

Media Manager & HSM

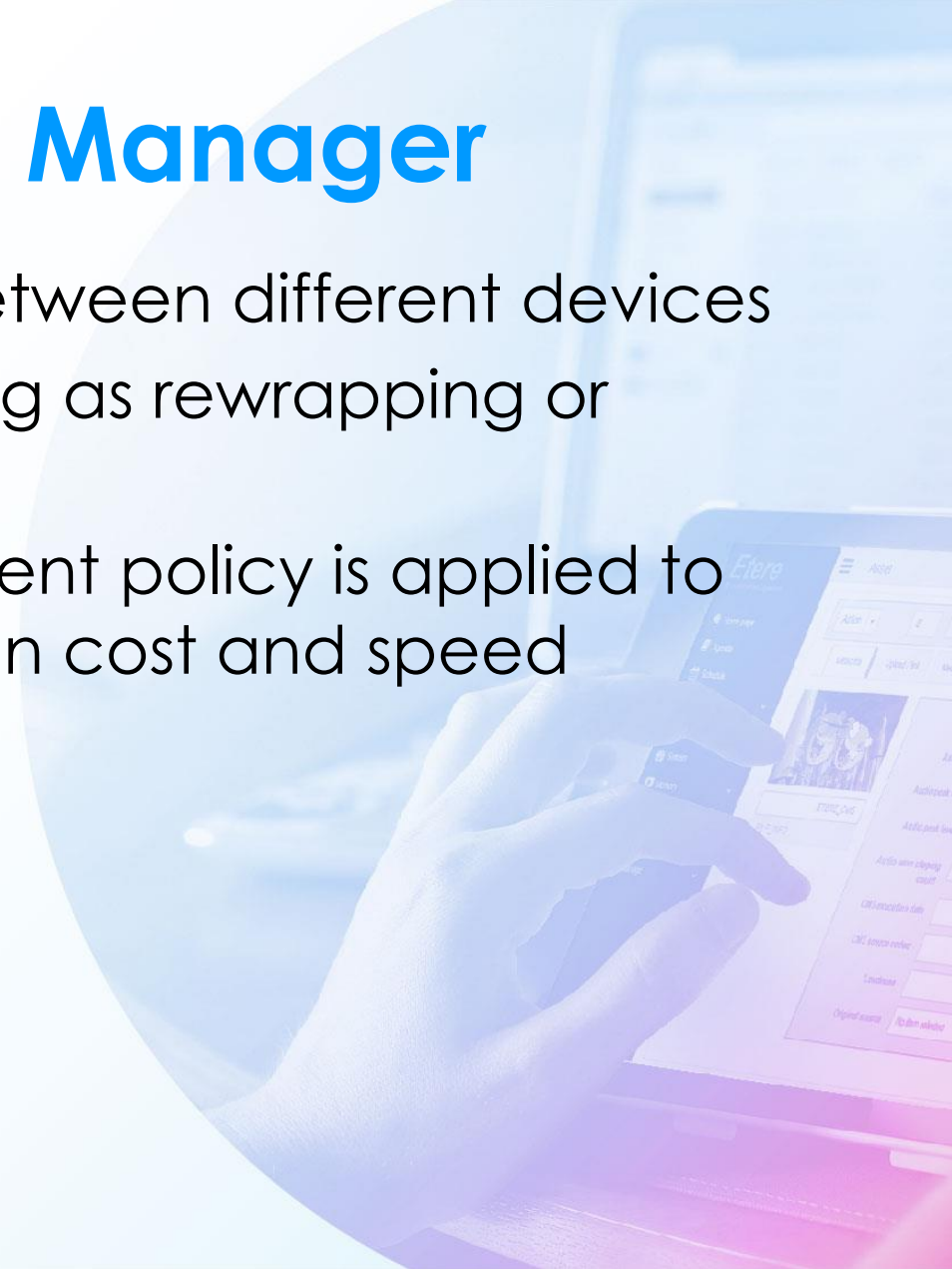
Fast Archive –

Long Term Archive – Media Management

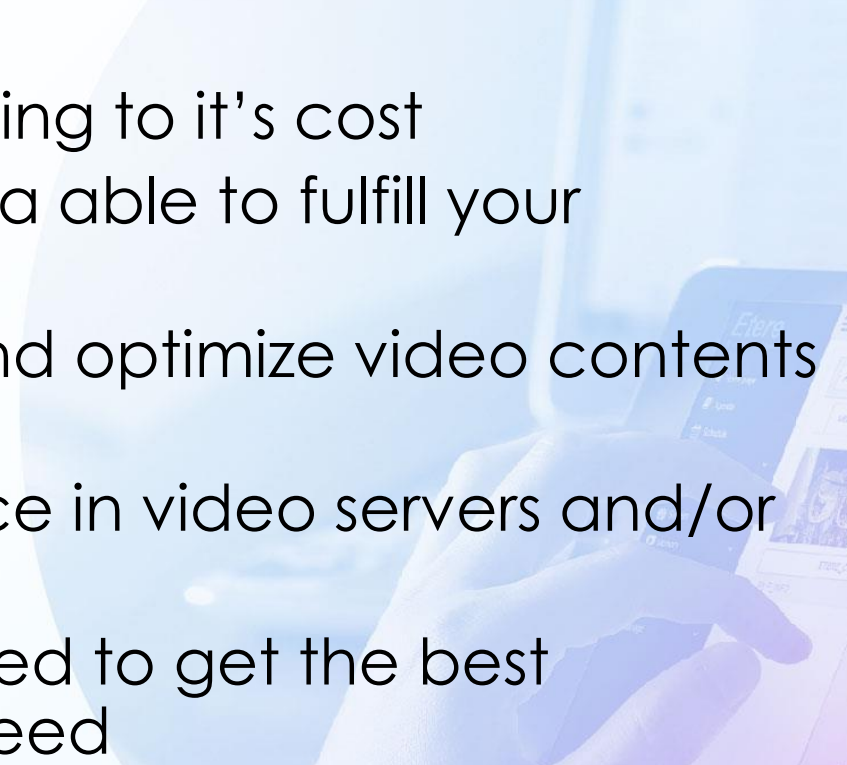


What Is a Media Manager

- A tool to move video contents between different devices
- Moving can include also changing as rewrapping or transcoding
- The Media Management movement policy is applied to get the best compromise between cost and speed



What Is An HSM

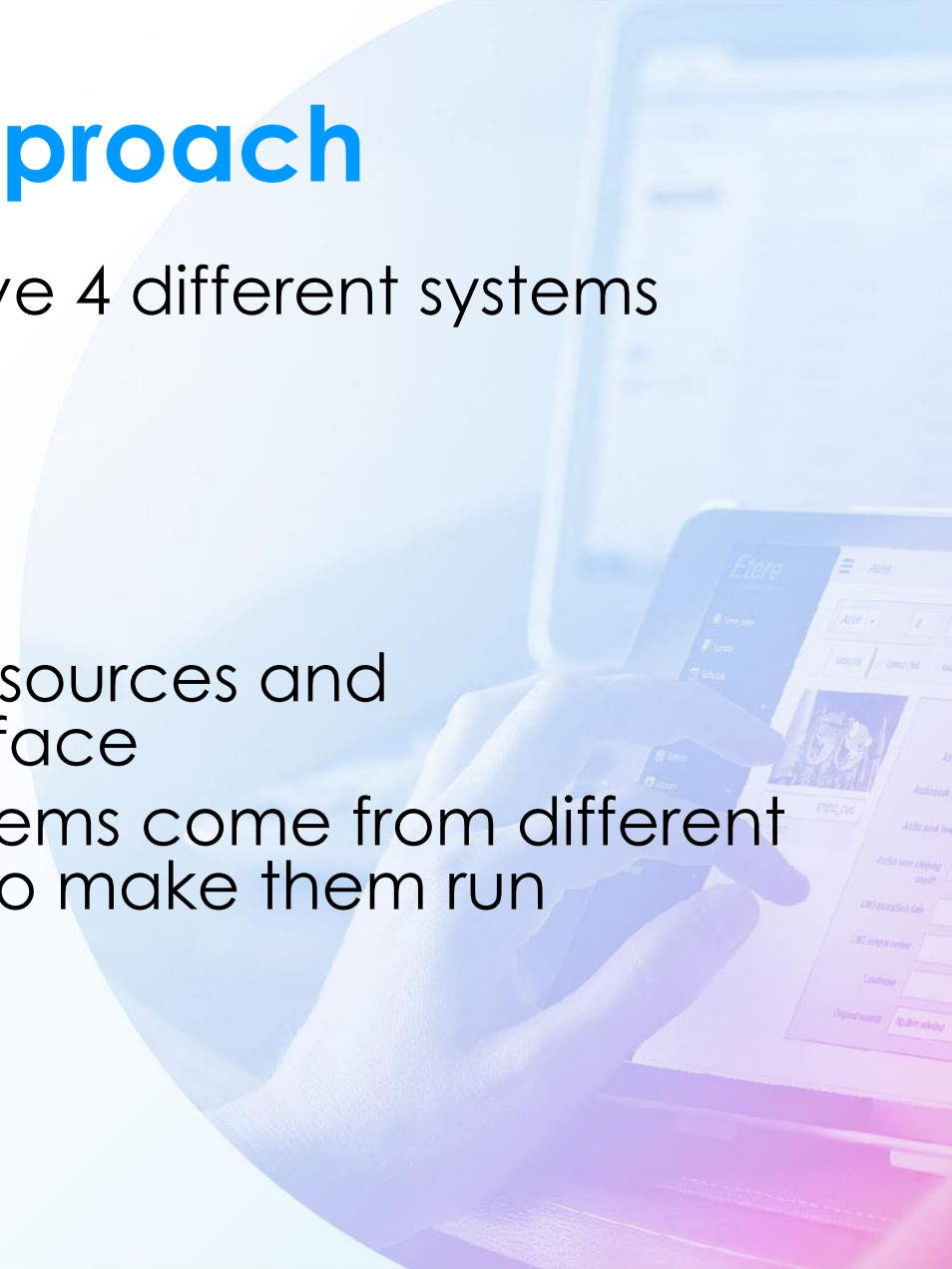
- Hierarchical Space Manager
 - HSM optimize you space according to it's cost
 - HSM use the less expensive media able to fulfill your request,
 - An HSM system is a tool to move and optimize video contents between different media
 - File move is necessary to save space in video servers and/or in disk libraries
 - The data movement policy is applied to get the best compromise between cost and speed
- 
- A hand holding a smartphone in front of a laptop screen displaying a software interface. The background is a light blue gradient with a circular overlay.

