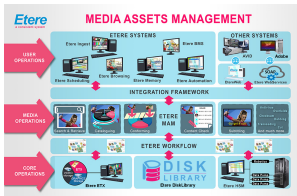
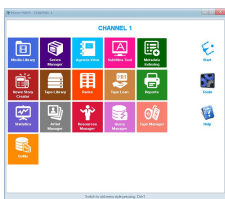


ETERE MAM HARDWARE GUIDE

Etere MAM is a comprehensive solution for flexible, modular and effective management of your digital assets.



Media Asset Management



Etere MAM



Etere Web Workflow

Etere MAM is a highly-effective digital content management solution that is designed specifically to streamline the process of ingesting, indexing, storage and retrieval of digital assets. Etere MAM is an end-to-end software solution created to fully optimize the value of your assets through a centralized management of digital content and associated metadata. Its effective implementation both increases operational efficiency and maximizes the return on investment of digital media. Etere MAM simplifies the process of content management by streamlining the digital workflow, bringing media to the market faster and in multiple formats, ensuring an exceptional and frame accurate content.

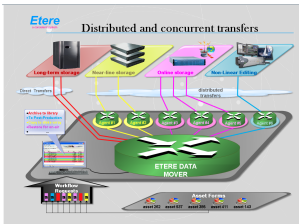
Key Features

- Automated ingest followed by effective and integrated QC workflows
- Facilitated content retrieval with automatic metadata association
- Search engine empowered with full-text and asset filters and queries
- Organizing the work of different groups
- Generation of multiformat, multipurpose files for delivery to multiple platforms
- Closed caption creation and retrieval
- Rights structure to protect intellectual property including digital watermarking
- Newsroom integration for real-time access to full media content(MOS compliant)
- HSM to transfer files between online, near on line and tape or disk libraries
- Manage different storages even geographically distributed

Etere Web

Etere web is hosted on Microsoft Web Server (IIS) which provides a reliable hosting service. Etere web supports both single server, multiple servers load balancing configuration and geographically distributed servers

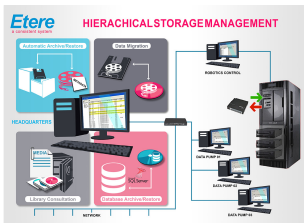
- Loading balancing is an option which optimizes resource use, minimizes response time and avoids overload of any single resource
- Access managed by Microsoft active directory
- An Etere streaming server is used to deliver the best experience to the Web browser that uses HTML5 players
- Etere streaming server is free to use and is normally embedded in the Web server or in the data movers or both



DataMover

Etere Data Mover

- A data mover moves a large amount of Data between storages. We suggest to use the fastest interface available
- Etere can use load balancing NIC as NAS or SAN storage
- You can use more servers to increase bandwidth. Etere uses clustering to distribute the load among servers
- Etere's load balancing technology loads each server to the maximum capacity possible
- HP DL3xx, Dell PowerEdge R720 or similar servers are suggested



HSM Diagram

Etere HSM

- For best performances we suggest to use 1 data pump server for every LTO, this is recommended but not mandatory
- A local cache is suggested to use the best of your LTO, we suggest a RAID0 system of 2 times the capacity of the LTO drive
- No fibre channel switch is needed as the drive can be connected directly with LTO
- Interface can be FC I-SCSI, SCSI or any others supported by Windows



SQL Database

Etere's software solution is based on the Microsoft SQL Server architecture that provides the whole system with a rich and powerful environment, and the best performance engine. Etere's software solutions has been designed to work with all versions of Microsoft SQL Server, including the free Express Edition (the best suited for smaller installations) and the professional editions (for larger installations). The hardware suggested by Etere for hosting an SQL Server depends on various factors such as clients number, playlist number and the fault tolerant method, however, an standard configuration that guarantees a good performance should include the following hardware: Recommended requirements for: Microsoft SQL Server 2008 R2

Operating System

Windows 2012

Windows 2008 R2

SQL Server

SQL Server 2014

SQL Server 2012

SQL Server 2008

Note: Please note that the list above is ordered from most to least suggested versions, SQL versions older than 8 years are excluded as they are not supported.

Hard Disk

For ETERE 1 TB is as much what you will need, use Microsoft suggestion to create a fast SQL server

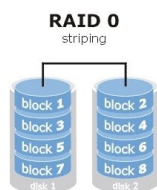
Notes

Any computer brand (e.g. HP, IBM, Dell, Fujitsu Siemens) Detailed specifications on SQL Server are available on the Microsoft's webpage

Fault tolerance

In case your system has a Main and Backup database, Etere Backup allows you to keep booth of them synchronized, this tool is given for free by Etere to its customers and also permits to perform automatic Backup and Restore procedures, Etere Backup is easy to configure and works with all the SQL versions. Alternatively to the use of Etere Backup, it is always possible to use any other method to increase the database fault tolerance including the following ones (which are explained in detail in the Microsoft Documentation):

- DB Replica
- DB Backup: automatic schedule procedure can be apply, manual restore
- DB Mirroring
- DB Clustering: high availability solution, automatic failover, this is the preferred
- SQL High Availability Group



RAID 0 diagram

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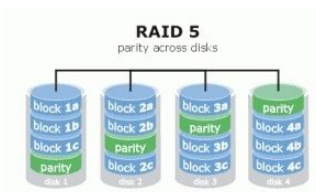
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RAID 5

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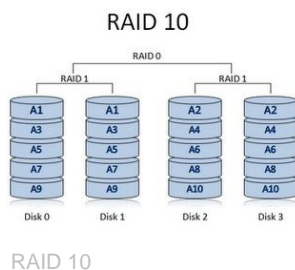
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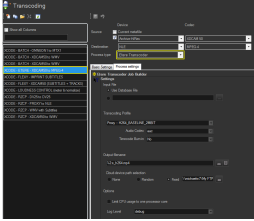
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Etere Transcoder action
Screen

Etere Transcoder

- A transcoder changes the video format and code. Transcoding is a CPU intensive task, thus, transcoding servers need to have powerful CPU and more CPU as needed. Also RAM is important as well to speed up the operation
- Some transcoding formats as H264 can use the GPU, so it is important that a H264 GPU card is available in the server. Etere uses the best GPU and CPU acceleration in the market
- Etere load balancing technology optimises resources and prevents overloading of any single resource
- HP DL3xx, Dell PowerEdge R720 or similar servers are suggested