Vanderbilt Implements the Bus-Tech MAS to Consolidate Resources and Dramatically Shrink the Backup Window

Today's economic environment has forced enterprise IT organizations to concentrate on getting as much done as possible with resources currently available – both financial and human resources. Successful IT organizations are implementing processes and solutions that maximize the efficiency of IT staff and provide enhanced ROI. Vanderbilt University's IT department is a case in point. Recently, it discovered a way to consolidate its mainframe and Unix systems backup processes, making more efficient use of physical resources, and reducing its daily mainframe backup window from an average of three hours down to 28 minutes.

The Application Scenario

Vanderbilt University's 9672 – R22 (OS/390) mainframe runs the University's general ledger application plus two smaller applications. IT staff runs nightly backups consisting of full volume dumps to tape of production packs and some system packs. In addition, Vanderbilt runs weekend backups that are the same as the weeknight runs except that SYSRES and SPOOL packs are also included.

Prior to installing the MAS, nightly backups to the 6 3480 tape drives took an average of three hours to complete, consuming from three to four tapes per volume. The weekly runs took four hours. In addition, Vanderbilt's backup process created two sets of 30 – 40 tapes – one set was retained on site, the other was transported off site and stored.

Vanderbilt identified four critical operational deficiencies that BusTech's MAS could address:

- Reduce the time devoted to the nightly and weekly backup processes
- Consolidate backups from both Unix and mainframe systems in an effort to increase overall IT operational efficiency
- Reduce the number of tapes generated and thereby reduce the amount of physical space required for tape storage
- Reduce the number of tape mounts for production volumes

The Implementation Scenario

First, the MAS was channel attached to the OS/390 mainframe. Next, an EMC Celerra NAS-based disk storage array also containing Unix systems data was attached to the

MAS via Ethernet. The Celerra is backed up to LTO tape over IP under control of the HP OmniBack backup utility.

Nightly and weekend mainframe backups are generated as usual with the exception that now the backup data stream is directed to the Bus-Tech MAS instead of 3480 tape. The MAS then copies mainframe backup volumes to the EMC Celerra which also contains Unix systems data. The HP OmniBack backup utility then generates backups of both the mainframe and Unix systems data to tape using the Celerra as a source and LTO tape as a target. The only change to the existing environment was a simple modification to production JCL code that changed "UNIT=TAPE" to "UNIT=VTAPE". Otherwise, the MAS was a simple "drop in" addition.

The Results

Now in full production at Vanderbilt, the Bus-Tech MAS has allowed IT staff to:

- Reduce the mainframe backup window from hours to an average of 28 minutes
- Reduce the number of tapes generated by mainframe backups from 60 to 80 per day to three per day.
- Reduce the total number of library tapes from 6,000 to 500, dramatically reducing the space required for tape storage.

Said Vanderbilt's Manager of Mainframe Systems, Ron Eastes: "The MAS was simple to implement and very transparent to our current production environment. We are now using the MAS to store production files we normally had committed to tape in order to reduce tape mounts, and will likely find other applications as well in the future."