

Is your network optimised for unified comms?

Unified communications (UC) is considered by many analysts to a key concern for enterprises, but it is crucial that the network is configured to support its specific demands, argues John Dumbleton, UK Managing Director of MASERGY.

Everyday, IT managers and CTOs are bombarded with fresh advice from their peers and staff on what they should be doing to maximise the productivity of their workforce. Recently a lot of this talk has centred on the latest innovations in network and communications technology:

"Multinational businesses should be investing more in unified communications", "company leaders should meet by videoconference to reduce their carbon footprint and save on travel costs", "converged IP networks should be used across the entire WAN." The good news is that it is possible to achieve maximum network and communications performance globally using unified communications - if the network is configured correctly from the ground up.

UC is a growing issue for enterprises with multiple locations as companies seek to deploy collaborative conferencing to improve productivity and lower costs across all global locations.

Faced with the implementation of various UC applications, many IT managers take a piecemeal approach by integrating each application on the existing corporate WAN until the global corporate network becomes complex and inefficient.

Often overlooked is the option of building an underlying network which is specifically engineered to support UCs. In short, an enterprise's UC deployment can be significantly accelerated with the selection of a 100 per cent pure IP multi-protocol label switching (MPLS) network with multiple classes of service (CoS).

Quality of service guaranteed for real-time apps

Building a UC network with an MPLS backbone enables CoS capabilities that automatically benefit an enterprise in a number of ways. Firstly, UC applications can be prioritised above other enterprise applications to improve application performance and the end-user experience.

This is especially important in the early deployment of UC solutions, since a bad experience with a new application can create a negative attitude, not only towards that application, but also towards other future UC applications, undermining confidence in the IT department.

IT managers must believe that these UC tools can actually improve collaboration and performance, and that the IT staff can deliver these tools. They will only believe this when they actually begin to experience these benefits.

A second advantage of a CoS-based network is that some UC applications can be prioritised above other UC applications on the network, creating an even better end-user experience.

This is especially true for UC applications such as voice and video that have stringent latency, jitter and packet order requirements. In fact, these real-time applications require a consistently high level of quality of service (QoS) across the entire network. For the enterprise, these real-time applications either work or they don't - sometimes is simply not good enough.

Many IT managers run into trouble by trying to deploy their real-time UC applications across a sub-optimal WAN, especially those staff taking seeking a quick deployment using the existing corporate network. The temptation is strong, and the early deployment of latency-tolerant UC applications might create a false sense of confidence for real-time applications.

These staff might even reason that a lack of strong service-guarantees for real-time applications (such as voice and video) can be overcome with additional equipment. Ultimately, these alternatives prove to be complex and, in many cases, expensive options to implement.

Furthermore, the initial quick start could be offset by the challenges of getting the total UC solution to perform on the existing network. Expectations have now been set, and setbacks or failure put the end-user experience at tremendous risk.

Therefore, IT managers should look to a global WAN service provider that does not constitute legacy frame relay or ATM networks, only a 100 per cent pure MPLS network that spans the globe for seamless service delivery.

Inter-company videoconferencing

The continued challenges with air travel, combined with growing pressure to reduce the corporate carbon footprint, have led to an increasing use of videoconferencing (VC), especially those deploying high-definition (HD) video. One of the emerging requirements for UC solutions is the ability to communicate with other companies on a secure network.

However, confidential executive video communication is often done on private networks that are closed to outside sources, including key partners. As VC becomes a growing part of the enterprise UC solution, IT managers should look to implement secure executive VC communications between different companies.

There is an added incentive for secure inter-company VC meetings, since a secure extranet will extend the use and ROI of the VC equipment, especially those that involve HD or sophisticated telepresence solutions.

Managing the network service

The typical UC deployment is focused on three things: getting all the UC applications to work together (putting the 'unified' in unified communications).

getting the UC applications to perform effectively across the corporate network; and making the UC applications available across the enterprise for all eligible employees.

This is by no means an easy task, which is why most IT managers wait until after the UC solution is deployed before they take a serious look at managing this performance across the WAN. Although understandable, this delayed management consideration can lead to a less-than-ideal performance of these applications going forward.

The mantra for many IT managers is that you can't truly manage a network if you can't see what's going on inside the network. Those with limited budgets often tinker with equipment settings in an attempt to correct a performance problem, or simply to improve current application performance. This can be the IT equivalent of banging on the side of the television to fix the picture. You are not sure what is actually happening, but it sometimes leads to a temporary improvement.

A more practical approach is to deploy a network management solution that provides granular information not only on network performance (latency, jitter, packet drops, etc.), but also a clear insight into how all applications are performing across the WAN. However, many network management solutions often involve deploying software and/or hardware throughout the enterprise to capture this performance information.

One problem with this approach is that the IT manager is tasked with getting yet another application to perform effectively across the corporate network. This management solution not only taxes the IT manager's time and attention, it also uses additional network bandwidth for running the management application.

However, a WAN network management solution that is service-embedded could be implemented to avoid the time and expense of deploying an additional application and to ensure the UC solution is performing at an optimal level.

Migration of the network to IP MPLS

As IT and network managers seek to simplify the management of multiple communications and messaging devices, while also improving communications integration and access for remote and mobile workers, they often begin with trying to deploy the UC solution on the existing corporate network.

Although tempting, this can prove to be detrimental to the company by slowing the deployment of a robust UC solution. Prior to any major UC deployment, corporate executives should challenge the underlying assumption that the existing corporate network can meet the future needs of a full UC solution.

By migrating to an advanced IP MPLS network that is purpose-built to support UC applications, the enterprise could quickly put itself on a path for a more rewarding experience for the end-user, and in a more competitive corporate position for the difficult times ahead.

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