How Many Archives

- A Video system has 4 archive levels:
 - Video server memory
 - Access time = 0, ready to run
 - Fast Archive
 - Access time = millisecond, ready to run after few seconds
 - Long Term Archive (data tape)
 - Access time 2 minutes, on request, the system automatically download video contents into the server
 - Standard videotape archive
 - Access time 15 minutes, the tape need to be found and ingested in the system
- Moreover a browsing system of 'unlimited' capacity is given to browse all the footage

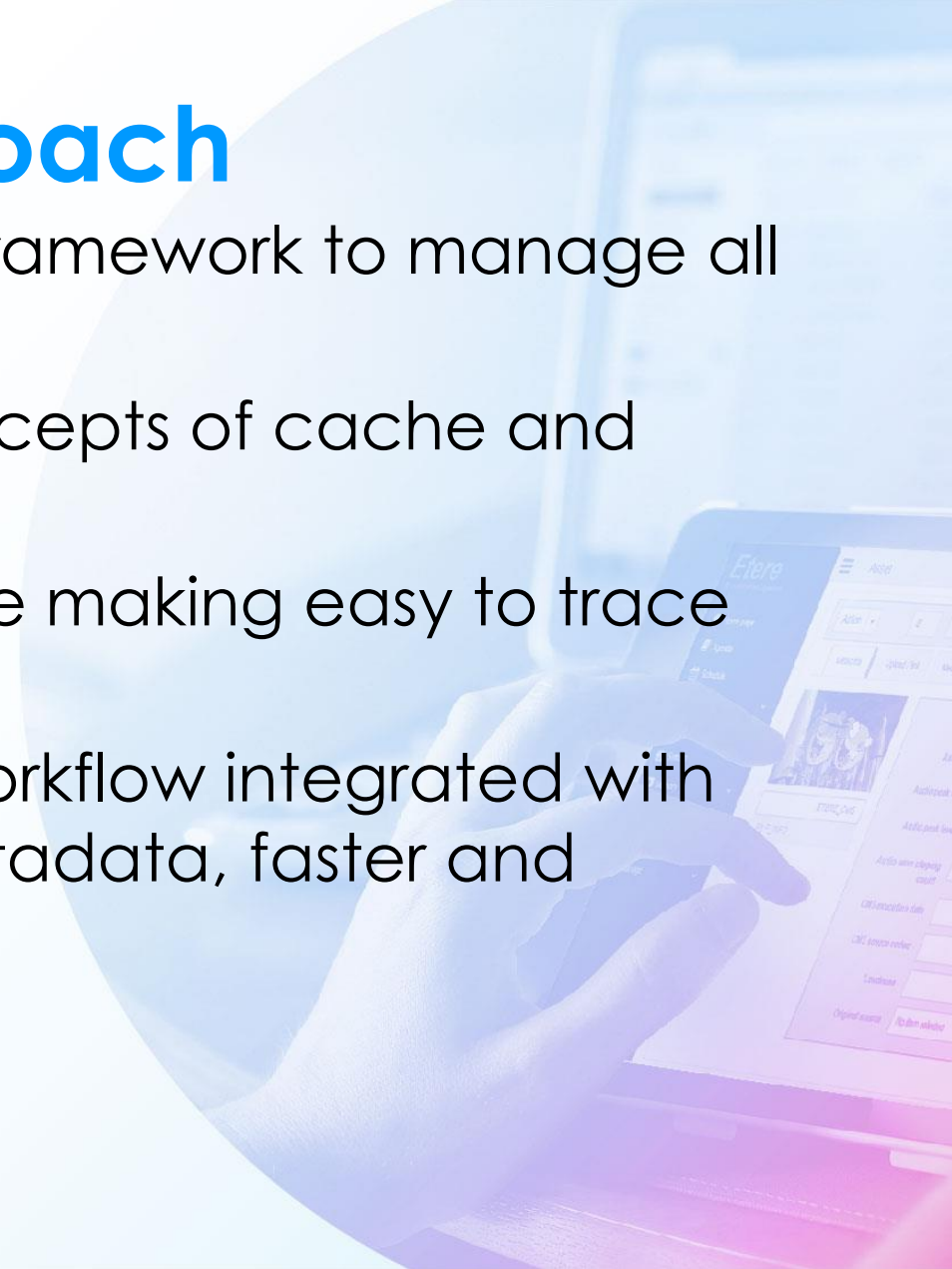
Traditional Approach

- In a traditional approach you have 4 different systems
 - Automation
 - Media asset management
 - HSM
 - News
- All four systems share the same resources and communicate with a limited interface
- The drawback is that the four systems come from different companies and it is very difficult to make them run together and cooperate



Etere Approach

- Etere solution consists in a single framework to manage all the network activities
- This approach outdated the concepts of cache and policy
- The system cooperates in its whole making easy to trace and retrieve information
- Data are moved according to workflow integrated with alla the media management metadata, faster and efficient



Media Manager

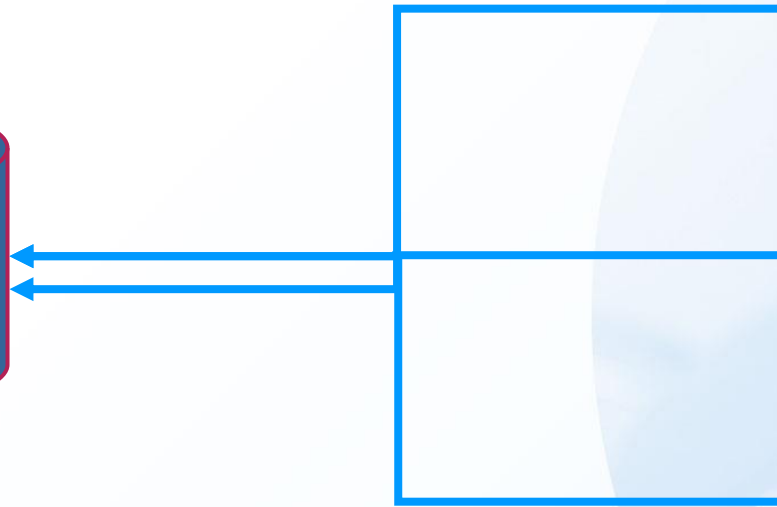
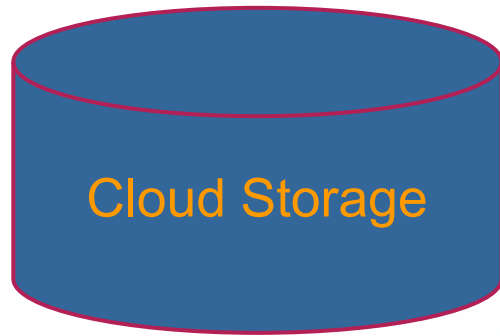


Cloud Media Management

- The Key of this project was Cloud
- Etere MM create a private Cloud where to store your content
- Cloud devices are logical entities. They can be group of devices or part of one device or both
- Etere MM automatically controls the available space in the cloud Etere MM has a multi-volume management intelligence



Cloud devices

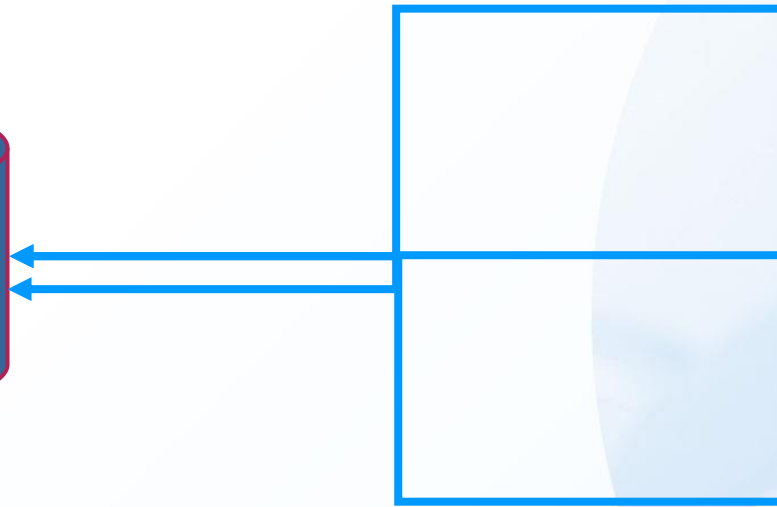
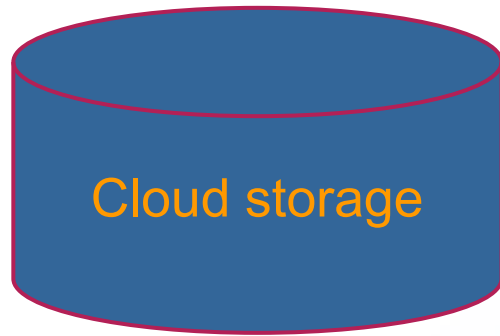


