

Church brings members together with IT

Church of the Highlands broadcasts live to 26,000 people a week with an end-to-end Dell infrastructure, bringing distributed campuses together virtually during Sunday services



“When more than 26,000 people are depending on us to make a service happen, it’s great to have Dell supporting our entire infrastructure.”

Shane Hamlin, IT Manager, Church of the Highlands

Customer profile



Company	Church of the Highlands
Country	United States
Employees	175
Website	www.churchofthehighlands.com

Business Need

Church of the Highlands needs to stream Sunday sermons to its 26,000-member congregation at nine physical campuses and online, with no interruptions.

Solution

The church supports its mission with end-to-end Dell infrastructure, including Dell servers, storage and networking equipment, as well as Dell SonicWALL firewalls and Dell KACE Systems Management and Deployment appliances.

Benefits

- Uninterrupted live broadcasts for 26,000 people a week
- Return on investment in six months
- Scalability to support organizational growth
- End-to-end protection for critical church systems and data
- Efficient IT management and faster IT deployment
- Excellent support from Dell

Solutions featured

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- [Server](#)
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- [Endpoint Management](#)
- [Desktop Computing](#)

Churches are no longer limited by their physical locations. With the right technology, they can reach out to individuals and communities around the world. It's also possible to broadcast live to members who can't attend services in person, allowing them to share in the experience of communal worship from their own homes.

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Church of the Highlands*

These are some of the reasons why technology is a critical enabler for the Church of the Highlands, a "mega church" in Alabama. Shane Hamlin, IT manager at the church, says, "We are one church, but we have 10 campuses, including an online campus. We have a local pastor at every one of our sites, but we all worship together on Sunday mornings, and we depend on technology to make that happen."

As part of the Sunday service, the church broadcasts the sermon live from its Grants Mill campus to more than 26,000 people across the church's eight other physical campuses, and to thousands of online viewers. "We synchronize all elements of the service in advance so we can deliver the sermon to all our members at the same time, wherever they are," says Hamlin. "To film and stream the sermon live, we need major processing power and storage in our data center, secure connectivity, and super-fast internet connections between campuses."

To support its live broadcasting requirements and other online activities, the church has built an IT infrastructure based on Dell servers, storage, security, networking equipment, PCs and laptops. "About five years ago, we decided to consolidate technology suppliers to simplify our IT procurement, management and support," says Hamlin. "We had always received great service from Dell and found their products to be very reliable, durable, and secure, which is why virtually everything we buy now is from Dell."

Broadcasting live to 26,000 people on Sunday mornings

Church of the Highlands is able to broadcast Sunday services reliably with its Dell infrastructure to more than 26,000 people a week. "We rely on two powerful Dell PowerEdge R910 servers

Technology at work

Services

[Dell Deployment Services](#)

[Dell Support Services](#)

- [Dell ProSupport](#)

Hardware

[Dell PowerEdge R610, R710, R720 and R910 servers](#)

[Dell EqualLogic 5100, 6100 and 6500 SANs](#)

[Dell Networking S4810P switches](#)

[Dell SonicWALL SuperMassive 9200 firewalls](#)

[Dell OptiPlex 7010 workstations](#)

Software

[Dell KACE K1000 Systems Management Appliance](#)

[Dell KACE K2000 Systems Deployment Appliance](#)

[Dell SonicWALL Comprehensive Gateway Security Suite](#)

[Dell SonicWALL Content Filtering Service](#)

to deliver the live video content to the Akamai cloud service, which provides the broadcast to congregations at our nine physical campuses as well as our members who access services online,” says Hamlin. “In addition to giving us all the processing power we need to stream sermons to our congregation in real time, Dell servers are highly reliable and have never let us down during a broadcast.”

Hamlin and his team have experienced excellent levels of reliability from the other Dell servers in the church’s data center, including Dell PowerEdge R610s, PowerEdge R710s, and PowerEdge R720s, which are virtualized using Microsoft Hyper-V technology. “We’ve never experienced even a minute’s downtime due to a server related issue,” says Hamlin. “We can all work productively because our Dell servers are always available when we need them.”

The church also relies on Dell servers to process payments from its campus cafés. “We take member’s payments on Dell point-of-sale terminals and these connect back to Dell servers in the data center,” says Hamlin. “With thousands of members buying coffee on a Sunday morning and at other times, the Dell infrastructure never misses a beat.”

