SOUNDNETWORKS

Documentation

Case Studies

Local Estate Agent

Our client operates from two offices in different Wiltshire towns. Prior to us working with them they were working from one physical server which contained three physical machines. The three machines' roles were file and mail server, remote desktop services and telephone system operation.

Many users at both sites work from Wyse terminals *(a client machine that relies on the server to perform data processing)* connected to the Head Office site where the servers are located. The remote site connects to the Head Office via a VPN connection.

t soon became clear that the existing setup was not fit for purpose. Telephone calls were often of poor quality, unable to be routed correctly between extensions and sometimes even dropped out. Home workers connected to the office in a fashion which left gaping security holes. Wyse terminal users often experienced frustrating delays whilst waiting for the system to respond, causing regular crashes of the software being utilised in a user's session. Regular server reboots were required to keep things running. The system simply did not have enough resources to run the services it was being asked to.

All these services running on one server also meant a single point of failure. If this server was to fail, need to be shut down or rebooted for any reason, this would result in a total loss of communication – no email, no telephones. It was a classic case of too many eggs in one basket – and the basket wasn't big enough!

We approached this problem in stages.

1. We migrated the email from the on-premise Exchange Server to Microsoft Exchange Online. Not only did this free up some resources on the existing server, but it also provided a greater level of redundancy should this server be offline for any reason. This meant that should the server go offline at Head Office, the email system would continue to function in the cloud. Users could still get to their emails in this scenario via either the app on their mobile phones, the Exchange Online Web Portal or via another computer with Outlook (off premise). Running email through the Exchange Online system also meant that the customer no longer needed to pay for third party mail hygiene services to scan incoming and outgoing emails for

malware, viruses and phishing attempts. This is now taken care of by security services built in to the Exchange Online package.

2. The telephone system was moved to another server. We worked with a partner to move the system off the existing server to its own dedicated 3CX (a software-based telephone system) Micro Server. A separate broadband line was utilised for the 3CX system at Head Office to provide an additional layer of redundancy should either the main broadband line or server be offline for whatever reason. This also freed up more resources on the existing server. A second 3CX micro server was installed at the remote site for additional redundancy, also with its own dedicated broadband line – making this site's telephones capable of operating independently of the Head Office but also able to function as one system. Calls could be transferred from one office to another as if they were in the same building.
3. We migrated all users and data from the existing server to a new Dell PowerEdge server. We specified hardware with more memory, more processing power and faster hard disks. Better hardware means better performance. We used Microsoft Windows Server 2016 and Microsoft Hyper V to create two virtual machines. One as the main file server and domain controller, the other as a Remote Desktop Services Server which hosts sessions for Wyse Terminal users and Home workers.
4. We deployed a Barracuda Backup device to the Head Office site. This unit, sited in the communications cabinet with the server, runs daily backups to itself, of both servers and then manages a backup of this data off-premise to the Barracuda cloud.

- Because of the above improvements, both sites now benefit from increased redundancy. Telephone systems can function independently of the other office when one is down, but together when both are online. As it is now cloud based, email can run independently, regardless of the situation at either site. Telephone and email uptime has improved.
- Terminal and desktop users no longer experience the same frustrating delays when carrying out day to day tasks – resulting in a higher level of productivity.
- Full system image backups of both servers provide enhanced restoration and disaster recovery options should the worst happen.