Join Devices

- One metadvice join multiple physical devices
- Files are spread out in the metadvice by Etere MM
- You can add disk to the metadvice without changing the archiving workflow

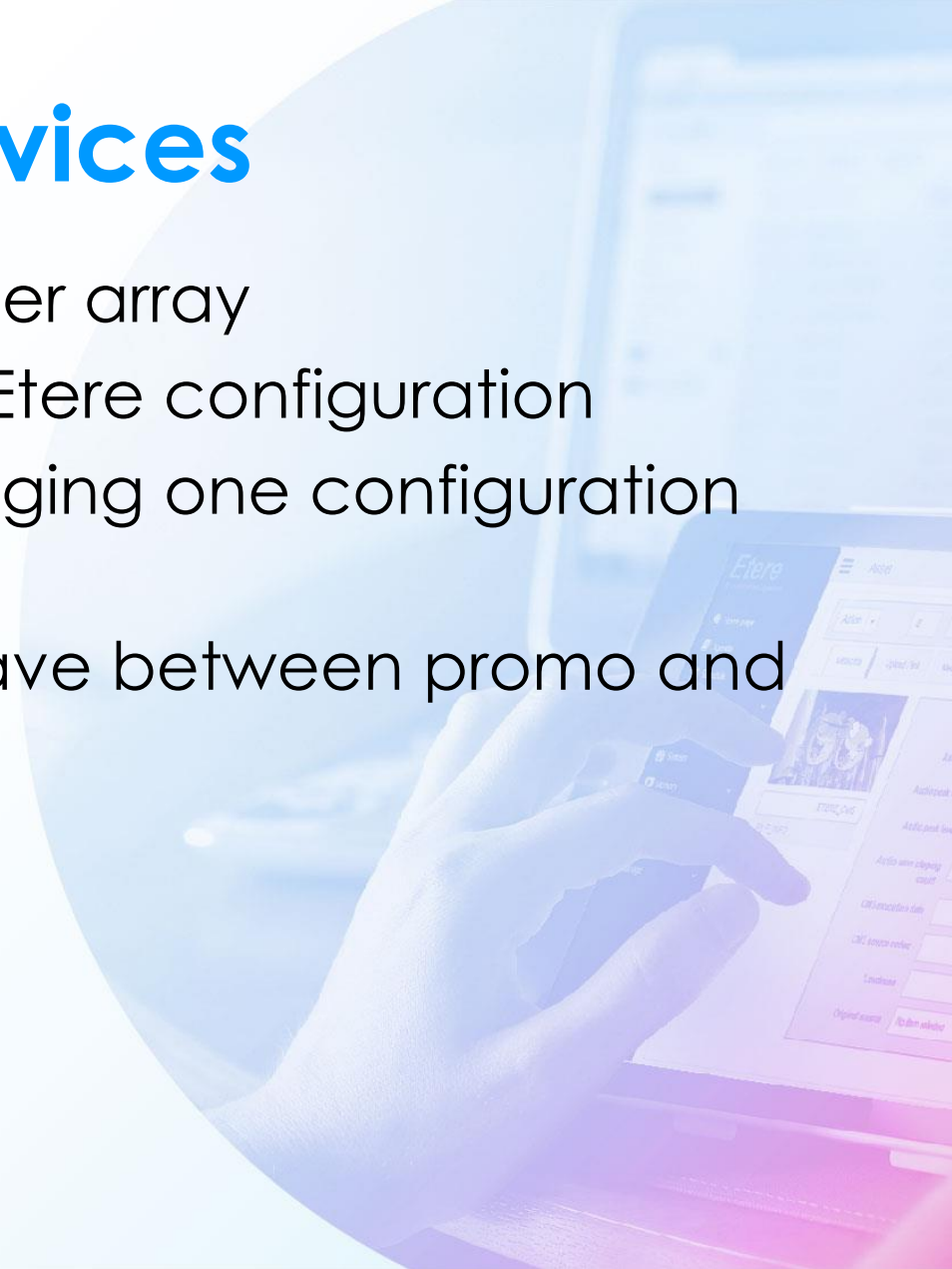


Join storages



Partition Devices

- One metadvice is part of a bigger array
- The logical space is limited using Etere configuration
- You can change the space changing one configuration on Etere, no partition is necessary
- Useful if you wish to divide the spave between promo and commercial for example



Partition Device



Disk 1



Space Limit Settings

Settings

Search

Cloud-devices

Cloud-devices space management

Cloud-devices
(the space is indicated in hhhh.mm)

ID	Description	Maximum space usable by		Maximum space used by		Media
		Single Assets	Common Assets	Single Assets	Common Assets	
1	System Storage	00000.00	00000.00	00000.00	00000.00	
2	HIRES	00000.00	00000.00	00000.00	00000.00	
3	LOWRES	00000.00	00000.00	00000.00	00013.37	
5	TAPELESS_RECEPTION	00000.00	00000.00	00000.00	00000.00	
6	No Media Pool	00000.00	00000.00	00000.00	00000.00	
7	ETLIBRARYWS2008_DATAPUMP	00000.00	00000.00	00000.00	00005.29	
8	HSM HIRES	00000.00	00000.00	00000.00	00005.28	
14	PROJECT	00000.00	00000.00	00000.00	00000.00	
16	MTX1_SD	00000.00	00000.00	00000.00	00002.16	2MTX
18	MATROX MTX3	00000.00	00000.00	00000.00	00000.46	1MTX

Maximum usable space
From single assets per station
00000.00

From assets common to other stations
00000.00

Color the maximum space used with...

In case it exceeds the limit

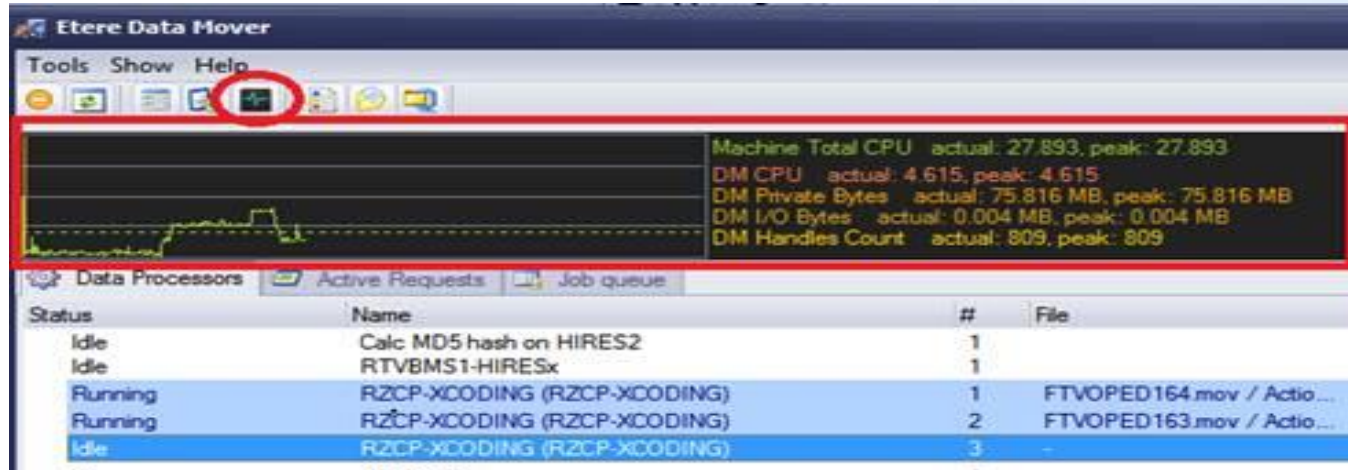
In case 90% is reached

Free To Design

- Etere media manager allow you a free design of the system
- Choose the logical metadevices as your convenience
- Choose the phisical metadevices as the best price/performances in the market
- Join them together using Etere media manager
- Create your workflow to use them as your wish

