Tyrone®

Case Study:
News Channel benefits from NAS deployment

Usually SAN is the preferred storage solution in broadcasting industry; but Jai Maharashtra, a news broadcaster didn't did the usual and opted to deploy NAS over SAN for their storage needs and benefited massively from the NAS solution offered by Netweb Technologies

CHALLENGE:

- For their broadcasting studio setup of their news channel, they wanted a storage solution that could deliver high throughput and sustained bandwidth; but opting for a SAN solution meant incurring very high cost which went beyond their budget.

- Wanted a cost effective storage solution which like a SAN could deliver sustained bandwidth and high throughputs.

- Sought a solution that would make them future-ready also

SOLUTION:

- Opslag FS2, a unified storage solution from Tyrone Systems was deployed as the NAS solution.

- The solution ensures that high bandwidth demands of the broadcasting house are fulfilled and there are no lags or downtime during the whole broadcasting process cycle

BUSINESS RESULTS:

- The 24-hour Marathi news channel has been successfully been on air without any broadcasting glitches since the day it was launched.

- The NAS solution has allowed the Marathi news broadcaster to save considerably on costs as compared to the SAN solution.

- As Opslag FS2 is unified solution, both supporting NAS and SAN features; so in future, if the news broadcaster wants to upgrade to SAN environment the present storage box will not become redundant and will help them again in reducing cost of SAN deployment

DEPLOYMENT ENVIRONMENT:

- Three Opslag FS2 boxes have been deployed as storage box for each of the broadcasting processes, i.e. Ingest, Edit and Playout.

- Opslag FS2 has been configured for NAS platform and to deliver sustained and guaranteed throughput of upto 600 MBps for each of the different broadcasting processes.

TYRONE OPSLAG FS2 UNIFIED STORAGE

- FS2 is a unified storage solution that offers high performance, high availability and flexibility through multiple configuration options as the storage box supports variety of protocols and interconnects.

EXECUTIVE SUMMARY

Customer Name:

A Newly Launched Marathi New Channel

Industry:

News Broadcasting

Corporate Office:

Mumbai, India

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For complete information on Tyrone Opslag FS2 unified storage,

visit http://www.tyronesystems.com/unifiedstorage.html

A well know Media Company which had a diversified portfolio of films, broadcast and digital entertainment verticals; had procured a license to air a prime Marathi news channel and had set out to launch the news channel.

Challenges:

The company wanted to set up their broadcasting studio for their soon to be launched news channel, but it was not going to be easy. The demands for bandwidth and throughputs are so high in broadcasting and production houses that a SAN solution is considered to be the ideal and only solution for the storage needs. The reason behind that is that in production or broadcasting houses where video either in SD or HD format is the main content and it requires a high and sustained throughput to transfer the video seamlessly and in real-time. If there is any drop in bandwidth, the whole video transmission will not be smooth and will result in jittery video feed, which is completely unacceptable for any broadcasting or production house. So, as rule of the thumb, SAN solutions are recommended in broadcasting and production houses as they are designed to deliver sustained high bandwidths.

The challenge for the company was that they did not have the budget to invest on a SAN solution. For a broadcast house like them, they too had to deal with high throughput requirement for their video content at their storage points. Being a news channel, their video content came as live feed from their OB vans which had to be stored directly to the storage box. This storage box called Ingest where the incoming feed is stored as video files. If at any point the feed gets interrupted by drop of bandwidth, the whole file being stored gets stopped and the video feed has to be transferred again. So it is critical to have a sustained high bandwidth to handle the incoming data feed stream. Then these stored video feeds are edited at another storage point called Edit, where editors who are connected directly to the storage box work on the video files to create the final output that is ready to be aired. As editors have their machines directly connected to the storage box, a SAN is ideal as it provides block level access and high enough throughput that can handle the video streaming. Finally, the finished video is transferred to the critical step called Playout where each of the finished video feed is stored and listed in the manner it will be aired. Again a very high sustained throughput and bandwidth is required at this storage point to ensure that while the video is being aired there is no video disruptions caused by the drop in throughput from the storage box.

