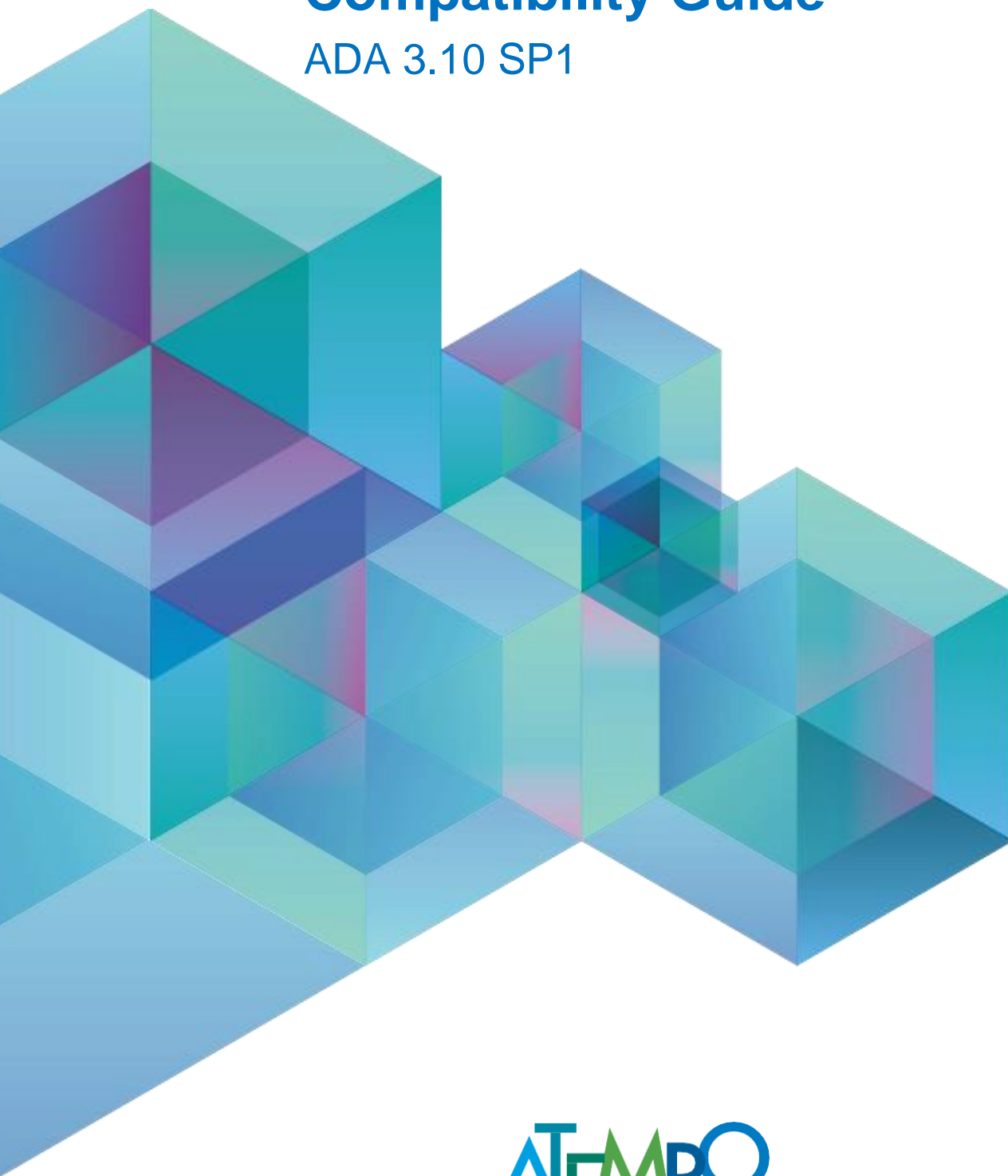


Compatibility Guide

ADA 3.10 SP1



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N°1 EUROPEAN SOFTWARE VENDOR FOR DATA PROTECTION

ATEMPO.COM

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Table of contents

01.	General Information	4
02.	Important Notices	4
03.	Atempo-Digital Archive – Server	5
04.	Atempo-Digital Archive – Agent	5
05.	Atempo-Digital Archive – Administration Console	7
06.	Atempo-Digital Archive – Native User Interface	8
07.	Atempo-Digital Archive – Java User Interface	9
08.	Atempo-Digital Archive – Storage Devices	10
09.	Atempo-Digital Archive – FastScan Compabilities	11
10.	Atempo-Digital Archive – Object Storage Devices	13
11.	Atempo-Digital Archive – Supported File Systems	14
12.	Atempo-Digital Archive – Shared or Distributed File Systems	14
13.	Media Manager (AMM)	15
14.	Atempo-Digital Archive – Transcoding for Video Asset Preview	21
15.	Atempo-Digital Archive – Partial File Retrieval (PFR)	22
16.	Atempo-Digital Archive – Metadata import	22
17.	Atempo-Digital Archive – Application Integration & APIs	24
18.	Atempo-Digital Archive – Language Availability	25
19.	Network & Protocols	25
20.	Atempo-Digital Archive – Specific Limitations	25

01. General Information

Presentation:

- New information in this document is shown in **blue**.
- End of Life components are shown in **red**

02. Important Notices

02.1. Licensing

The following modules and options require an additional ADA license:

- ADA for Avid Interplay
- ADA for Final Cut Server and Final Cut Pro
- Rich Media option for Partial File Retrieval (PFR) and Automatic Metadata Import for Graphic File Formats (MXF, DPX, etc.)
- Automatic Metadata Import for Graphic File Formats (AVI, JPG, MPEG, etc.)
- Fast scan (NetApp, Isilon, Qumulo, GPFS,....)