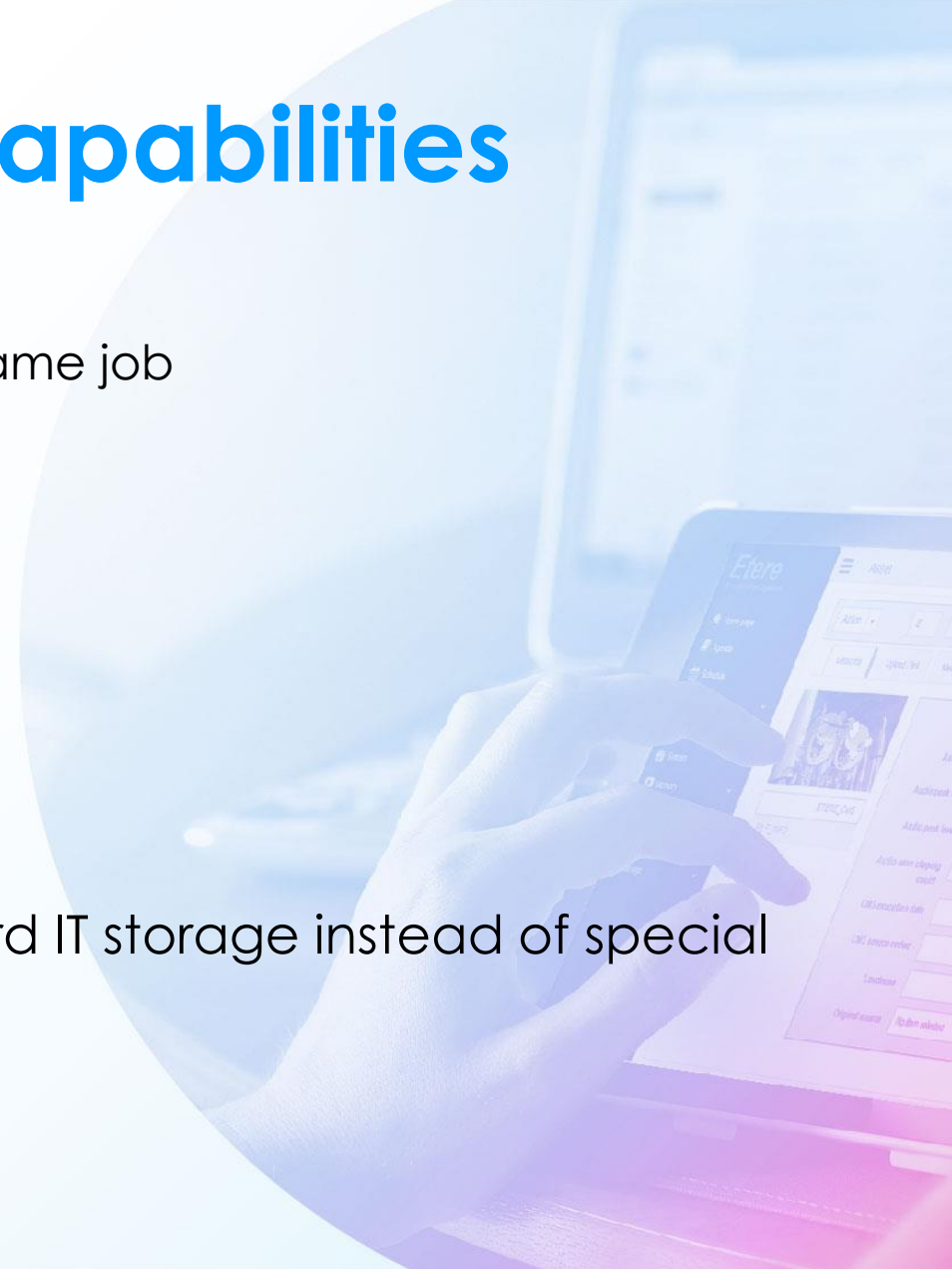


Load Balancing



Cloud Storage Capabilities

- Load balancing
 - Multiple Media Management sharing the same job
- Space aggregation
- Lan and Wan transfer
 - FTP Active
 - FTP Passive
 - FTP Server to Server
 - NTFS-NFS
 - UDP file transfer
- All those features allow you to use standard IT storage instead of special solutions

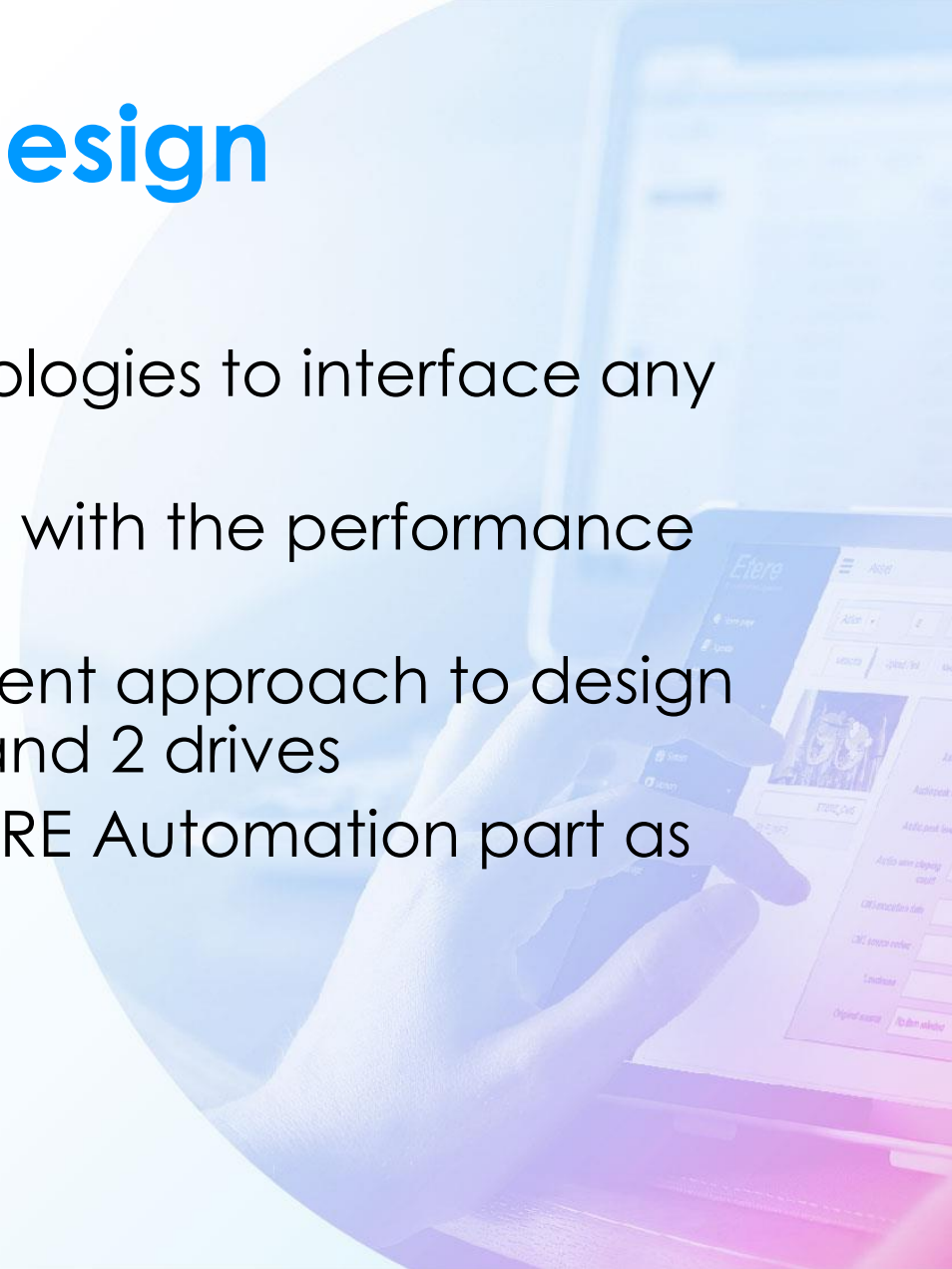


ETERE HSM



Etere HSM Design

- Etere HSM has a very open design
- It use the standard windows technologies to interface any library
- The hardware design allows system with the performance ratio required by the customer
- In the following slides it shows different approach to design an enviroment with a tape library and 2 drives
- The drawing does not show the ETERE Automation part as
 - Database server
 - Ingest
 - Videoservers

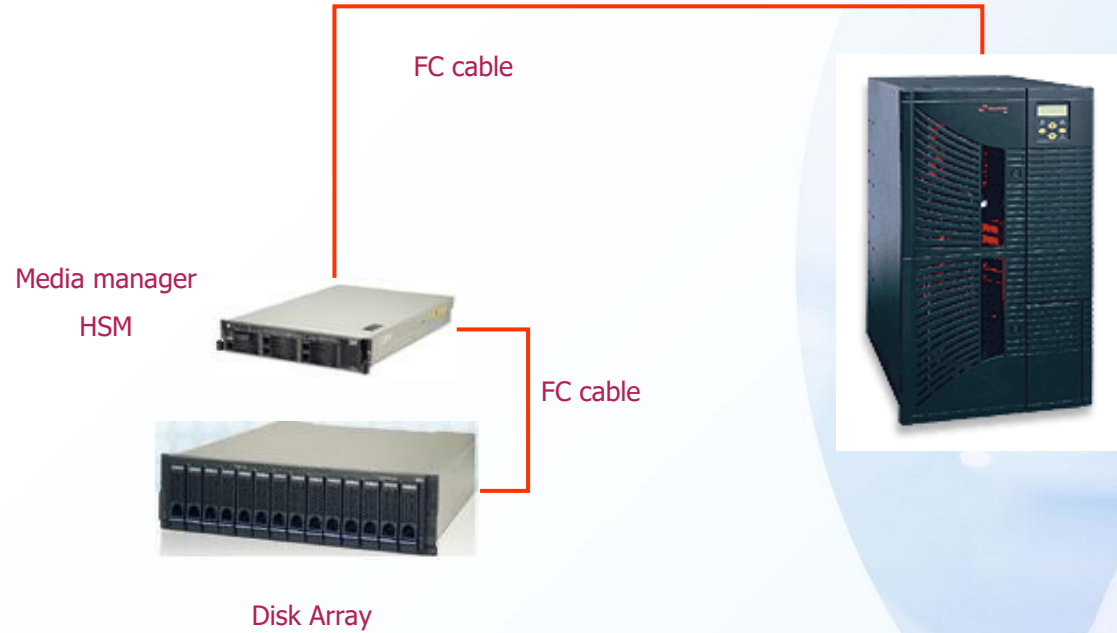


Solution 1 CUT The Cost

- In this you have a single windows server that runs media manager and ETERE HSM
- The server has a cache that is 2 times the drive capacity.
- This is a good trial system or a system to choose where there is low traffic between the library and the system

