that seamlessly connects workforces with the workloads and applications they need, from anywhere.

Enabling progress

The main two innovations are network functions virtualisation (NFV) and software-defined networking (SDN).

NFV detaches network functions from hardware so they can run on software. SDN is the method for controlling these abstracted networks.

Together, these techniques can transform an enterprise network into an adaptive asset that adjusts quickly to changes in requirements and becomes an enabler of progress, rather than a bottleneck.

Business benefits



Reduce CapEx

Fewer hardware costs and pay-as-you-grow model to eliminate overprovisioning



Accelerate time-to-market

Deploy networking services faster to support more agile application development lifecycles and delivery



Deliver agility and flexibility

Scale services to meet demand and quickly configure network changes to optimise for different applications or services



Application-centric infrastructure

Redefining the network

From a rather static, hardware-focused unit, IT is becoming a more dynamic, application- and user-centric entity.

IT must be ready to deploy entire application environments instantly and dynamically – and then modify or remove them just as quickly.

Business-enabling innovations have already resulted in the emergence of dynamic, application-centric IT trends such as the cloud and DevOps automation. And now SDN is doing the same for networking.

Application-aware

SDN will allow networks to become simpler, faster and more scalable, so that the network is no longer the weak link in the infrastructure chain.

Now, instead of the infrastructure dictating what is and isn't possible, organisations will decide what they want to accomplish and then code software to deliver the underlying infrastructure requirements.

Networks will be built with an 'application- and user-first' mentality that synergises with the rest of your infrastructure and enables optimal development, improvement and delivery of applications to end users.

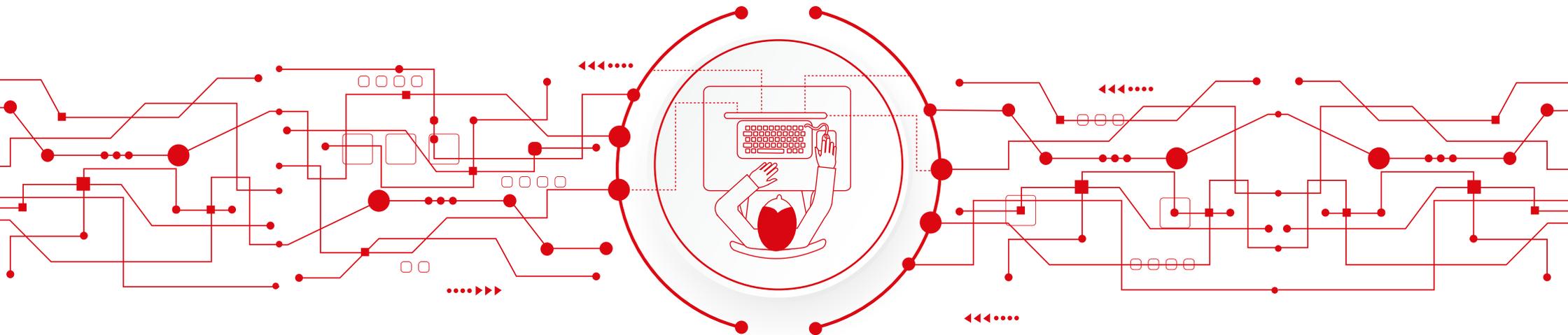
SDN and the cloud

Revolutionise your business model by establishing software as a core strategy, enabled by combinations of dynamic networking and private, hybrid or public cloud solutions.

This combination of agile networking and hosting arrangements is the key to building flexible, homogeneous, coherent infrastructure that enables fluid and responsive application development.

The biggest hurdle, according to Dell², when adopting such hybrid solutions is their complexity.

The good news is that you needn't manage that complexity alone.



2. Dell survey: <http://www.businesscloudnews.com/2015/10/22/dell-and-microsoft-unveil-joint-hybrid-cloud-offering/>

Finding a partner

A combined application, networking, compute and storage solution can provide maximum flexibility for a dynamic, application-first, customer-centric (and market-winning) business.

Here, a trusted partner can cut through the complexity of networks, providing expert advice and the services you need to maximise the value of your applications.

The right partner can help you:

- Deliver application-appropriate network infrastructure
- Switch applications and workloads flexibly across datacentres and private, hybrid and public clouds
- Provision and configure physical and virtual networks more quickly
- Maintain central visibility and control of network operations both physical and virtual
- Right-size your network and benefit now whilst helping you plan for the future
- Future-proof your applications with in-built DoS mitigation and web acceleration, backed by a range of Disaster Recovery and business continuity strategies
- Provide a reliable private connection to the public cloud

How do you find the right partner?