- Migration workflows
- AVID Interplay Dispatcher

Please note:

The following options require a specific license available only as an add-on.

- The “Deduplication on File Name & Size” and “Deduplication on File Name & Size & Modification Time”. To request this license, download the ADA documentation from the Atempo Customer Support Portal, and sign the disclaimer available for this option.
- The video transcoding

A license request is generated when you configure the feature in the Administration Console. See the ADA documentation for details.

03. Atempo-Digital Archive – Server

Operating System	Version	Architecture
Linux¹	Red Hat 6	X86-64
	Red Hat 7	
	Red Hat 8	
	SUSE SLES v11	
	SUSE SLES v12	
Microsoft Windows	Server 2008 R2	X86-64
	Server 2012 R2	
	Server 2016	
	Server 2019	

04. Atempo-Digital Archive – Agent

Operating System	Version	Architecture
HP-UX	11i v2	Itanium
	11i v3	
IBM-AIX	7.1	64
	7.2	
Linux	Red Hat 6	X86-64
	Red Hat 7	
	Red Hat 8	
	CentOs 6	
	CentOs 7	
	CentOs 8	
	SUSE SLES v11	
	SUSE SLES v12	

¹ Please note that the Administration Console is not available on Unix or Linux. If you install ADA Server on Unix or Linux, plan to have a separate Windows or OS X machine to run the Administration Console.

	Debian 7 Debian 8 Debian 9 Debian 10 Ubuntu 14.04 LTS Ubuntu 16.04 LTS Ubuntu 18.04 LTS EulerOS V2.0	
macOS	MacOS 10.9 (Mavericks) MacOS 10.10 (Yosemite) MacOS 10.11 (El Capitan) macOS Sierra (10.12) macOS High Sierra (10.13) macOS Mojave (10.14)	X86-64
Microsoft Windows²	Server 2008 R2 Server 2012 R2 Server 2016 Server 2019 Windows 8 Windows 10	X86-64
SUN Solaris	Solaris 9 Solaris 10 Solaris 11	SPARC

² Cluster Install ADA HSM Filter Driver. Can be installed on a Windows cluster (Active/Passive). This installation is performed by Atempo Professional Services.