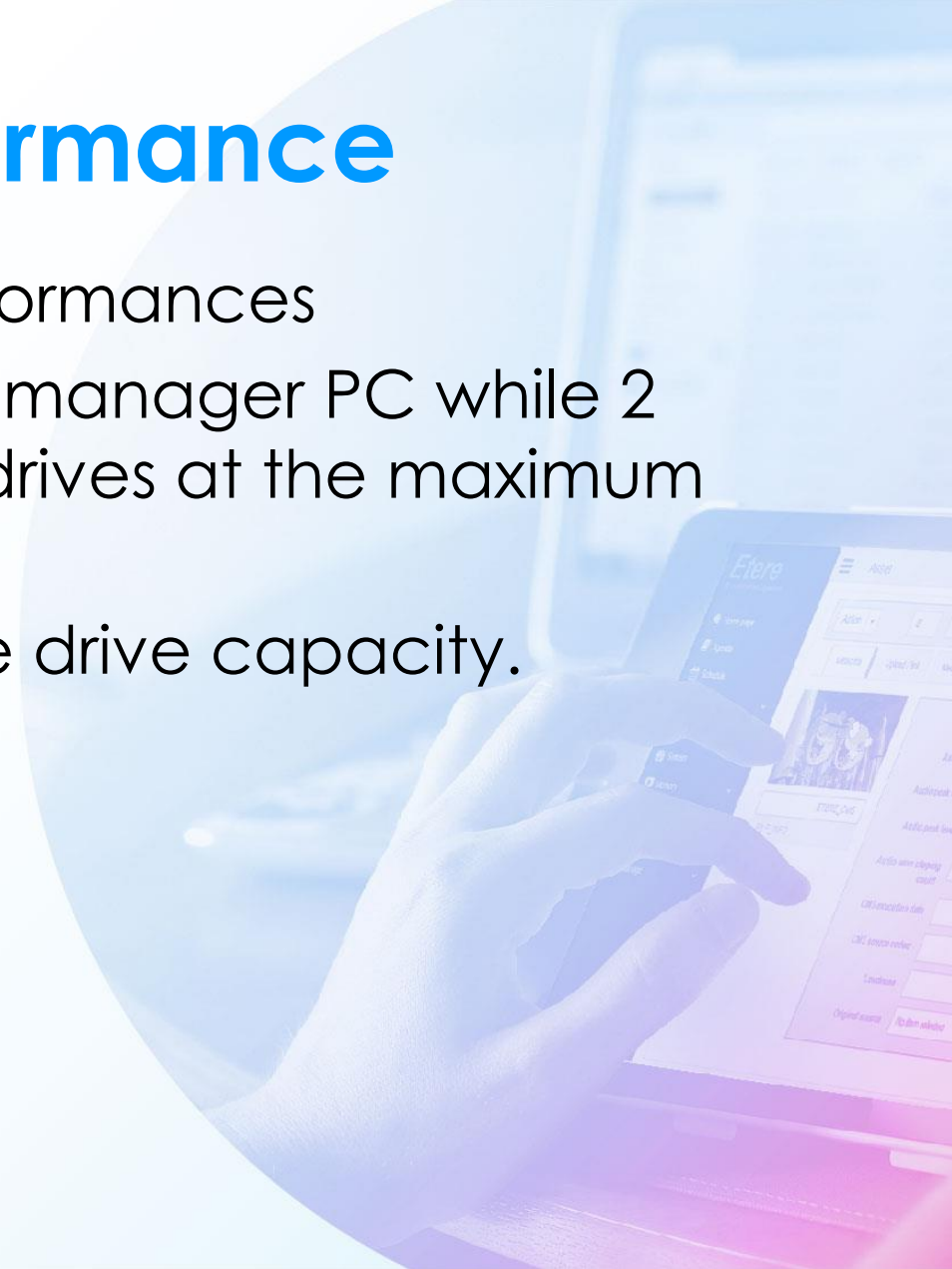


Solution 1 CUT The Cost



System 2 Performance

- This is the system if you need performances
- The Robot mover is on the media manager PC while 2 data pumps moves data to the drives at the maximum speed
- The cache is *MINIMUM* 2 times the drive capacity.