Make sure they:



Have expertise and a proven track record across hosting and networks



Have pedigree in providing top-tier networking solutions with class-leading service



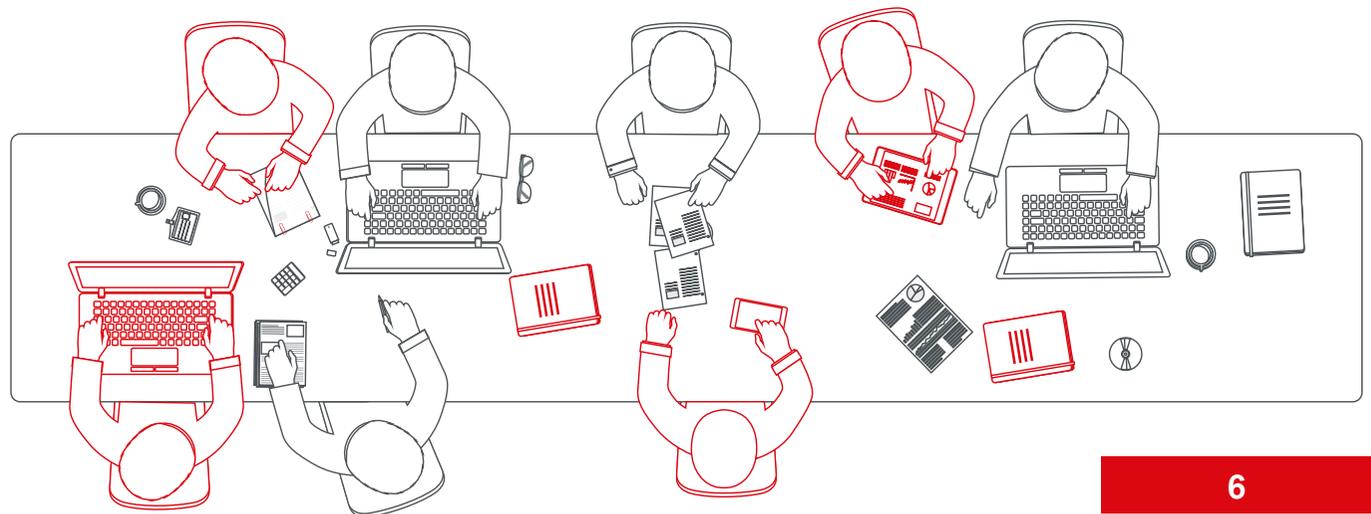
Take an application-first approach to infrastructure



Take the time to understand your business



Work with you to match the right level of service to your needs

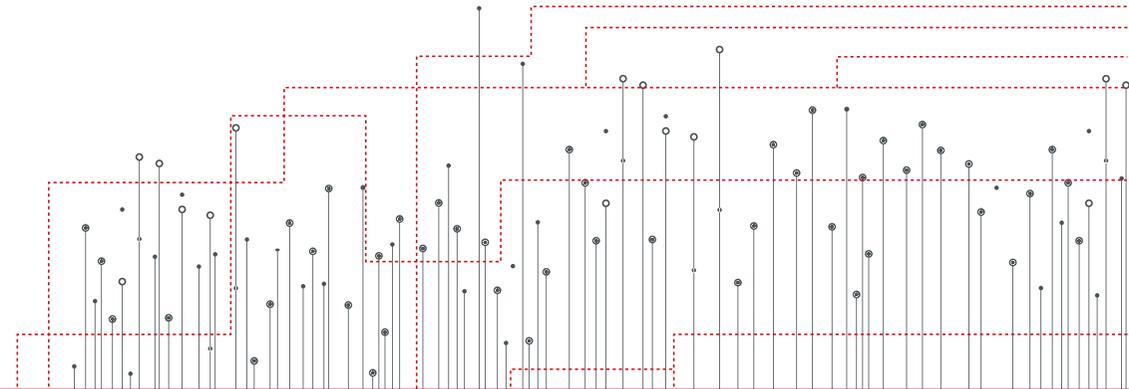


Redefining business

The next generation of networking will be a key component of what we call a 'software-defined business'. One that is dynamic, application-aware and user-centric.

The intelligently provisioned resources of a software-defined business will be the building blocks for a new, innovative way of doing business where software is at the centre of all communications and interactions.

The successful firm of the future must embrace this new model – or risk putting their business in danger.



eBook takeaways



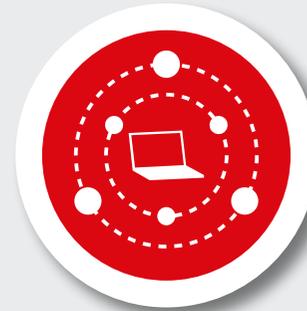
A traditional approach to network management is a bottleneck to business growth



Networks need to become as agile and flexible as the cloud has made compute and storage



Software is enhancing the agility of networks



Make your IT department application- and customer-centric in its approach



Face problems of complexity with a partner you can trust

About Claranet

Claranet have been market-leading service providers of networks for 20 years.

We have been recognised as a leader in Gartner's Magic Quadrant for Cloud-Enabled Managed Hosting, Europe in 2013, 2014 and 2015, based on our completeness of vision and our ability to execute.

We have over 5,000 customers and an outstanding record for delivering high quality solutions across a wide range of industries.

Our expertise and knowledge is built not only on the skills of our people, but also on the highest industry standards. You can be assured that our practices, processes and competencies meet all the key industry accreditations and that you will receive the highest quality of service for your business requirements.

Discover how our managed services and expert teams are helping our customers, like River Island, make a real difference in the world.



“ Claranet offer the personal approach of a boutique provider with enterprise-grade solutions that can be adapted to our particular needs. Their world-class technology and service delivery allows River Island to create a truly amazing retail experience.”

Doug Gardner, CIO at River Island.

Get in touch to find out how we can help you map out the future for your network

Call us: +31(0)40 239 3300 | **Email us:** verkoop@claranet.nl | **Visit us:** www.claranet.nl | **Follow us:** @Claranet_NL