05. Atempo-Digital Archive – Administration Console

Operating System	Version	Architecture
macOs	MacOS 10.9 (Mavericks)	
	MacOS 10.10 (Yosemite)	
	MacOS 10.11 (El Capitan)	
	macOS Sierra (10.12)	
	macOS High Sierra (10.13)	
	macOS Mojave (10.14)	
Microsoft Windows	Server 2008 R2	X86-64
	Server 2012 R2	
	Server 2016	
	Server 2019	
	Windows 8	
	Windows 10	

06. Atempo-Digital Archive – Native User Interface

Operating System	Version	Architecture
macOS	MacOS 10.9 (Mavericks)	
	MacOS 10.10 (Yosemite)	
	MacOS 10.11 (El Capitan)	
	macOS Sierra (10.12)	
	macOS High Sierra (10.13)	
	macOS Mojave (10.14)	
Microsoft Windows	Server 2008 R2	X86-64
	Server 2012 R2	
	Server 2016	
	Server 2019	
	Windows 8	
	Windows 10	

07. Atempo-Digital Archive – Java User Interface

- The Java UI only supports the resolution of NFS mount points – CIFS/SMB mounts are not recognized.
- The Java UI only implements the Agent Archiving mode – i.e., archive and retrieval must be done from/to a filesystem managed by an ADA Agent. Client mode is not supported.

Operating System	Version	Architecture
HP-UX³	11i v2	Itanium
	11i v3	
IBM-AIX	7.1	64
	7.2	
Linux		X86-64
SUN Solaris	Solaris 9	SPARC
	Solaris 10	
	Solaris 11	

³ The HP-UX ADA Java UI does not support remote access to a share made through NFS.

08. Atempo-Digital Archive – Storage Devices

Vendor	Product	Primary Storage	Secondary Storage	Storage Manager Connector	FastScan & Snapshot Connector
(Any)	NAS offering CIFS / NFS access ⁴	X	X		
Avid	Unity MediaNetwork / Nexis ⁵	X	X		
	Unity/ISIS/NEXIS	X	X		
DELL EMC	Celerra / VNX	X	X		
	Centera ⁶		X	X	
	Data Domain ⁷		X		
	Isilon	X	X	X	
Exanet	ExaStore Clustered NAS	X	X		
Facilis⁸	TerraBlock server series	X	X		
FAST LTA	Silent Cube Storage	X	X		
Harmonic	MediaGrid ⁹	X	X		
Hitachi	HNAS	X	X		
Huawei	OceanStor	X	X		
Incom / HIT	HIT NAS Archive Appliance Series 1035 /		X		

⁴ The choice between CIFS and NFS is dependent upon the OS used by the ADA Agent used to access the NAS. CIFS if the ADA Agent is running on Windows, NFS if running on macOS or Linux/Unix.

⁵ Avid Nexis compatibility guide is applied here. The gateway can be a Windows or a macOS – no Linux no Unix. If using this storage with a tape library, only AMM can be used.

Please also refer to the section describing Avid Interplay compatible storage.

⁶ EMC Centera is only supported when the compliance mode is not enabled. No macOS support for the EMC Centera (no API).

⁷ Data Domain De-duplication Storage Systems are only supported as storage targets with NFS/CIFS.

⁸ Validated with ADA using version 5.0.3.5 running native Facilitis file system and AVIDFS emulation.

⁹ Only ADA Agent local mount points.

