

Digital Workflows with a NAS

VECTORBOX and V-BOX News can be combined with a broadcast NAS central storage over Gigabit LAN to create streamlined and low-cost digital workflows without the cost and complexity of a SAN.

VECTORBOX connectivity and real-time playout performance gets the most from a NAS centric architecture. The result is a shared media environment that can be coupled with any asset-management database for system-wide information and media access. In addition, open media format support with native MXF compatibility gives you the freedom to choose the NLE and storage that fits the bill.

The advantages of building a digital workflow using VECTORBOX with a NAS over a Gb LAN are:

- Efficient digital workflows
- Accelerated time-to-air
- Flexibility in NLEs and components
- No format conversion issues
- Enhanced redundancy options
- Simultaneous media sharing between channels
- Reduced operating expenses and dependency on tape
- Scalable architecture with flexible channel count

Network

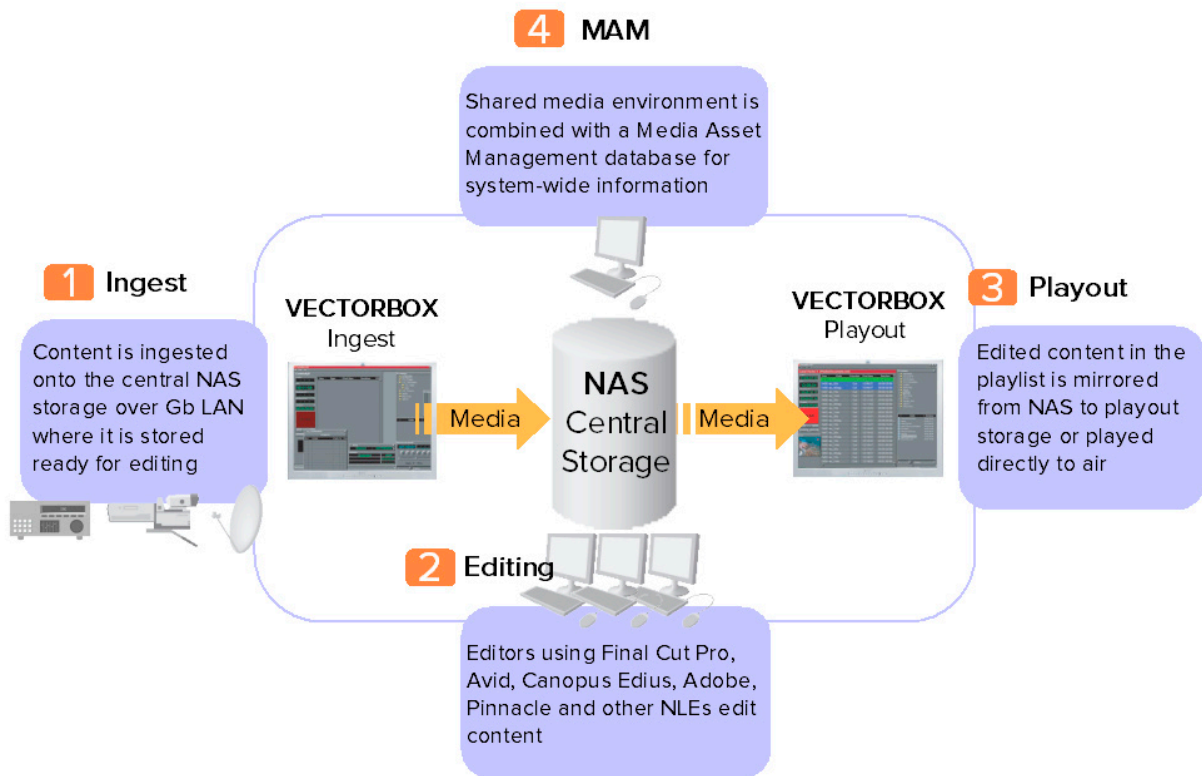
VECTORBOX guarantees maximum performance from your Gigabit Ethernet network (Gb LAN) but playout over a Gb LAN requires a network infrastructure that is both high quality and tightly integrated and a top quality Gb LAN switch must be used for this purpose. MediaCopier is used to automate media mirroring and transfer between storage volumes whilst managing file format and network bandwidth.

