

Integrated voice and data infrastructure provides platform for growth and increased efficiencies



Lyons Davidson is a national law practice of 36 partners and over 1200 staff operating from principal offices in Bristol and regional offices in Solihull, Leeds, Greater London, Plymouth, Edinburgh and Cardiff.

According to Fraser Clark, IS Manager, Lyons Davidson make full use of technology with the support of a fully integrated IT team. "By use of our Filestream case management system we are able to design bespoke workflows tailored to our clients' products and needs. Our client extranet application, LD Extra, enables us to share data with clients and creates a highly effective interface between our processes and those of our clients. In fact IS is paramount in all we do."

In 2009 Lyons Davidson decided to invest in their voice and data communications infrastructure to make it suitable for their future business plans.

Fraser Clark, "We were using a Centrex based service which was nearing end of life. It did not offer the scalability required nor the degree of flexibility needed for the type of applications we wanted to develop to integrate voice into our business applications.

Consultants that we engaged with to determine a replacement system produced a detailed report that included both customer premise-based and managed service solutions which resulted in a request for further information being sent to 15 potential suppliers. From their submissions we decided to see four companies and their solutions, including suppliers of Avaya, Mitel, Cisco and Nortel based products."

Objectives

"Our prime objective for any solution we chose was that on day one of implementation there would be as minimum a disruption as possible for our staff. We wanted a painless change – something we had not achieved when we originally opted for and installed the Centrex product.

Lyons Davidson has three contact centre 'type business units each with around 50 to 60 staff. These represented key growth areas for our organisation that had to have an optimal solution which would grow with us, function robustly and provide the type of management information we needed to effectively manage them.

A resilient solution was essential as so much of our customer interaction depended upon our IT systems. We wanted to take workforce flexibility and mobility to the next level with applications such as desk and mobile phone twinning and enabling simple, easy to use remote working.

Originally we had not included data communications in our change out plans but it soon became evident that there was very little support for implementing a new state of the art voice based communications platform on the existing Local and Wide Area Networks (LAN/WAN).

Our objectives for the data network were therefore to upgrade to a fast, voice capable LAN/WAN that had Power over Ethernet (PoE) switches. Central to our requirement was to have an effective management system for the network and switches that provided a top level view of the network. Additionally we decided to segregate traffic types by introducing a multiple VLAN (Virtual LAN) model.

Finally, we had to ensure that any system proposed and implemented could readily integrate with our Filestream case management and business process system which worked in a Windows SQL environment."

Evaluation

Lyons Davidson saw all four solutions on their short list and applied 'weighting' factors to elements of each proposal.

Fraser Clark, "Price was never an overriding factor for us but had to be taken in to account so we attached a 50 per cent weighting to costs with the remaining 50 per cent weighting apportioned amongst factors such as quality of voice, contact centre solution, collaboration applications, presence, the implementation and service plans as well as the overall service level agreements.

We also 'scored' the demonstration itself as well as taking in to account the stability of the supplier company where we took up three references on each.

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In a close contest we decided to implement an Avaya Solution from Reading based IP Integration. A key factor was the strength of IPI's development capability which we felt would work well with our own development team to deliver the innovation and integration we wanted. We also found the IPI teams very personable and felt that we would be able to build a strong working relationship with them rather than being just an account number on a list; to us, that is an essential requirement for a key supplier."

The Solution

Lyons Davidson had elected to install an Avaya Communications Manager based solution at their head office in Bristol plus Avaya G450 Local Survivable Gateways at all their regional offices all connected by an MPLS network for intra office voice and data communications.

The Local Survivable Gateways were also served by ISDN as a fallback provision to ensure business continuity.

The MPLS network was provided by IP Integration's ISP partner Star and included a QoS (Quality of Service) for the voice element. In terms of available bandwidth 60Mbps capacity was installed at Bristol, 25Mbps at each of the contact centres and 10Mbps at the other regional offices.

Robust and reliable communications with customers and between their own office sites is critical to the day to day operations at Lyons Davidson so the Avaya solution provided had to satisfy stringent requirements.

Providing three levels, or options for business continuity, the Avaya Communications Manager has 'out of the box' survivability for basic core functionality to be maintained at a satellite office in the event of the main system failing.

Level two business continuity is provided by Local Survivable Processors (LSP) which are slave systems running off the main system where in the event of the remote office losing connectivity with that main system through say an outage or disaster the Avaya Gateway immediately recognises the problem and says, 'right, I can look after myself' and maintains close to 100% of the system's full functionality.

With 1200 users spread across seven sites all the Avaya applications licences are held and managed centrally from the Lyons Davidson Bristol headquarters. In the event of the LSP coming in to operation these licences are automatically 'assigned' to the remote site.