NetApp	FAS Series ¹⁰	X	X	X	X
Nutanix	Nutanix Files	X	X		
Panasas¹¹	ActiveStor™	X	X		
Panzura	Panzura Cloud Storage	X	X		
Permabit	Permabit Enterprise Archive	X	X		
	Permabit Cloud Storage	X	X		
Qumulo		X	X	X	X
Sony	Optical Disc Archive (ODA) ¹²		X	X	

09. Atempo-Digital Archive – FastScan Compatibilities

Vendor	Product	Minimum version
DELL EMC	Isilon	OneFS 7.2 & 8.x
NetApp	FAS Series	7-Mode: no minimal version Cluster Mode : 8.2.1 Not compatible with FlexVol
Qumulo		2.8.5

¹⁰ Validation made on ONTAP version 6, 7, 8.0, 8.1, 8.2, and 9. No support for Windows 2012. Gateway needs to be Windows (Fpolicy API limitation). Please note integration is leveraging Fpolicy 7mode. Cluster mode is not supported. Please contact us for more details.

Please note a NetApp filer can only have one Fpolicy registered application. If antivirus is already using Fpolicy, then stubbing will be not possible.

Fpolicy Clusters are not supported – NetApp Metro Clusters are not supported.

CIFS only volume supported – CIFS/NFS volumes supported – NFS only volume not supported.

¹¹ Validated with ADA using ActiveStor version 4.1.2. Certified using: CIFS connection from Windows, NFS connection from Linux/Unix/macOS. Now supporting DirectFlow on Linux.

¹² Please note that ODA is supported from both a Windows or Linux ADA controlled platform.

10. Atempo-Digital Archive – Object Storage Devices

Vendor	Product	Archive Target	Accelerate	Multipart	Lifecycle	Versioning
(Any)	Object Storages offering S3 / Microsoft Azure Blob Stock / SWIFT access	X		X		X
Amazon¹³	AWS S3 Storage	X	X	X	X	X
Caringo	SWARM / CAS ¹⁴	X			X	X
DataDirect Networks	Web Object Scaler (WOS): REST Interface	X		X		
	Web Object Scaler (WOS): WOS API	X				
Econocom	Econocloud S3	X		X		X
EMC	Elastic Cloud Storage (ECS)	X				
HDS¹⁵	HCP Object Storage & Cloud Storage	X				
HGST	ActiveScale	X				
Huawei	FusionStorage ¹⁶	X		X		X
	OceanStor 100D	X		X		X
Microsoft	Azure Blob Storage	X		X	X	X

¹³ Please note that we support the Amazon S3 API but we offer no direct support for Glacier's specific API, we use the S3 lifecycle feature to manage data movement to/from Glacier.

¹⁴ Certified with CASTOR/SWARM 6.5 SDK and fully qualified using the "@IP"/"static locator" syntax. Not validated using the "proxy locator" syntax.

¹⁵ Certified with HCP version 6.

¹⁶ Only S3 protocol is supported.

NetApp	StorageGrid ¹⁷	X				
Scaleway	Object Storage	X		X		X
Scality	RING sproxyd	X				
	RING CDMI	X				
Wasabi	Object Storage	X		X		X

11. Atempo-Digital Archive – Supported File Systems

Operating System	Version
Microsoft Windows ¹⁸	NTFS, ReFS
macOS ¹⁹	HFS+, APFS
Linux	Ext2, Ext3, Ext4
	XFS
Unix	HP-UX, Solaris, AIX: Native file system

12. Atempo-Digital Archive – Shared or Distributed File Systems

Solution	Primary Storage	Secondary Storage One to One	Secondary Storage AFC ²⁰
Apple Xsan	X	X	X
Ardis Tech DDP ²¹	X	X	X
Avid NEXIS MediaNetwork and ISIS	X	X	X

¹⁷ Only S3 protocol is supported.

¹⁸ DFS is not supported.

¹⁹ AFP is not supported.

²⁰ AFC = ADA File Storage Container.

²¹ Supporting DDP from an ADA platform running macOS X and above, Linux Red hat (starting from Kernel 2.6.18_128). No support for Windows.