Storage

VECTORBOX local storage ranges from a buffer storage for use in this type of NAS centric architecture to a larger storage for standalone use. Thanks to its extreme internal bandwidth and connectivity, VECTORBOX is suitable for use with a wide range of NAS central storage systems from different manufacturers and of varying prices and volumes. VECTORBOX has been tested successfully with different market-leading brands including Editshare, Avid, Data Direct, Net App and Ciprico.

Digital Workflows

The right digital workflow is a consideration of many factors including individual channel architecture and systems, content format and type as well as procedural considerations related to media and metadata processing, monitoring and checks etc. The following indicates a few of the possibilities for creating a digital workflow from ingest to playout using VECTORBOX with a combination of NLEs and other storage systems.

**NAS based digital workflow**

Ingesting New Content

Content can be recorded from incoming satellite feeds, OB van, VTR or any other SDI or analogue (VECTORBOX DSX only) source, in manual, semi automatic or fully automatic batch recording mode. Batch recording relists are created in advance using VECTORBOX Recorder interface or Relist Manager SW on an off-line PC on the Gb LAN. Relists are then saved into the VECTORBOX catalogue and loaded as required.

There are two possibilities for creating the optimum ingest workflow for your channel:

Ingest onto local storage This is where feeds are recorded onto the local VECTORBOX buffer storage. Content is then trimmed (if required) using the VECTORBOX outputs on an SDI or analogue video monitor or on a VGA monitor in low-resolution (WM9) using Playlist Editor+ software on an off-line workstation.

If ingest and playout are on the same VECTORBOX system, content can be played out from local disk with or without time delay or automatically transferred onto the central NAS storage ready for editing. If a VECTORBOX Recorder model is used, the content is automatically transferred to the NAS / playout domain.

Direct ingest onto the central NAS storage VECTORBOX can also be configured to record SDI feeds directly onto a central NAS storage over the Gb LAN for editing and later file sharing.

In both cases, content can be recorded in MPEG 2 I-Frame, IBP, DV25, DV50 and also IMX formats. Ingest can be in .avi, .mov (QuickTime) and also MXF formats and these may be mixed in the same relict.

Editing Content

Once content is ingested onto the central NAS storage, editors can load the media directly onto a wide range of non-linear editors for editing including Final Cut Pro, Avid DV, Pinnacle Liquid, Matrox, Canopus and many more. Once rendered, media is either manually or automatically (using MediaCopier) returned to the central NAS storage over the same Gb LAN for playout.

Scheduling Content

Playlists are created on the VECTORBOX itself or on any PC on the Gb LAN using Playlist Editor+ or a third-party scheduling/traffic system and then saved in the VECTORBOX catalogue as .xml files for loading and playout. Playlists may contain clips from disk as well as events from VTR, studio and satellite.