Achieving full returns on investment in just six months

The Dell servers have helped the church achieve significant cost savings compared with its previous broadcast infrastructure. “Prior to using Dell infrastructure, we relied on satellite services to broadcast to our campuses,” says Hamlin. “This worked for a while, but it was very expensive and didn’t easily allow for growth. The Dell PowerEdge R910 servers paid for themselves in less than six months.”

Ensuring security for critical church systems

To ensure that IT systems are constantly available to support live broadcasts and keep financial and operational data safe, Church of the Highlands needs to

minimize the risk of hacking and other malicious attacks on its network. “We can’t allow vulnerabilities anywhere in our network, and we’ve been working with Dell SonicWALL to make sure we don’t,” says Hamlin. “We can count on Dell SonicWALL to stop every kind of attack on our network, from viruses and hacking to denial-of-service attacks.”

Protecting credit card and member personal information is also something the church takes very seriously. “People trust us and count on us to keep their personal information safe,” says Hamlin. “Knowing we have everything behind a SonicWALL firewall gives me the peace of mind that we are secure.”

One potential security vulnerability is Church of the Highlands’ extensive WiFi networks, which provide free internet access for members at the nine physical campuses. Although this is an extremely popular service, it also opens up security holes and increases the risk of hacking and other malicious activities. “We need to make sure that our systems are completely secure and that no one can access inappropriate content on our campuses. Dell SonicWALL firewalls give us all the protection we need.”

With massive spikes in web usage on Sunday mornings, Church of the Highlands needed a high-performing firewall that could manage a tremendous amount of connections per second. “To manage in excess of 4,000 connections to our WiFi network in a four-hour window at Grants Mill, we deployed two Dell SonicWALL SuperMassive 9200 next-gen firewalls in a high-availability configuration. In addition, we chose Dell SonicWALL TZ 215, NSA E6500 and NSA 6600 firewalls to secure our other campuses, which also support upwards of a thousand connections on Sunday mornings at each campus.”

The deep security capabilities of Dell SonicWALL next-generation firewalls help protect the church and its members. “We can get several attacks during our



Shane Hamlin, IT Manager, Church of the Highlands

Sunday service every week by people intent on doing harm,” says Hamlin. “With the range of security services available in Dell SonicWALL — including intrusion prevention, gateway anti-virus and the Content Filtering Service — we can block attacks every time and protect our congregation from inappropriate online content.”

In addition to protecting church systems and members, the Dell SonicWALL security infrastructure increases the performance of applications on the network for end users. “We can move large blocks of HD video data between sites without taking a performance hit thanks to the security infrastructure, which optimizes network performance and helps us provide an excellent experience for members visiting our campuses.”

Supporting rapidly growing IT needs

With technology requirements and data volumes growing dramatically at the church, the church’s IT infrastructure is constantly evolving. “We have a lot of online resources for our members, including past sermons and videos, and that adds up to a lot of data,” says Hamlin. “To make sure we can keep up, we are working with Dell storage experts to deploy a new EqualLogic 10 GbE storage area network here at Grants Mill, which will meet our storage needs for years to come. We also want to migrate our three existing Dell EqualLogic 5100, 6100 and 6500 SANs away from Grants Mill to other locations to ensure continuity in the event of an unplanned disruption at one of our churches.”

To support growing demand for online services and broadcasting services, the church is also upgrading connections into its data closets from 1 GbE to 10 GbE and, in some cases, 20 GbE with Dell Networking equipment, including Dell Networking S4810P switches. Faster connections to the church’s data closets allow video editors and other end users to work more productively. “The Dell Networking switches provide super-fast

I/O throughput, so video editors can work on video clips directly on our Dell EqualLogic SANs for the first time,” says Hamlin. “We will save time by eliminating the need to download video clips to desktops, and we can ensure that work is never lost due to local hardware failures or user errors.”

Increasing IT and management efficiency

To reduce IT management workloads and improve service for users, the church turns to the Dell KACE K1000 Systems Management Appliance. “We can see at a glance what servers, desktops and other devices are running on the network, and what software is running on every device with Dell KACE,” says Hamlin. “With accurate information about which machines have been patched, we can ensure that all our desktops are secure and up-to-date.”

