A stable, cloud-ready network supports NXP Semiconductors’ global business

Background: NXP technology drives our smarter world

Technology developed by NXP Semiconductors is all around us – in our cars, bank cards, biometric passports, metro tickets, hearing aids, mobile phones and more. The global leader in secure connectivity solutions for embedded applications, NXP focuses on the automotive sector (including driverless cars), the internet of things, and wireless infrastructures.

Headquartered in the Netherlands, the company has more than 100 facilities – including multiple R&D, design and manufacturing centres – across 33 countries, and employs more than 30,000 people.

Objectives: increase agility with cloud-based applications

NXP wanted to make it easier for employees to collaborate, work effectively when away from the office, and store and share large files. That meant increasing its use of cloud-based services for office applications such as email, video conferencing and data storage.

And as a business, NXP wanted to take advantage of the simplicity and convenience of hosted solutions for managing HR and other company-wide functions.

Challenges: support a sharp rise in internet traffic

The corporate network in place at the time was around six years old – too old to have been designed with access to cloud applications in mind. Every site had a network connection to its nearest NXP regional data centre in Europe, Asia and the Americas; internet breakout was available only at the data centres.
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Maurice Arntz, Senior Director, Infrastructure IT Solutions, NXP Semiconductors

“That worked fine while the majority of our IT services were hosted locally and network traffic was mostly intra-company,” says Maurice Arntz, Senior Director, Infrastructure IT Solutions at NXP. “But as we ramped up our use of cloud applications, the network struggled to support the sharp rise in internet traffic.”

As the contract with NXP’s connectivity provider approached renewal time, Arntz seized the opportunity to refresh the network architecture and optimise it for consumption of cloud services.

**Solution: a cloud-ready corporate network**

The redesigned network architecture provides for immediate breakout to the internet at every site, bypassing the regional data centres. Each site has its own connection to the internet, which is separate from its connection to the corporate network. Larger sites have duplicate connections for added resilience.

As part of the transformation, Arntz went out to tender for a new connectivity provider. “We wanted a well-priced, reliable and scalable network from a provider that could ensure consistent global delivery,” says Arntz. “The NTT Communications proposal for an MPLS network and internet access service fitted perfectly. We were convinced by their ability to help us realise our network transformation, and their readiness to build a good working relationship with us.”

The NTT Com MPLS network would also give NXP the option to converge voice and data and reduce outgoing call costs by making the transition to IP voice.

Just before contract signature, however, a new requirement arose. NXP acquired Freescale Semiconductors, which doubled the size of NXP, creating a company with $10 billion of annual revenues. “The acquisition added a whole new dimension to our network transformation, as we had to integrate the two companies onto a single network at the same time as rolling out the new architecture to every site,” says Arntz. “NTT Com accommodated our expanded requirements seamlessly into the contract.”

NXP and NTT Com agreed a multi-phase project for rolling out the entire network, including the Freescale integration. “Business had to continue as normal throughout,” points out Arntz. “In particular, all our design centres and factories operate 24/7. Halting design and production for a network renewal was out of the question.”
To avoid interruptions, NTT Com added and tested the new connections at each site before disconnecting the old ones. “A key member of the NTT Com team was our dedicated project manager, who provided excellent support for what was a complex network transformation,” says Arntz. “Overall project governance was very effective, and NTT Com maintained engagement with us at all levels. It truly felt like a collaborative journey.”

Arntz also cites NTT Com’s ability to find creative solutions to unexpected problems, such as when damage to cables at a site in the UK took out both its internet and corporate network connectivity. “NTT Com quickly installed temporary wireless connections at the site while the subcontractor replaced the cabled connections,” recalls Arntz. “It’s an approach that also proved useful as a backup at other sites when, for example, major roadworks in the area risked disrupting in-ground cables.”

Benefits: stability, security, scalability

The redesigned architecture and move to NTT Com have given NXP a more stable and resilient network than before. “And of course, now that every site has its own internet access, we have the bandwidth we need to use cloud applications efficiently,” says Arntz. In addition, NTT Com implemented SIP trunking, which enables the two largest NXP sites in the Netherlands to make and receive voice calls over the MPLS network.

The NTT Com solution incorporates enhanced monitoring capabilities, which provide increased network visibility. “We have more insight into our network, and can quickly flag any issues,” says Arntz. “At the same time, NTT Com is very proactive around incident handling and resolution. That means far fewer outages affecting network performance.”
In addition, the new network is much more secure. “The nature of our business makes us a prime target for cybercriminals,” explains Arntz. As a matter of course, NXP rigorously protects its intellectual property, and ensures its development and manufacturing environments are highly secure. “We’ve now ring fenced our company through the security features in the network design and on the network itself,” says Arntz.

He’s also confident that NTT Com can handle the network-related implications that come with NXP’s dynamic agenda of mergers, acquisitions and divestments. Having incorporated the Freescale acquisition onto the network at the start of the contract, a year later NTT Com helped NXP’s divestment of its Standard Products business line run to plan, with a network separation project. “NTT Com smoothly carved out the network supporting Standard Products’ five factories and approximately 10,000 employees,” says Arntz. “They’ve proved they can easily support this type of business activity that’s so common in the technology industry.”

Besides the NTT Com network solution itself, Arntz appreciates the harmonious working relationship between the two companies. “As well as being capable, the NTT Com people are a pleasure to work with, which really matters with a big contract like this,” says Arntz. “NTT Com scores well on our internal supplier ratings. Everyone is happy with them as a key global supplier to NXP.”