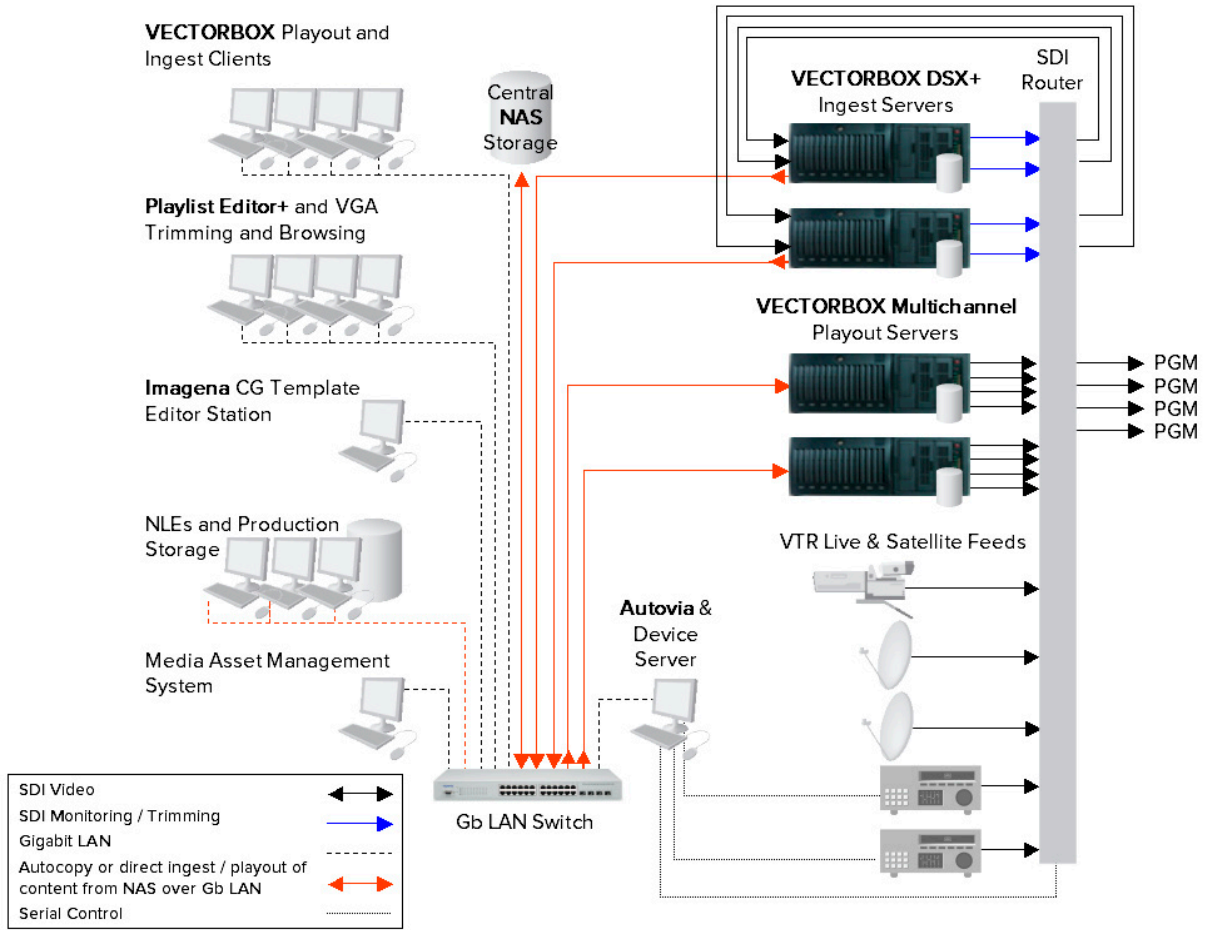
VECTORBOX also allows you to create and schedule virtual (empty) clips for content that has not yet been ingested. Virtual clips are given a specific file name and then scheduled by dragging and dropping them into the playlist. When media with the same file name is ingested over Gb LAN or from an SDI source, it automatically updates the playlist and thus can be played to air after a short buffering time of 12 seconds. Media can also be trimmed as it ingests for re-insertion.

Playout

We recommend that playout be carried out from the local VECTORBOX storage as 'best practise' for broadcast in most channel environments. This precaution adds an extra level of redundancy, as content is available on both the central and local storage as well as eliminating the real risk of losing an on air signal due to LAN failure.

As discussed above, once files have been edited, they are saved as finished media in the playout watch folder on the central NAS storage. Media transfer from here to the local playout storage can be managed in two ways. The first is simple folder mirroring where all the media in this watch folder is transferred to the local playout storage and the second is selective as only the specific media required by playlist is transferred in this way.

Selective mirroring is possible as MediaCopier checks the playlist for required media against the local playout storage. If any media is not present, it autcopies this content from the NAS to the local storage of the playout machine. If time is not available to do this, MediaCopier enables playout of the media directly from the NAS to air, as might be the case with breaking news. Automatic media transfer is backed up by automatic media purge by expiry date to assure that disks do not become overfull.



Complete digital workflow with separate VECTORBOX ingest and payout