

TWR Stays On the Air In A Remote Location

Acronis® helps shortwave radio station stay on the air in Guam with 99.7% uptime



International Christian Broadcasting

The 50-year-old Trans World Radio produces Christian radio broadcasts in more than 225 languages and dialects, aired from more than 2000 outlets around the world. The non-profit's Asian shortwave broadcast outlet is located on the US Territory of Guam, the largest of

the Micronesia islands. Opened in 1977, it transmits its message in 23 languages through its shortwave radio transmitters, reaching out to millions of listeners in the Asia Pacific region.

Because the site is located in a remote area of the Western Pacific where traditional engineering and IT services are not readily available, a downed server can cause the TWR broadcast system to go off the air for days if precautions aren't taken. And while Guam is a geographically perfect location for broadcasting shortwave radio to Asia, the island is prone to very large tropical storms and earthquakes which can quickly take down the infrastructure. In spite of this, and with the help of Acronis® True Image Echo software, TWR manages 99.7% uptime in its broadcast operations.

Needed flexible disaster recovery options.

When TWR's facility switched its programming materials from an analog source to a computer network in 1999, it became very dependent on the reliability of its server population. Currently TWR uses seven Microsoft 2003 Servers and two Active Directory domains, 23 Microsoft XP clients, and one Linux-based 1.5TB NAS.

TWR's remote location requires spare systems to be sent to Guam by airfreight, but the time delays associated with receiving parts can threaten to take the facility off the air. Therefore, it is imperative to be able to quickly adapt to a disaster in order to maintain reliability until spare parts can arrive.

"Our original disaster recovery solutions were constrained by hardware which only backed up the data, not the entire operating system," says Douglas Gregson, IT manager and engineer at the Guam facility. "To recover from disaster by rebuilding a system, then restoring data, was costly and inefficient."

Organization

- Trans World Radio
www.twr.org

Industry

- Broadcasting

Key Challenges

- Recover servers with broadcast programming material
- Bare Metal Restores
- Restores to dissimilar hardware

Environment

- 7 Microsoft 2003 Servers
- 2 Active Directory domains
- 23 Microsoft XP clients
- 1 Linux-based 1.5TB NAS
- 1.5TB Network Addressable Storage unit attached to a high-speed LAN.

Solution

- Acronis True Image Echo Workstation
- Acronis True Image Echo Server
- Acronis Universal Restore

Organizational Benefits

- Fast recovery of entire systems
- No longer have to keep clones of existing servers for server restores
- Positive experience lead customer to recommend it to other groups within the organization



Douglas Gregson, IT manager and engineer at TWR's shortwave transmitter building on the island of Guam

If the station suffered a server failure in its audio delivery system, the staff would need to perform a bare-metal restore within a few hours or suffer the cost of losing an audience. However, the site did not have the personnel or the time to spend on rebuilding complex systems from the ground up.

Acronis the key to a fast recovery.

TWR's digital audio software vendor suggested disk imaging as a way to quickly move to another server. Gregson found that the first solution he tried, an early version of Norton Ghost, had two limitations. First, it permitted only local (non-network) imaging. Second, he could only recover to an identical hardware device.

"Being able to restore a system universally to any hardware or virtual hardware was a critical criterion to effective disaster recovery," he says. "At the time we researched recovery tools we found that only Acronis could provide universal recovery through its Acronis Universal Restore option."

"I was amazed at the performance. Acronis Universal Restore worked perfectly!"

- Douglas Gregson, Trans World Radio

Gregson began testing by imaging an XP host, replacing the hard drive, booting the software from a CD and restoring the image to a new hard drive. "I remember the first successful restore," he says. "I was amazed at the performance. Acronis Universal Restore worked perfectly!"

TWR immediately began using Acronis to build an offline duplicate of its production environment. Acronis True Image Echo software was used to create images of multiple servers and workstations and then restore the images into a single VMware server. This duplicate network served as a test bed for months of network and software development tests. "My ability to use disk imaging to create a virtual server for running tests saved me thousands of dollars in hardware costs and hundreds of hours of setup time," Gregson reports.

Exceeding Expectations

Since Acronis True Image Echo Workstation and Server products performed so well in a test environment, TWR decided to use them in its production environment. Initially, it used Acronis True Image Echo Server on three of its seven servers and the Acronis True Image Workstation product on five of its 23 workstations, later rolling out the software to cover all servers and workstations.

The organization now uses Acronis backup software to perform daily backup of data on its file servers and takes monthly system images of critical systems. These monthly system images are automatically timed to occur just prior to each Microsoft Patch release day. Should a new patch create an issue, the station can then restore the system back to the previous day's healthy state and continue operations. All images are written to a 1.5TB Network Addressable Storage unit attached to a high-speed LAN. It only takes about 10 minutes to image a four gigabyte server, Gregson points out.

"One of the best products." Gregson calls Acronis Universal Restore software "one of the best products I have ever used. "The first time I used it, I was amazed at how well it worked. On two occasions I used the Acronis Universal Restore function to recover a crashed server to new hardware. In both situations, the crash was due to motherboard failures and identical hardware was not available. If it wasn't for this software I would have been rebuilding new servers for days. The restore process was fast and easy since all my images are automatically updated regularly and stored on a network storage device which is accessible through a Gigabit LAN. I was up and running in a few hours after receiving my new hardware – amazing! Its ability to restore an entire system to any new hardware or virtual device complements the imaging software, making it one of the most versatile tools in my software toolbox."

Since Acronis software became the Guam facility's backup and recovery solution, Gregson says he has recommended Acronis software to partner offices around the world. Many have embraced it, and he is told that very little training was required to take advantage of its capabilities.

"I often joke with people when they ask what kind of disaster recovery plan I have," Gregson says. "My answers for disaster recovery for computer systems and spiritual life are similar: 'I plan on death- it is inevitable - but I have absolute hope in a higher power to restore life after death!' For computer systems I plan to use Acronis True Image."