Harmonic Mediagrid ²²	X	X	X
IBM Spectrum Scale (GPFS)	X	X	X
Lustre ²³	X	X	X
Quantum StorNext ²⁴	X	X	X
Tiger Technology metaSan / metaLan ²⁵	X	X	X

13. Media Manager (AMM)

The Media Manager needs to be installed in environments where the target archiving is tape.

It is the platform that enables ADA to access tape libraries and tape devices.

Atempo Media Manager can be installed on the same machine as the ADA agent or on a different machine. It is an option of the ADA agent setup.

Operating System	Version	Architecture
Linux	Red Hat 6	X86-64
	Red Hat 7	
	Red Hat 8	
	CentOs 6	
	CentOs 7	
	CentOs 8	
	SUSE SLES v11	
	SUSE SLES v12	
	Debian 7	
	Debian 8	
	Debian 9	
	Debian 10	

²² Supporting Mediagrid from an ADA platform running Windows, macOS and Linux.

²³ From Lustre versions 2.12.3 to 2.12.4

²⁴ macOS, Windows and Linux only.

²⁵ Supporting Metadata controller on Windows and macOS and MetaSan/Lan Agents on Linux, macOS and Windows.

	Ubuntu 14.04 LTS	
	Ubuntu 16.04 LTS	
	Ubuntu 18.04 LTS	
	EulerOS V2.0	
macOS	MacOS 10.9 (Mavericks)	X86-64
	MacOS 10.10 (Yosemite)	
	MacOS 10.11 (Yosemite)	
	macOS Sierra (10.12)	
	macOS High Sierra (10.13)	
	macOS Mojave (10.14)	
Microsoft Windows ²⁶	Server 2008 R2	X86-64
	Server 2012 R2	
	Server 2016	
	Server 2019	
	Windows 8	
	Windows 10	

13.1. Supported libraries

The following libraries are supported by the Media Manager.

BDT:

- MultiStak
- Flexstor
- Flexstor II

DELL:

- Dell ML6000
- Dell 160T
- Dell TL2000/TL4000

²⁶ Cluster Install ADA HSM Filter Driver. Can be installed on a Windows cluster (Active/Passive). This installation is performed by Atempo Professional Services.

FUJITSU:

- Fujitsu-Siemens FibreCAT TX24
- Fujitsu-Siemens FibreCAT TX48
- Eternus LT 20/40/60 S2 Series
- Eternus LT260

HP:

- HP StorageWorks 1x8 G2
- HP MSL 2024 / 4048 / 6000 / 8096
- HP 1/8 Thinstor
- HP MSL6480
- HP MSL3040

HUALU:

- DA-BH7010
- DA-BH8010

IBM:

- IBM TS3100 / TS3200 / TS3310
- IBM TS2900 / TS3500 / TS3576
- IBM TS4500
- IBM 3584

NEC:

- NEC LL009F
- NEC T40A
- NEC T16A

ORACLE STORAGE TEK

- STK SL500
- STK L700 , Sun StorEdge L700
- STK L180 , Sun L180
- STK L20
- STK L40
- STK L80
- SUN STK SL3000
- StorageTek C4
- StorageTek SL24 / SL48 / SL150
- StorEdge L400
- All library using ACSLS (SL8500,...)

OVERLAND:

- NEO Series 2000 / 4000 / 8000 Arcvault Series

- NEOxl 60 and 80

QUALSTAR:

- Qualstar Q Series
- Qualstar XLS Series
- Qualstar TLS Series
- Qualstar RLS Series

QUANTUM:

- Adic Scalar i500
- Adic Scalar i2000
- Adic Scalar 24
- Adic Scalar 10k
- Adic Scalar 100
- Adic Scalar 1000
- Quantum Scalar i3/i6
- Quantum Scalar 50
- Quantum Scalar i40 / i80
- Quantum Scalar i500
- Quantum Scalar i2000, i6000
- Quantum SuperLoader3
- Quantum PX500 Series
- Quantum PX720
- ATL M1500, M4 DATA MagFile, M4 DATA MagStack 2-4, M4 DATA MagStack 5-10