As an additional benefit, Church of the Highlands can guarantee that it is compliant with software licensing requirements. “We believe that using software you haven’t paid for is stealing, so it’s very important for us to be compliant,” says Hamlin. “We can see exactly who is using what software with Dell KACE, which ensures that we have all the right software licenses, and we can also see if someone isn’t using their license, which helps us optimize licensing investments.”

The church exploits the service desk feature of the K1000 appliance to reduce IT management workloads and costs. “Before, people were stopping me all the time with IT-related questions and issues,” says Hamlin. “Now, they simply raise a ticket in the IT queue of Dell KACE and we get back to them quickly with a solution. We can also fix PCs remotely with Dell KACE, which means we spend less time traveling and respond much faster to support requests.”

The IT team also sets up queues for other tickets in Dell KACE to optimize a range of operational processes. “We’ve taken

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the concept of a service desk to the next level by creating tickets for facilities management, procurement, HR and more in Dell KACE. If you want a room painted, you just raise a ticket in the facilities queue, and if you have a new starter in your team, you can create a ticket in the HR queue. We also track all the money we spend this way, which helps us to be accountable to our members who donate money to support our work."

Deploying IT faster

To reduce the cost and complexity of deploying servers, desktops and software, the church is taking advantage of the Dell KACE K2000 Systems Deployment Appliance. "We can now deploy new workstations and laptops quickly and simply, taking them down to the bare bones, connecting them to the network, and using Dell KACE to configure them automatically based on pre-existing images," says Hamlin. "Deploying a new desktop — including all patches, configurations and group policies — used to take me an hour. Now I can do more than 25 in a day with Dell KACE."

When the church builds out a new campus, its K2000 appliance helps to quickly and easily configure the required server and desktop infrastructure. "By the time servers and desktops get to the new campus, they are ready. We know we can plug them in and they're going to work," says Hamlin. "This means we can get a new campus up and running extremely quickly and efficiently, and that all the local staff members can work effectively from day one."

Building trust based on excellent support

Although the church IT team is small, it must deliver consistently excellent services for staff and members. "Because we have limited internal resources, our technology partners have to act as an extension of our team and help us deliver excellence in everything we do," says Hamlin. "When more than 26,000 people are depending on us to make a service happen, it's great to have Dell supporting our entire infrastructure."

The church benefits from Dell ProSupport, which gives the IT team access to Dell technology experts 24 hours a day on the phone and online. However, the support provided by Dell goes far beyond the terms and conditions of the ProSupport agreement. During one of the church's annual conferences on marriage, for example, a video broadcast was disrupted because of a technology issue and Dell was quick to help. "We lost connectivity to Grants Mill, which is where we were running the conference from. But the fault wasn't internet-related, it was equipment-related," says Hamlin. "I immediately emailed our Dell AM, who just happened to be at one of our campuses, and he elevated the issue to the highest-possible level of support at Dell. Because of his tenacity, we were able to work through issue and resume the conference the next night, which was a great achievement and a great demonstration of Dell's responsiveness."

Over the years, the church and Dell have built a close working relationship based

on trust. "If you trust someone, you can have a better relationship with them, and that applies to business relationships as well," says Hamlin. "I trust my Dell team, which is why I don't even talk to other suppliers. I wouldn't want to lose that trust."

Achieving savings with standardized desktops

In addition to having a single partner for support, Church of the Highlands has chosen to standardize its desktop environment on Dell technology. "We buy Dell OptiPlex 7010 workstations, which meet our needs in terms of reliability and performance," says Hamlin.

With just one model of desktop, the church can streamline management and fault fixing. "If a BIOS upgrade fixes one machine, we can apply it across all our Dell OptiPlex 7010s and it will work," says Hamlin. "We can also keep a few spare machines in case we have a hard drive failure or another hardware issue. Because staff store all their work centrally, we can simply deploy a new machine and they can start working again as if nothing ever happened."

This standardization also helps the church achieve significant cost savings. "If you shop around for the deal of the day from multiple suppliers, you may save pennies on procurement, but you'll spend dollars on support," says Hamlin. "With our standardized Dell desktop environment, we can maintain and fix workstations more quickly and cheaply, and minimize downtime and disruption for our users."

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