Lyons Davidson elected to opt for the third level of Avaya business continuity, 'Enterprise Survivability'. Here a 'shadow' system is located in the network so that in the event of a failure at the main site the shadow system instantly takes over complete control of communications.

The shadow system is mirrored to reflect any changes to configuration that are effected on the main system and the shadow can be located anywhere in the world.

A further productivity and continuity application provided by IP Integration was the One-X Attendant Receptionist. Here four sites with a total of 11 operators have been designated to handle incoming calls and route them through to the right person.

Because Lyons Davidson has a highly skilled in house team of application developers IP Integration provided them with an API (Applications Program Interface) which has enable them to quickly build and integrate their own applications to run with the Avaya Communications Manager.

Implementation

Installation of the IP Integration Avaya solution began in November 2009 and was concluded by May 2010.

Fraser Clark, "Before the voice systems were installed the LAN/WAN upgrade was carried out and our telephone numbers ported over from the Centrex system to ISDN. IP Integration had proposed a new Gigabit LAN based upon Extreme Networks products.

Fraser Clark, "We deployed Extreme Networks X250 and X450 switches with PoE as standard. There are many benefits to be gained from Extreme Networks products, not least of which is ease of use. Extreme has the same operating systems throughout their product range so that familiarity of use is assured throughout our organisation. This is an especially significant benefit in a branch network organisation such as our own.

Secondly, Extreme has built in resilience designed for voice applications. Failover speeds of two or three seconds may be acceptable for many data application but not for voice where Extreme has a 50ms failover time.

We expect networks to be dynamic and Extreme addresses this with built-in automation within their OS so that their networks can automatically detect devices and treat them accordingly. For example, recognising, say, an Avaya IP phone and providing the correct voltage Power over Ethernet to the device as well as recognising when an office is shut down and turning power off to chosen devices.

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This is not only a great 'Green Benefit' but also saves us around 70% of power consumption when compared to like for like solutions.

The new VLAN enabled us to segregate voice and data traffic on different IP Networks so that we can tag voice for QoS purposes. There was nothing further to do from an MPLS perspective as the Extreme Networks products knew that voice was priority traffic on the network.

In a phased implementation our headquarters in Bristol was the first location installed although this represented more than 50 per cent of the overall project implementation.

We had decided that all the implementations throughout the network would go live on a Thursday night which would leave us time on a Friday to call in resources and a weekend during which we could fix any problems should they have arisen. In the end we had no major issues to contend with as all systems were tested prior to going live.

In terms of training we instituted a 'train the trainer' program with IP Integration whereby they trained our own internal trainers who then carried out our staff training. We had decided to use mainly Avaya N9620 IP phones throughout the firm with some secretaries using the N9650 model. From a management perspective IP Integration carried out thorough Avaya System Administration training."

Benefits

"Lyons Davidson business communication planning is now far more robust and the contact centres are working very effectively.

The integration with our Filestream case management application is working smoothly with the Avaya Communications Manager so that customer records and files are immediately associated with the calling line identity displayed.

Workforce flexibility and mobility is now far better. We can receive calls directed at deskphones with our mobile phones and the Avaya 'softphone' application works really well on remote user laptops meaning that each user no longer has to bill call charges back to the company.

We have also had to test the resilience since we went live. Two "snow events" in January and December 2010 affecting our New Malden office (one of which caused a complete power failure to the building) were managed successfully with the use of the new telephony system. Not only were we able to re-route calls to other offices throughout our network, but the ability to provide links to employees working at home, combined with our secure Juniper system access, meant we were able to maintain our service levels.

The new LAN is fantastic. The Extreme Networks management interface provides a complete and clear view of the network and a visibility of any issue that we simply did not have before whilst the WAN performance is excellent.

We are now saving money on inter office calls. Whereas with the Centrex system a call between say Plymouth and London would be chargeable now the call is free.

Did we achieve what we set out to achieve at the outset of the project? Yes, definitely. We are now reaping the rewards of that investment and have the platform we need to deliver our plans for further business efficiency and innovation."

About IP Integration

Our goal is very simple: to help our clients derive the maximum benefit from technology through flexible tailored solutions, and we measure our success on your return on investment with us and on your continued loyalty, won through the excellence of service we guarantee to every one of our clients.

We know that developing the most successful communications infrastructure and managing new telephony, data and application services is a significant challenge facing businesses today. At IP Integration we understand that organisations must evolve their communications strategy, and through proven knowledge, experience and support, we provide complete business communications solutions.

Our voice, data, and systems integration solutions embrace the technology of the converged multi-service network for businesses of all sizes and the partnerships we have developed with the industry's leading players coupled with our in-house bespoke software solutions allow us to offer unparalleled levels of application integration to our customers.