SPECTRA LOGIC:

- Spectra Logic T Series
- T24 to T-Finity
(T50, T120, T200, T380, T680, T950,...)
- [Spectra Stack](#)

SONY:

- PetaSite series using FC SCSI connection
(PSC API not yet supported)

TANDBERG/EXABYTE:

- Tandberg T-40+²⁷
- Exabyte Magnum 448, Tandberg StorageLibrary T48
- Exabyte Magnum 224 , Tandberg StorageLibrary T24
- Exabyte Magnum 1x7 2U
- Exabyte Magnum20

²⁷ No automatic detection of the library. A manual procedure is required. Please contact Atempo Professional Services for more information.

13.2. Supported Drives

Technology	Model	WORM and Encrypted Drive
HP	HP LTO3, LTO4, LTO5, LTO6, LTO7, LTO8, LTO8M	No
HUALU	Hardware mode: DA-BH7010, DA-BH8010 Software: AuroraGDAS version 3.1.14	Yes
IBM	IBM LTO3, LTO4, LTO5, LTO6, LTO7, LTO8, LTO8M IBM TS1130, IBM TS1140, IBM TS1150, IBM TS1155, IBM TS1160	No
Oracle StorageTek	T10KA, T10KB, T10KC, T10KD T9840, T9940	No
Sony ODA	Minimum supported versions are: Drive ODA FC: ODS-D77F Firmware level 1688 ODA Driver: 4.0.2 Gen 1 & 2 & 3, SAN Support only supported on Linux	Yes (depending on media)

13.3. Supported Tape Formats

Tape Format	TAR (PAX)	LTFS ²⁸
Available using AMM	Yes	Yes LTO5, LTO6, LTO7, LTO8, LTO8-M
Available in Tape Library	Yes with AMM	Yes with AMM
Metadata automatically Stored on Tape	Yes	No ²⁹
Tape Duplication	Yes	No
Tape Verify	Yes LTO5, LTO6, LTO7, LTO8, LTO8-M	Yes LTO5, LTO6, LTO7, LTO8, LTO8-M

13.4. Library & Drive Limitations

13.4.a. Drives

The type of drives supported are the ones listed as supported by ADA in the above section.

²⁸ LTFS format is compliant with LTFS Format Version 2.0.0 standard

²⁹ The LTFS standard does not normalize the storing of metadata on tape.

13.4.b. Libraries

AMM only supports libraries that offer barcode management capabilities.

When barcode management is available, AMM supports the following library types:

- SCSI
- iSCSI
- Fiber Channel
- SAS (Linux and Windows only)

13.4.c. Devices

- **No VTL support with ADA/AMM**
- Only tape libraries and tape drives in a library are supported (no standalone drives)
- **Only tape libraries equipped with mailbox are supported** (no autoloader)
- Only libraries with the serialization mechanism (drive serial numbers are reported by the library) are supported
- Only devices with serial numbers are supported
- Device names must not contain spaces as characters
- Barcodes on cartridges are mandatory, must be reported by the library **and must be unique in the ADA configuration**
- Cleaning of tape drives is not supported (cleaning must be managed by the library)
- Only one type of tape drive per library is supported
- Drive and library arm multipath are supported

13.4.d. Other limitations

- Tape drives and tape libraries connected through NDMP are not supported
- Drive sharing with other applications is not supported
- Library sharing with other applications is not supported, but library splitting is supported

13.4.e. Other Media Manager Supported:

- Sun StorageTek ACSLS 7.3, 8.x
- Sun StorageTek LibAttach 1.4.2

13.4.f. ACSLS Support

- The ACSLS server can be on any operating system (check Oracle compatibility guide)

- The client side delivered by ADA/AMM agents must be a Windows or a Linux operating system only
- Only one library can be declared on the ACSLS server and Media Manager only supports the standard port for ACSLS clients

14. Atempo-Digital Archive – Transcoding for Video Asset Preview

The transcoding for video asset preview feature creates a low resolution version of an asset that can be viewed in a video player without retrieving the entire asset.