Considering these requirements of high bandwidth at every stage of broadcasting process to be met; the news broadcaster wanted a storage solution that could deliver them a sustained bandwidth of 600 MBps and should be cost effective as they had a very limited budget.

Solution:

Looking at the cost constraint of Jai Maharashtra, Netweb Technologies offered them a NAS platform based on Tyrone Opslag FS2 unified storage solution. Three Opslag FS2 boxes configured as NAS were deployed for each of the broadcasting steps, viz. Ingest, Edit and Playout. Delivering such high sustained throughputs from a NAS solution is very tricky. Since, Netweb Technologies have a completely integrated solution whereby the hardware and the software stacks are highly optimized for each other; which helps Netweb Technologies to design their NAS solution to deliver high bandwidth. Below are some of the reasons why Jai Maharashtra opted for NAS solution over a SAN solution for their broadcasting setup:

- Having a NAS solution that could meet their throughput requirements has helped Jai Maharashtra to save massively on cost had they opted for a SAN solution. As this NAS platform has been designed to offer sustained bandwidth of 600

MBps, which is well above the maximum requirement stated by Jai Maharashtra. Hence, there is enough provision that even if there is a drop in bandwidth the video feed will not get disrupted at any point of time.

- Tyrone Opslag FS2 is a unified storage solution; hence it can act as NAS and SAN depending on the client's requirement. In future, when the bandwidth requirement increases for Jai Maharashtra, then they can transition easily from a NAS scenario to SAN environment by doing the necessary setup changes for additional hardware requirements. Whereas having a simple NAS box would have become of no use, as that NAS box couldn't have been used in SAN environment. Hence, jai Maharashtra can utilize the main advantage of Opslag FS2 unified solution to use the same FS2 box as SAN and save up on costs.

- Opslag FS2 offers a fixed price model and does not bounds the customer with any additional license fees for following:

  - **Storage Expansion:** Unlike other solutions that offered storage solutions based on storage capacity; and for any additional storage expansion in future require the customer to buy additional licenses from the vendor. Whereas, Tyrone Systems offers complete box as storage solution and user is free to use all of the HDD bays or just one depending on his requirement or need.

  - **Incremental Features:** As Opslag FS2 supports input-output unification, the user has flexibility option to choose between various interconnect technologies like 10 Gig Ethernet, InfiniBand or FC. Users just have to pay for the hardware upgrade for implementing any of the interconnect technology; since the storage box has the provision to support any of these features. Users do not have to pay any additional license fee for the same and hence are future-ready with no additional cost burdens.

Benefits:

Going for a NAS solution where SAN had been the ideal recommended solution, Jai Maharashtra has been able to able to adhere to their budget for cost, and was able to launch their news channel on the planned date.

- **Cost:**

  - Not only the NAS solution was much cheaper in cost as compared to SAN solution; the pricing model offered by Netweb Technologies was such that it was inclusive of all licenses. Whereas in case of SAN there would have been additional annual fees for SAN File System license for every user, which would have been a lifelong recurring cost. So, from cost aspect, this deployment has been very cost effective in fulfilling the requirements of the news broadcaster.

- **High performance:**

  - Even though a typical NAS could deliver a very high average bandwidth, but when observed on a performance graph then some troughs and some crests can be seen. When a usage scenario involves video transmission, then even a small crest in performance could lead to drop of video frames. Therefore, where videos are concerned, crests are not at all permissible and sustained throughput is the main primary requirement. In such a case, Opslag FS2 is capable of delivering the required bandwidth consistently and in a sustained manner. Thus, Jai Maharashtra has been successfully running their channel broadcasting without any issues caused by drop in performance in terms of bandwidth by the storage solution.

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- **Future-Proof:**
  - At present the bandwidth requirements can be met by NAS platform, but when they go further higher. Then the Opslag FS2's main advantage can be utilized. It can easily be transitioned from NAS to be used as a SAN solution, without incurring much cost as compared to a completely new SAN deployment. Even when the company goes for new SAN deployment, then the present FS2 box can be converted into Fibre-channel storage to become a part of SAN, meaning no wastage of current resources.

* Disclaimer for Case Study