System 2 Performance

Media manager



Ethernet Switch



Storage



FC cable



Data Pump

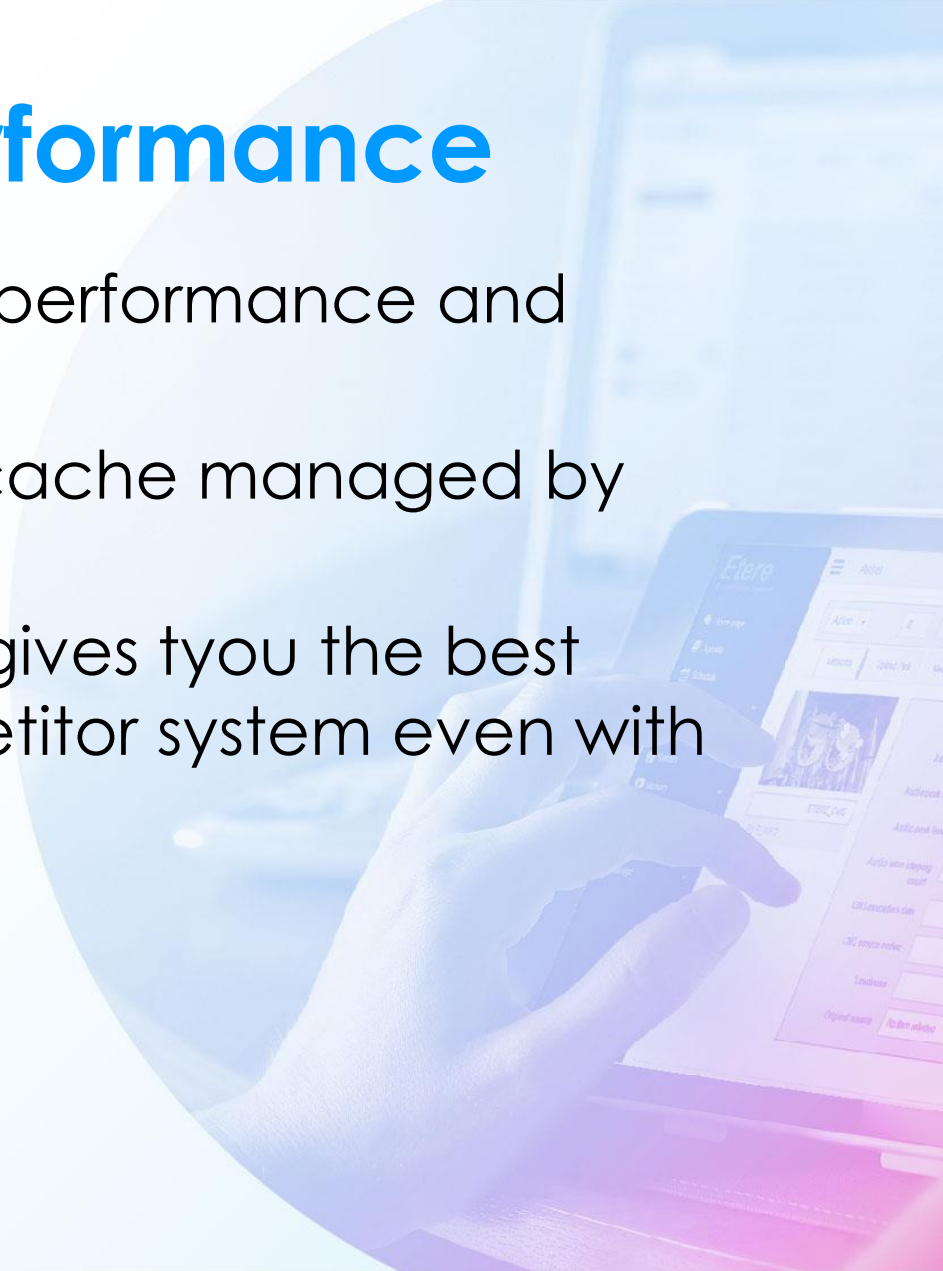


Data Pump

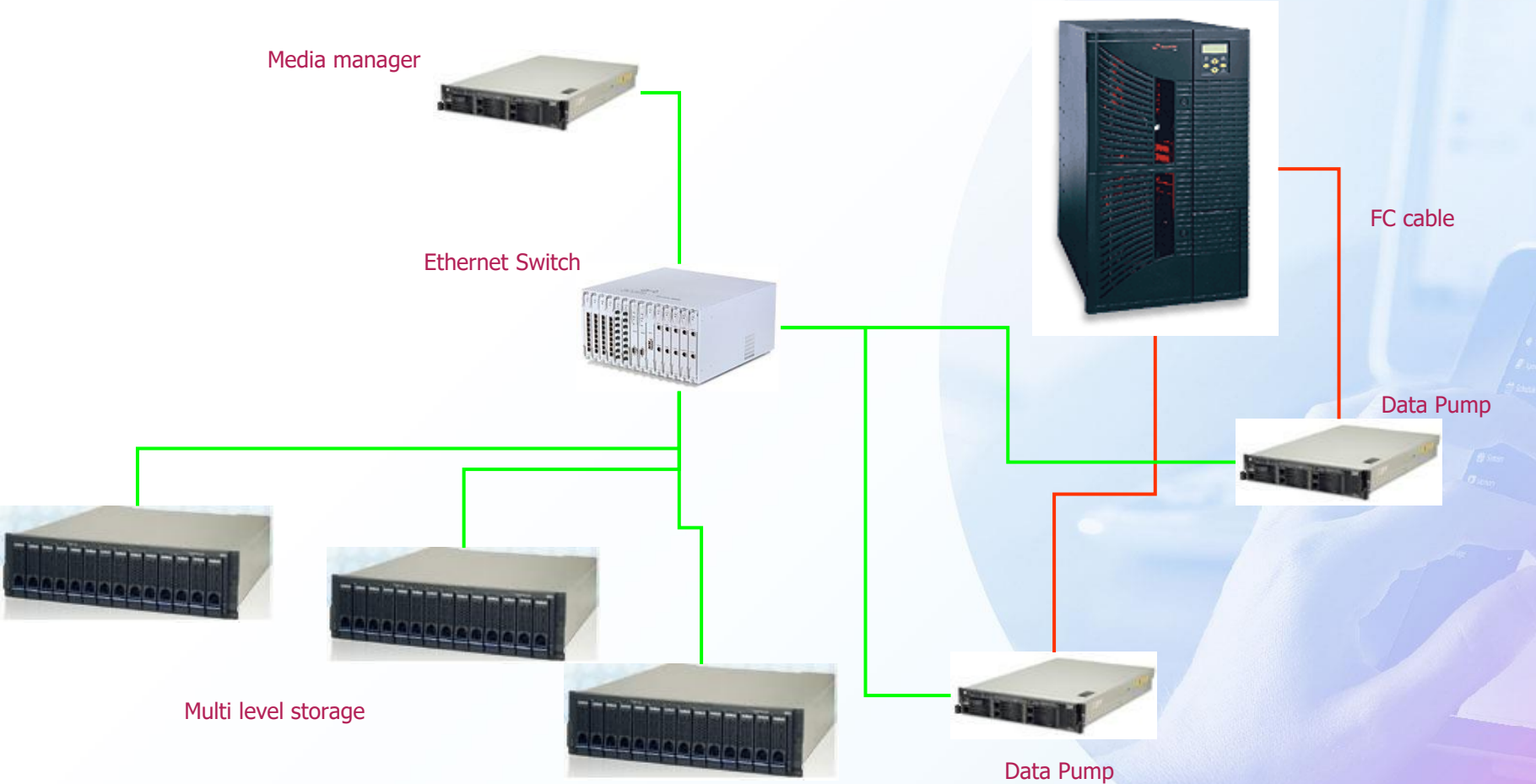


System 3 Bestperformance

- This is the system if you need best performance and integration
- The cache is 2 complete 3 level cache managed by ETERE HSM
- The perfect engine of ETERE HSM gives tyou the best performances against any competitor system even with less HW resources



System 3 Best Performance



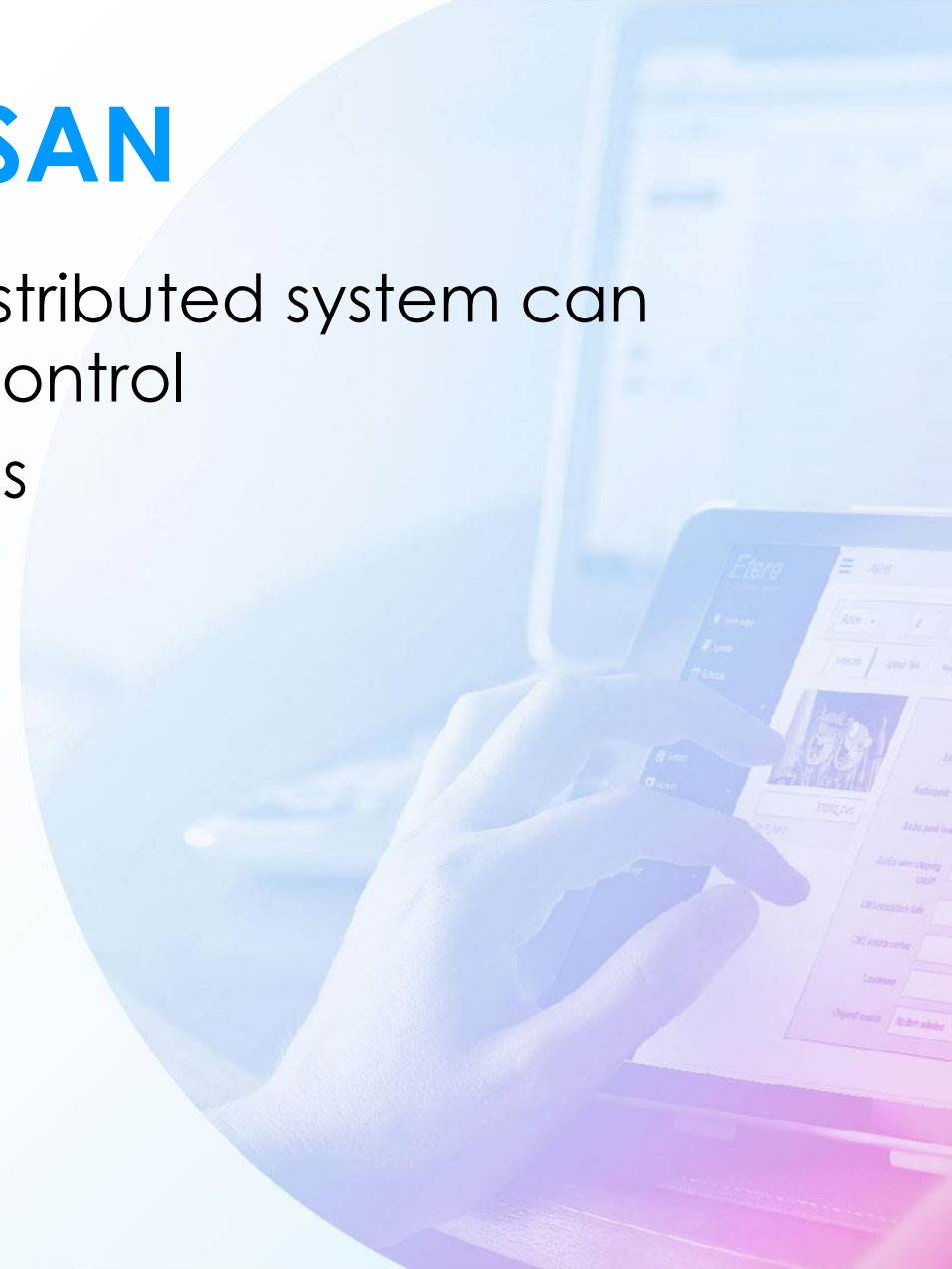
Etere HSM

- This system ensures the best performances and integration
- Etere HSM + MM the the only system in the market with an embedded multi level and multi rule cache
- Etere HSM intelligent engine ensures the best performances with less HW involvement than that required by Etere competitors
- Etere HSM allows you to design your logical system without limits

