



NEXUS-*fms*

fuzzy media storage



nex·us [nek-suhs] noun
1. a means of connection; joint
2. a connected series or group

NEXUS-*fms* provides an effective and expandable storage solution ranging from 2 to 512 terabytes.

Unique to the **NEXUS-*fms*** solution is the concept to use uncomplicated hardware to implement redundant storage. Performance, storage capacity and management is distributed over a cluster of 1U **NEXUS-*fms*** servers implementing a truly scalable storage solution.

The native integration with other PubliTronic products allows for a single supplier solution resulting in a fast and effortless implementation of your playout requirements.

Key features

- Scalable capacity
- Scalable performance
- Load balanced operation
- Unique resilient concept
- Easy management
- No need to transfer content between storage systems, simplifying automation control
- Low start-up investment (buy as you need)
- Single file system storage
- Cost efficient solution
- 24/7 support by PubliTronic

Typical Applications

- Native **Cobalt** storage solution
- Near-line storage
- Storage archives
- Generic storage

Concept

Bigger and faster storage solutions tend to get more vulnerable to errors due to the addition of complex hardware. PubliTronic have solved this by implementing a forward error correction (FEC) technique in the **NEXUS-fms** servers utilizing distributed processor performance on the servers as a powerful alternative for hardware RAID solutions.

The FEC scheme is configurable and as such the customer defines the desired redundancy. Typically a 4/5 scheme is chosen resulting in 80% efficiency of the raw storage. For example; 5x **NEXUS-fms** 1U servers of 2TB result in a total effective storage of 8TB. The 4/5 scheme uses 20 % redundancy, meaning 1 **NEXUS-fms** server can fail without compromising the **NEXUS-fms** cluster functionality.

Capacity and Performance

The capacity of a cluster of **NEXUS-fms** servers is determined by the number of units and the FEC scheme (e.g. 4/5 = 80%).

The performance (throughput) of the cluster is calculated by the multiplication of the throughput of a single **NEXUS-fms** server. A cluster of 5 servers offers 2 gigabits/sec (5 x 400 megabits/sec). Practically the client - not the **NEXUS-fms** cluster - is often the limiting factor in throughput.

By concept, the **NEXUS-fms** cluster allows multiple clients to be load balanced in their access to the cluster.

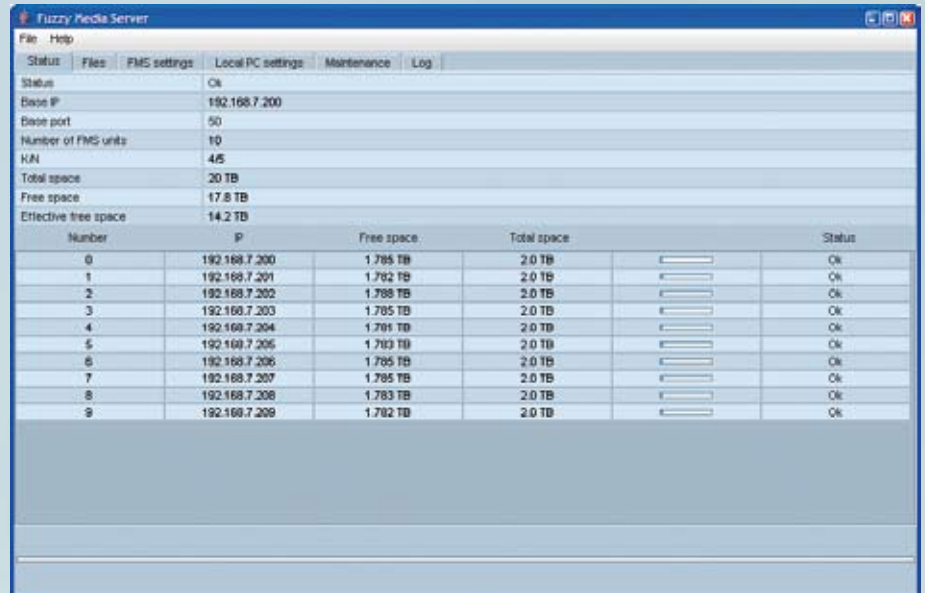
Single volume

Clients can access the **NEXUS-fms** cluster through FTP and SMB. The **NEXUS-fms** cluster will always present itself as a single scalable filesystem resulting in easy asset management without the need for moving data from one system to another.

Management

The Web interface to the **NEXUS-fms** cluster allows the user to perform management tasks, check cluster status and view logging.

NEXUS-fms units are natively integrated in the PubliTronic **Cobalt** payout automation environ-



The screenshot shows the 'Fuzzy Media Server' web interface. It has a menu bar with 'File' and 'Help'. Below the menu is a 'Status' tab. The main content area displays system information: Status (Ok), Base IP (192.168.7.200), Base port (50), Number of FMS units (10), K/N (4/5), Total space (20 TB), Free space (17.8 TB), and Effective free space (14.2 TB). Below this is a table with columns: Number, IP, Free space, Total space, and Status. The table lists 10 units, each with a unique IP address, approximately 1.78 TB of free space, and a total of 2.0 TB. All units show a status of 'Ok'.

ment and are actively logging messages when user interaction is required.

Identical to every **NEXUS** platform solution, an additional and independent **NEXUS IP mana-**

ger (separate processor) manages the status and health of the **NEXUS-fms** server and provides remote management tools for unmanned and remote payout sites.

Technical Details

Storage capacity	2 terabytes - per 1U frame
Data throughput	400 Mb/sec. - per 1U server
FEC schemes	configurable: 1/2, 2/3, 3/4
Transfer protocols	FTP, SMB (windows share)
Discs	SATA II, swappable
CPU	Intel Xeon
Memory	4 Gb
Linux OS	Real-time 2.6
Ethernet	2 x: 10/100/1G
PC i/f	VGA, keyb, RS232
Size (W x H x D)	484 x 44 x 600 mm - 19" x 1,74" x 23,6"
Weight	max. 15 kg / max. 33 lbs
PSU	Redundant, dual AC, max. 500 VA
Operating environment	10°C to 30°C / 32°F to 86°F
Relative humidity	10% to 90% non-condensing

Contact PubliTronic or your local distributor for more information on Cobalt, NEXUS automation and Indigo technology. We look forward to showing you the exciting possibilities these innovative products can offer your business!

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