

Freedom of the Road

Network optimisation and the drive to maximise the network



Everyone needs the network. It's the strategic and operational lifeblood of any business, the silent enabler of all your business processes and functions. But as we've seen over the course of this series of articles, as information technology takes quantum leaps forward and enterprises load their networks with more and better applications, the underlying network infrastructure is often the last consideration, when it should be the first. This leads to slower, less efficient, more vulnerable networks.

Optimisation is a tool that can maximise your current network capacity, making the most of the hardware and technology you've already got. In this final article in our series on technology trends and their impact on the network, we look at three more immensely influential trends: **convergence**, **rich content** and **globalisation**.

Technology is good... but only if you plan for it

The convergence of data, voice and video is a huge trend – IP Telephony and VoIP have had mainstream adoption since 2007 – and businesses are increasingly feeling its effects. Why? Because networks increasingly transport data, voice and video, while most of them were designed only for data traffic. Not only are the traffic loads increased, but new and different traffic types are introduced, that require different network characteristics in order to work successfully – speed or bandwidth, delay or latency, packet jitter and packet loss. These characteristics effectively determine the success or failure of the communications applications introduced by convergence. It's a common scenario, and one that we have a lot of experience dealing with. Our advice is to keep top of mind that networks have to be engineered to comply with the requirements demanded by these applications and services – and that performance optimisation technologies play a key part in establishing the required parameters. If you're stuck with a struggling network because of poor planning and expansion, then optimisation can offer you a solution that maximises your existing investment in the network

and makes sense both in terms of technology and the bottom line.

Another significant trend taking shape in the marketplace and driving the way technologies are developing is the rise and rise of rich content. Today, applications and users exchange far more rich content – from email attachments to interactive applications – and this comes at the price of a drain on network resources and poorer performance. Increasing use of collaborative applications drives multiple end points for rich media outside the data centre and traffic patterns and flows change. This complicates network design and performance engineering and requires a very different approach. It's imperative to consider all the elements in the communication chain – again, all the signposts point back to optimisation as a method to free up the bottlenecks and get your network traffic flowing smoothly again.

Globalisation as a trend feels old, but is still having major impacts on the way we do business. Companies are increasingly leveraging global business models in offshore, near-shore and onshore constructs, driving a proliferation of global WANs with all the attendant performance challenges. Global WAN costs remain high. Optimisation is always a key requirement.

Looking back over these trends and the increased complexity and load imposed on the modern network, it's clear that the exciting benefits and advances could all be lost – just by the simple oversight of failing to consider and prioritise the underlying network and gain insight into how the increased demands will impact your infrastructure. It is usually a combination of these changes that will result in a performance loss or slowdown. In some cases it can escalate considerably into a snowball effect, with one factor impacting on another, which affects another, and so on, until suddenly you have a huge problem.

What should you do if you suspect your network is not optimised?

We recommend a simple five-stage approach:

- **Assess:** Figure out what traffic your network is actually carrying. Review the initiatives you have put in place in your IT environment in the last 18 months – could they have impacted your network's performance? Are you planning to undertake any new projects?
- **Structure:** Put in place tools, technologies and policies to structure the traffic that you carry on your network. Are SAP updates business-critical? If so, consider dedicating a certain portion of capacity to them
- **Accelerate:** Now that you've got control of your network traffic, figure out which applications need an extra boost of performance. Is it your IP Telephony? Use some of the newer optimisation technologies to accelerate specific traffic
- **Operate:** Begin and maintain the iterative process of monitoring traffic and adjusting your performance optimisation strategy accordingly. Remember the golden rule of good business: what gets measured gets managed gets done. So start reporting on network performance and assign people to be accountable
- **Scale:** Extend your optimisation approach across your entire environment so you can reap the full benefits - and watch as your network improves and users experience better performance and their productivity jumps

For more information on performance optimisation, please access our website, www.dimensiondata.com or contact your local Dimension Data office.

The convergence of data, voice and video is a huge trend – IP Telephony and VoIP have had mainstream adoption since 2007 – and businesses are increasingly feeling its effects.

MIDDLE EAST & AFRICA

ALGERIA • ANGOLA
BOTSWANA • GHANA • KENYA
MOROCCO • NAMIBIA • NIGERIA
SAUDI ARABIA • SOUTH AFRICA
TANZANIA • UGANDA
UNITED ARAB EMIRATES

ASIA

CHINA • HONG KONG
INDIA • INDONESIA • JAPAN
KOREA • MALAYSIA
NEW ZEALAND • PHILIPPINES
SINGAPORE • TAIWAN
THAILAND • VIETNAM

AUSTRALIA

AUSTRALIAN CAPITAL TERRITORY
NEW SOUTH WALES • QUEENSLAND
SOUTH AUSTRALIA • VICTORIA
WESTERN AUSTRALIA

EUROPE

BELGIUM • CZECH REPUBLIC
FRANCE • GERMANY
ITALY • LUXEMBOURG
NETHERLANDS • SPAIN
SWITZERLAND • UNITED KINGDOM

AMERICAS

BRAZIL • CANADA • CHILE
MEXICO • UNITED STATES