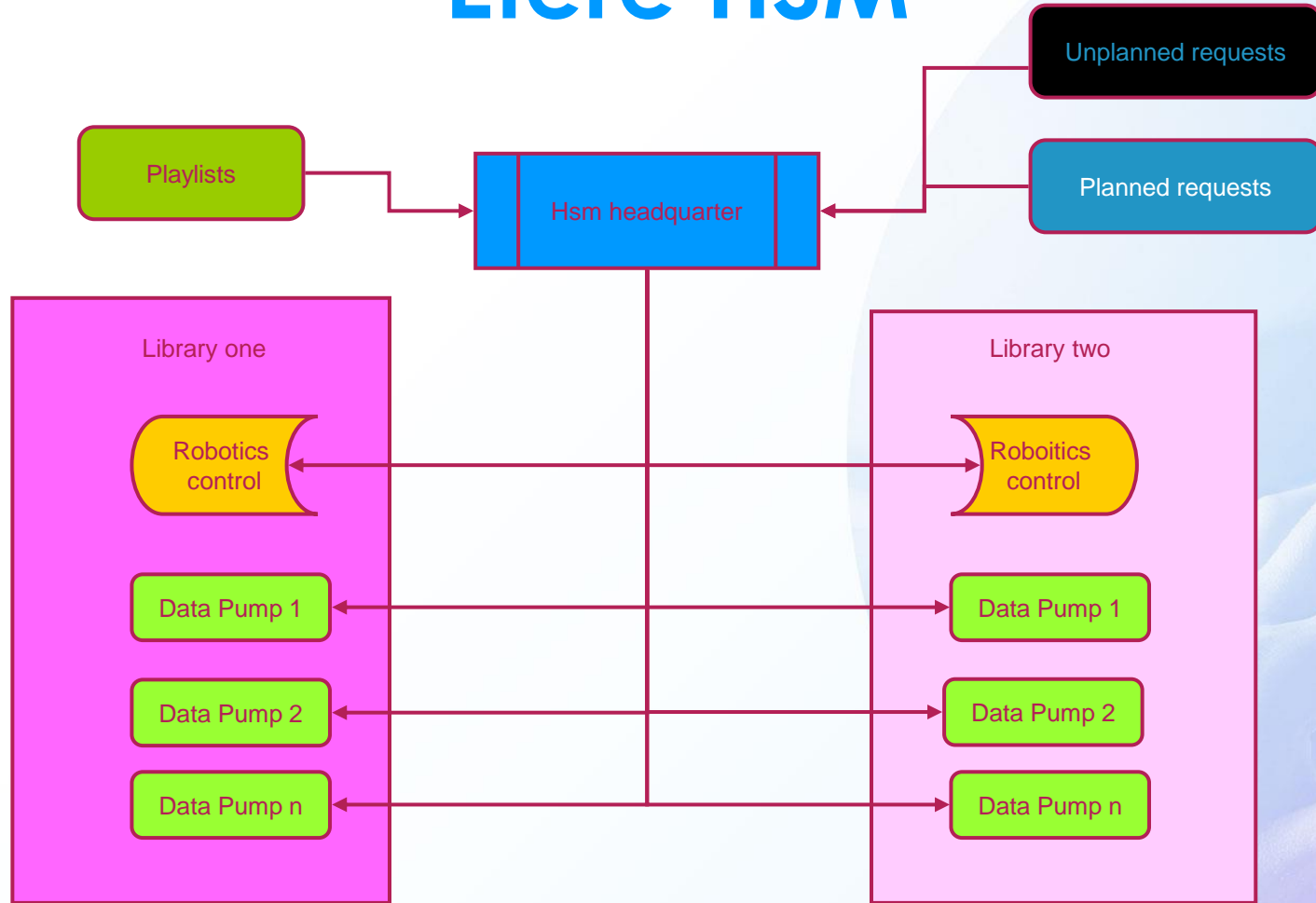


System 4 SAN

- SAN is not a Must with ETERE, a distributed system can perform even better under ETERE control
- But ETERE fully support SAN systems



Etere HSM



HSM Library Status

Settings

Search

- Basic Configuration
 - AD Insertion Management
 - Aspect Ratio Conversion
 - Audio Configuration
 - Audio data
 - Barcode
 - Brands Configuration
 - Codes
 - Email Server
 - Etere Installation
 - Etere PCs
 - Etere Skin
 - Genres
 - Holidays
 - Icons
 - Language workflows
 - Languages
 - Media Formats
 - Media Library
 - Media Pools
 - Passwords
 - Personal Data
 - Racks**
 - Reports Editor
 - Roles
 - System
 - Tape Loan
 - Tape types
 - Taskbar displayed title
- Classes configuration
 - Classes
 - Configuration parameters
- Coding Areas Audience Section
 - Coding Areas Audience
- Company Tables
 - Cities
 - Cluster
 - Collection
 - Districts
 - Outstanding level
 - States
- Customers Management System
 - To Do notifications settings
- Devices Setting
 - CG/Crawl
 - Cloud-devices
 - Codecs
 - Important metadata
 - Logo Generator No.01

Racks

30 sec

Code

Rack: ar-etera-hsm01\IBM 3576-MTL Lines: 34 Columns: 1 Free slots: 2

Total space: 76.36 TB Used space: 45.16 TB 59%

Lines	Media code	Video Standard	Free space	Used space	Total space	Percentage	Media pool
1	B00053L6	LTO6	108.43 MB	2.29 TB	2.29 TB	99%	BA-MP-MEDIUMROTAT...
2	B00008L6	LTO6	106.51 MB	2.29 TB	2.29 TB	99%	BA-MP-MEDIUMROTAT...
3	B00062L6	LTO6	0	2.27 TB	2.27 TB	100%	BA-MP-LOWROTATION...
4	B00011L6	LTO6	0	2.27 TB	2.27 TB	100%	BA-MP-LOWROTATION...
5	B00071L6	LTO6	0	2.24 TB	2.24 TB	99%	BA-MP-LOWROTATION...
6	B00049L6	LTO6	72.00 MB	2.29 TB	2.29 TB	99%	BA-MP-MEDIUMROTAT...
7	B00081L6	LTO6	86.00 MB	2.28 TB	2.28 TB	99%	BA-MP-LOWROTATION...
8	B00056L6	LTO6	2.27 TB	20.03 GB	2.29 TB	0%	BA-MP-MEDIUMROTAT...
9	B00047L6	LTO6	2.23 TB	42.16 GB	2.28 TB	1%	BA-MP-MEDIUMROTAT...
10	B00055L6	LTO6	70.00 MB	2.29 TB	2.29 TB	99%	BA-MP-MEDIUMROTAT...
11	B00029L6	LTO6	74.00 MB	2.27 TB	2.27 TB	99%	BA-MP-MEDIUMROTAT...
12						0%	
13						0%	
14	B00079L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-LOWROTATION...
15	B00048L6	LTO6	2.23 TB	46.88 GB	2.28 TB	2%	BA-MP-MEDIUMROTAT...
16	B00052L6	LTO6	2.26 TB	10.09 GB	2.27 TB	0%	BA-MP-MEDIUMROTAT...
17	B00023L6	LTO6	125.79 MB	2.28 TB	2.28 TB	99%	BA-MP-MEDIUMROTAT...
18	B00083L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-LOWROTATION...
19	B00084L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-LOWROTATION...
20	B00085L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-LOWROTATION...
21	B00040L6	LTO6	106.51 MB	2.28 TB	2.28 TB	99%	BA-MP-MEDIUMROTAT...
22	B00046L6	LTO6	70.00 MB	2.27 TB	2.27 TB	99%	BA-MP-MEDIUMROTAT...
23	B00086L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-LOWROTATION...
24	B00036L6	LTO6	86.00 MB	2.30 TB	2.30 TB	99%	BA-MP-MEDIUMROTAT...
25	B00003L6	LTO6	2.19 TB	91.40 GB	2.28 TB	3%	BA-MP-HIGHROTATION...
26	B00063L6	LTO6	2.27 TB	2.51 GB	2.27 TB	0%	BA-MP-MEDIUMROTAT...
27	B00082L6	LTO6	7.61 GB	2.17 TB	2.18 TB	99%	BA-MP-LOWROTATION...
28	000028L5	LTO6	0	1.36 TB	1.36 TB	100%	BA-MP-LOWROTATION...
29	B00033L6	LTO6	2.27 TB	0	2.27 TB	0%	BA-MP-MEDIUMROTAT...
30	B00076L6	LTO6	220.21 MB	2.26 TB	2.26 TB	99%	BA-MP-LOWROTATION...

Column 1

VTRs / Drives

No	Media code	Video Standard	Free space	Used space	Total space	Percentage	Media pool
256	B00032L6	LTO6	380.80 GB	1.95 TB	2.32 TB	83%	BA-MP-MEDIUM...
257	B00080L6	LTO6	1.44 TB	866.85 GB	2.29 TB	36%	BA-MP-LOWROT...
3						0%	
4						0%	
5						0%	

