COLDSTORE -

How BAPS Shri Swaminarayan Mandir - Houston used COLDSTORE to solve a serious problem with RAID Storage

With a large amount of acreage to cover and a policy of openness and welcome, the BAPS Shri Swaminarayan Mandir - Houston in Stafford, TX has also maintained a forward thinking security policy.

“Events that have occurred in the past, such as minor theft and vandalism”, said Kaivalyamurti Swami, one of the organization’s administrators, “as well as a desire to provide for the safety of our residents and thousands of visitors each year have driven us to keep a modern security policy in place.”

Having seen Veracity’s COLDSTORE in action at ISC West 2011, Kaivalyamurti Swami knew that he wanted to use this system in conjunction with Genetec’s Security Center 5. What he did not know was that the use of COLDSTORE, planned for 2012, would need to be accelerated due to a serious issue with the installed shared RAID array storage system at the BAPS Mandir in Houston.

THE PROBLEM

The RAID system located in Houston, while continually requiring disk defragmentation and disk replacement, had been recording video delivered by Genetec’s Security Center with no problems.

Upon accessing the system to retrieve archived video during the week preceding September 11th, a significant problem was discovered.

“The system had simply stopped recording all of the video”, reported Kaivalyamurti Swami. “While each camera here at the Temple is set to record 24 hours per day, 7 days per week, the RAID system was not allowing all the video to be laid onto the disks.”

Further investigation revealed that the RAID system was only recording data sporadically, and was appearing to Genetec’s archiver to be full even when space for
recording was in fact available. As more time was spent analyzing the system, more issues were discovered as follows:

- Authentication issues were preventing read/write access
- Changes to access rights were causing recording to stop
- Playback of video only came after extended buffering time
- RAID disks were failing after 6 months of use

With an absolute requirement for 24/7 recording and a solid VMS in place, BAPS needed a fix.

THE SOLUTION

Having already done the research and knowing that COLDSTORE was the storage system of the future, Kaivalyamurti Swami reached out to Veracity on a Saturday afternoon. “I sent an email to Veracity on Saturday and outlined the problem to Scott Sereboff and his staff”, said Kaivalyamurti. “Within a half an hour I had an affirmative response from Scott, and within another half an hour we had spoken by phone and decided a plan of action.”

On Monday the 12th, a COLDSTORE unit was prepared for use with Genetec’s Security Center 5 and sent out to the BAPS Shri Swaminarayan Mandir for a Wednesday delivery. Once the unit arrived into Houston, Kaivalyamurti Swami and his team installed 15, 2TB Western Digital Caviar Green disks into the unit and got it onto the Mandir’s network.

Once visible on the Temple’s network and a remote session established, the technical support team at Veracity got to work. First, Veracity’s Video Mover was installed onto the local server that housed Genetec’s Security Center 5. This program, developed by Veracity with the assistance of Genetec, allows COLDSTORE to serve as the “archiver” for Security Center 5 and moves the data from local storage to COLDSTORE on a time-delimited basis. COLDSTORE Manager, Veracity’s GUI front end for managing COLDSTORE, was then installed and used to provide NTP and DNS information to the system.

Once Video Mover was initiated, it immediately began to move video data from the local drive to COLDSTORE. By the end of the day, Friday the 16th of September 2011, BAPS personnel were able to completely switch over to COLDSTORE and no longer worry about the inconsistencies of writing to the RAID system.

CONCLUSION

COLDSTORE was perhaps the single and only system that was capable of fulfilling the immediate need at hand. With a remarkable ease of installation, no need for external
cooling, a minimal power requirement [COLDSTORE operates at under 50 watts of power and as attached to a “Kilowatt power measurement unit is operating at 46 watts at BAPS], virtually no management required and a seamless integration to Genetec’s Security Center 5, COLDSTORE has given BAPS precisely the storage system that they needed to manage a growing security installation.

“With the Linear Array of Idle Disk technology I get a dramatic decrease in power required and I only need to operate 2 disks at one time while writing which means I dramatically increase the usable life of the off the shelf consumer grade hard drives installed into COLDSTORE” opined Kaivalyamurti Swami. “In addition, Veracity’s innovative Sequential Filing System, which treats the video data as what it actually is- sequential- means that the recorded data is laid down to disk at the physical level in a logical and time oriented way. It’s truly sequential at the disk level, and this means almost no issue with fragmentation, read/write errors, and read and write times about three times faster than any other system.

“I knew that I could rely on Veracity to be there for me; even though until this incident I was nothing more than a potential customer, I knew that the reputation established by Veracity for support would mean that I could get the help I needed.

“What I didn’t know- despite having seen COLDSTORE in action and seen the demo- was whether or not the system would truly do what had been advertised. Well, it has, and I am happy to say that BAPS has selected COLDSTORE to be the storage system for now and for our future.”

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