Digital Tape Content

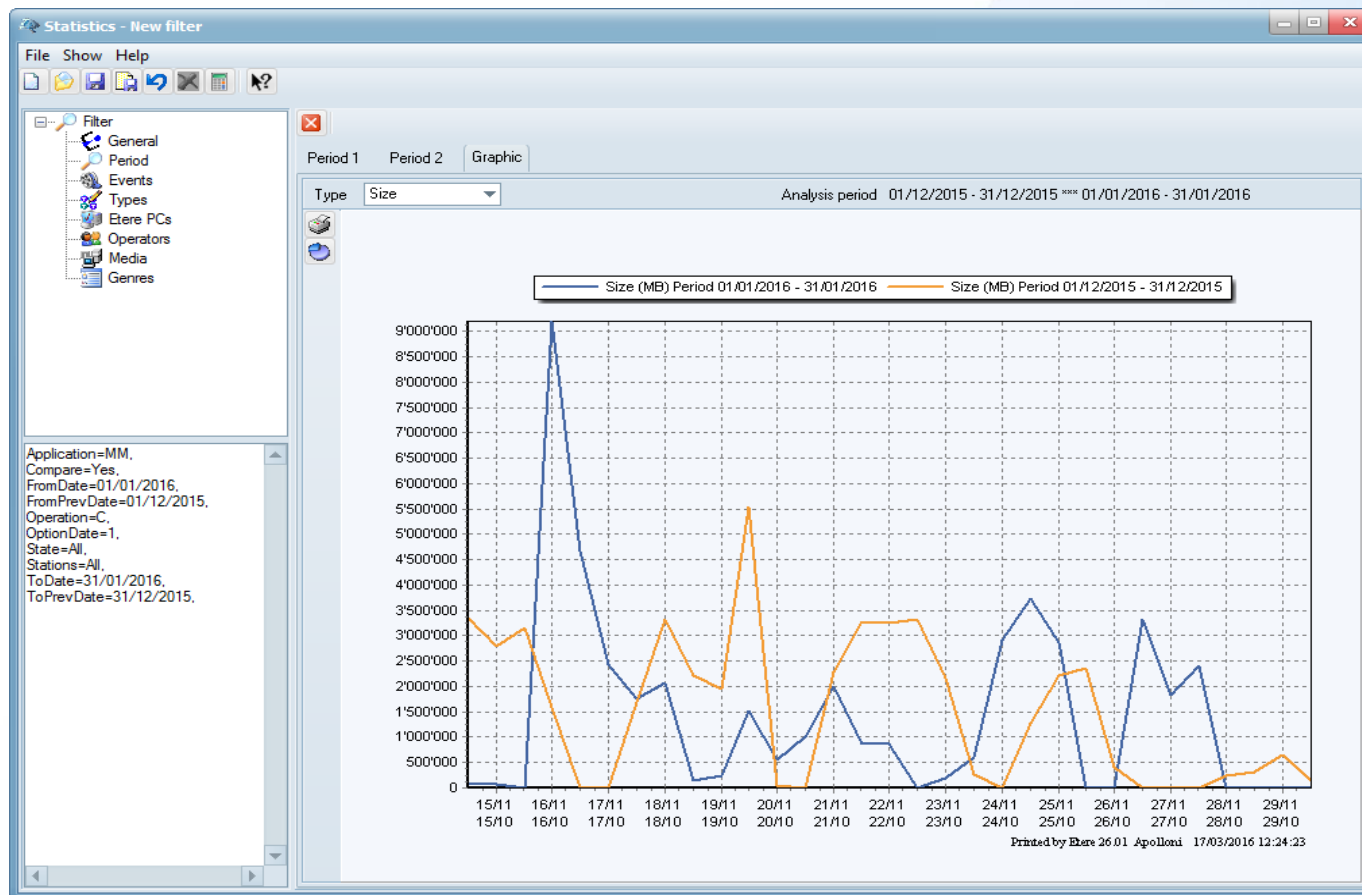
Tape Info

Show Options Help

Code: **B00081L6** Type: **LT06**
Title: **B00081L6** Type: **Data Tape**
Barcode: **B00081L6**

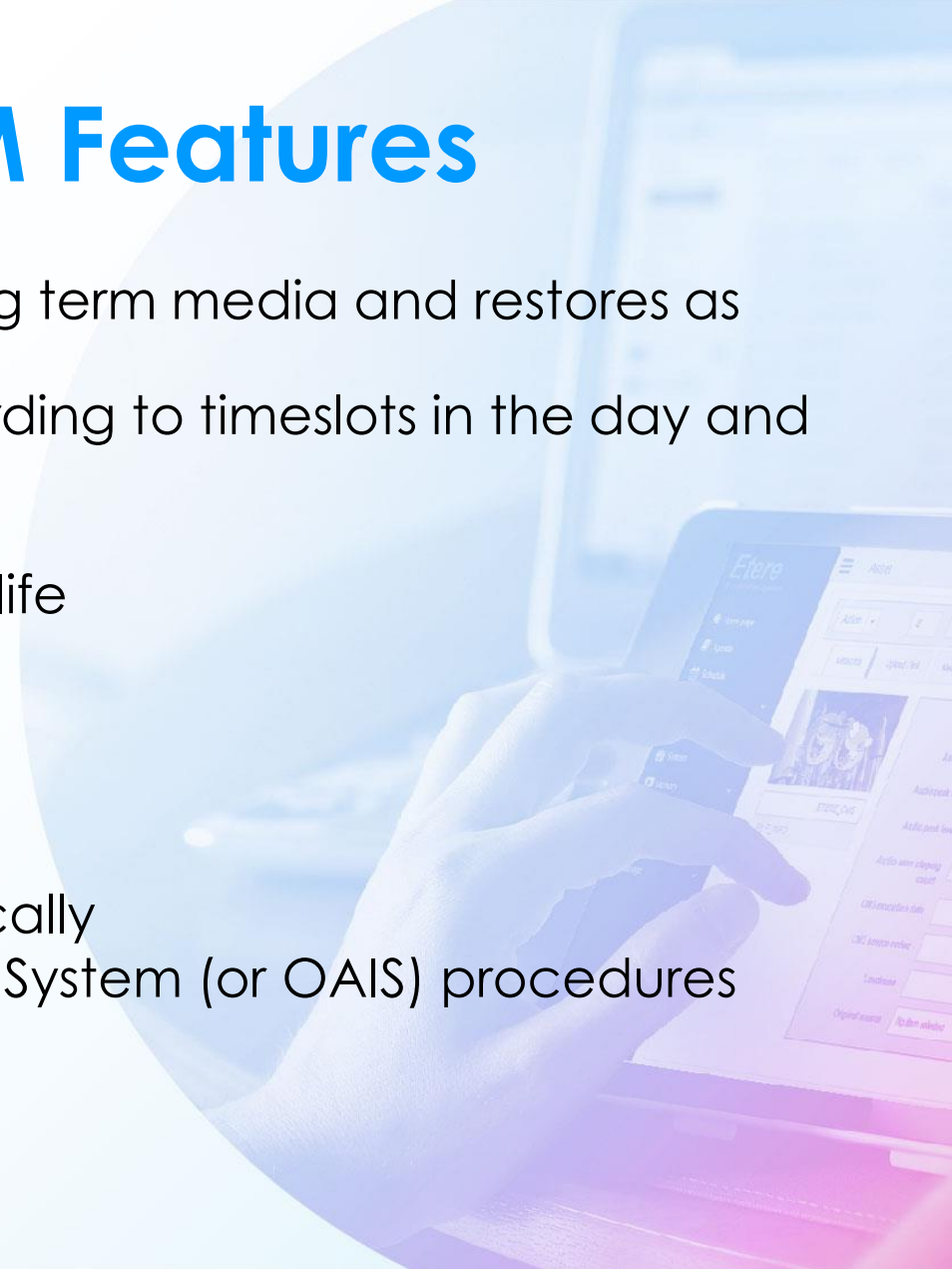
S...	Q...	C...	Code	Description	Metafile	Start	End	Filename	Size	Source Path
L			ZZZZ19412	CHD29302	064D0000000002343FC	2463767	2468887	064D00000000023440F.mov	319.73 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
L			ZZZZ19412	CHD29302	064D0000000002343FC	2468888	2474008	064D000000000234410.mov	319.73 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
L			ZZZZ19412	CHD29302	064D0000000002343FC	2474009	2479128	064D000000000234411.mov	319.64 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
L			ZZZZ19412	CHD29302	064D0000000002343FC	2479129	2484248	064D000000000234412.mov	319.64 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
L			ZZZZ19412	CHD29302	064D0000000002343FC	2484249	2489368	064D000000000234413.mov	319.64 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
L			ZZZZ19412	CHD29302	064D0000000002343FC	2489369	2494488	064D000000000234414.mov	319.64 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			ZZZZ19413	SEARS_30s_Del 15a118deEne...	064D000000000234439	2494489	2498081	064D000000000234439.mxf	224.13 MB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	KESHET-BAX_Deal_With_it_1...	064D0000000000829FC	2498082	2656592	064D0000000000829FC.mxf	9.67 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	KESHET-BAX_Deal_With_it_1...	064D0000000000829FE	2656593	2815103	064D0000000000829FE.mxf	9.67 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	KESHET-BAX_Deal_With_it_2...	064D000000000082BA0	2815104	3025908	064D000000000082BA0.mxf	12.87 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	KESHET-BAX_Deal_With_it_2...	064D000000000082BA9	3025909	3253193	064D000000000082BA9.mxf	13.87 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	KESHET-BAX_Deal_With_it_2...	064D000000000082BBA	3253194	3467976	064D000000000082BBA.mxf	13.11 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082CEB	3467977	3613869	064D000000000082CEB.mxf	8.90 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
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H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082E21	3760225	3906142	064D000000000082E21.mxf	8.91 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082E59	3906143	4052538	064D000000000082E59.mxf	8.93 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
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H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082EFD	4635560	4782393	064D000000000082EFD.mxf	8.96 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082F00	4782394	4932036	064D000000000082F00.mxf	9.13 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	ETC-BAX_BILLY_ON_THE_S...	064D000000000082F03	4932037	5079727	064D000000000082F03.mxf	9.01 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	COCA-COLA-BAX_CC-FM EST...	064D000000000082F37	5079728	5125782	064D000000000082F37.mxf	2.81 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	COCA-COLA-BAX_CC-FM EST...	064D000000000082F38	5125783	5267248	064D000000000082F38.mxf	8.63 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
H			064D000000000000...	COCA-COLA-BAX_CC-FM EST...	064D000000000082F39	5267249	5383349	064D000000000082F39.mxf	7.09 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...
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H			064D000000000000...	COCA-COLA-BAX_CC-FM EST...	064D000000000082FC1	5529319	5670915	064D000000000082FC1.mxf	9.08 GB	\\ar-etere-dm01.playasur.ad.viacom.com\ETERE_...

From Log to Statistics



Etere Cloud HSM Features

- Optimized for broadcast use, archives long term media and restores as fast as it's possible
- Each drive can be assigned as R/W according to timeslots in the day and the week
- Online and offline tape management
- SMPTE 2034 (AXF) archive format for long life
- LTFS format as a free option
- Background defragmentation
- Dynamic media pools
- Integrated tape migration
- Touch function to test file integrity periodically
- Conforming to Open Archival Information System (or OAIS) procedures



Etere Hybrid Cloud

Etere HSM supports Hybrid Cloud

- A mix of public, private cloud and on premise cloud
- A single management console
- Manages storage that uses local & off-site resources
- Multiple storage tiers to mix different storage types
- Move data to the cloud to accommodate workflow-driven demands and dynamic requirements
- Supports a highly agile business