The license for this option is complimentary. It can be obtained free of charge by completing a request form upon configuring the Video proxy transcoding format in ADA Administration Console.

The transcoding option is only available with **ADA File Storage One to One located on the ADA Server**. All video formats/codecs supported by FFmpeg can be transcoded, however if you intend to perform Partial File Retrieval, some restrictions apply, see the Partial File Retrieval section for details.

The Preview Player is only available on Windows and macOS interfaces, not available on java UI.

Partial retrieval can be performed directly from the ADA Preview Player on Windows interfaces only, not available for macOS or java UI.

Operating System	Version	Possible Preview File Format	Preview Player Available	Launch PFR from Preview Player
Linux	See Agent compatibility	MPEG-1/QuickTime H.264 ³⁰ /QuickTime	No	No
macOS		MPEG-1/QuickTime H.264 ³¹ /QuickTime	Yes	No
Microsoft Windows		MPEG-1/QuickTime H.264 ³² /QuickTime	Yes	Yes

³⁰ Provided that H.264 Cisco library has been installed on the agent. See ADA Administration guide for details.

³¹ Provided that H.264 Cisco library has been installed on the agent. See ADA Administration guide for details.

³² Provided that H.264 Cisco library has been installed on the agent. See ADA Administration guide for details.

15. Atempo-Digital Archive – Partial File Retrieval (PFR)

The Partial File Retrieval (PFR) feature for the MXF and QuickTime (QT) formats is available via the Rich Media option that must be added to the ADA configuration in order to use partial retrieval. PFR requires a new license.

PFR is only available in Agent Mode archiving, not in Client Mode.

The Rich Media Option also delivers automatic metadata import for media industry file formats such as MXF, DPX, etc. See the Metadata Import section for details.

15.1. Containers Supported by the PFR Option

15.1.a. QuickTime (QT)

No restriction concerning the essence supported.

15.1.b. MXF

ADA supports the wrappers and essences listed below.

Please note that in order to confirm that we are fully compatible with your flavor of MXF files, please send links to samples file to be tested to: ada_info@atempo.com

- MXF wrappers: Op1a to Op3c (including XDCam, P2, Ikegami, K2, Omeon) - If interested in using Op3 please contact us for more information
- And the following essences: IMX 30, 50, 50, Mpeg2, Mpeg2HD, Mpeg4, DV, DVCPRO 25/50, DVCPROHD, AVC-I, H.264, Jpeg2K, DNxHD, uncompressed, Tiff, Dpx, Bwf, Wave, Aiff, Aes2, Aes8, VBI, D-Cinema(DCI) support, DCP creation.
- Concerning the support of “clip/frame wrapping” mode (video audio interleaved) by our Partial File Retrieve feature, here is the perimeter supported:
 - o In entry: MXF clip/frame wrapping is supported
 - o In output: MXF frame wrapping as an output

Concerning Avid's MXF formats:

- Partial File Retrieve is fully supported in an Interplay configuration equipped with an Interplay Archive Server.

16. Atempo-Digital Archive – Metadata import

The Automatic Metadata Import feature delivers Automatic Metadata Import for media industry file formats (MXF, DPX...) or graphic file formats (AVI, JPG, MPEG, JPG2000...) depending on the option reference. It is available in the Rich Media Option. An additional license is required for this feature.

From the following graphical file formats (file must be named with the exact file extension listed below):

ARW AVI AVS BMP CALS CIN CMYK CMYKA CRW CUR CUT DCM DCR DCX DIB DJVU DNG
DPX EMF EPDF EPT EXR FAX FITS FPX GIF GRAY HALD HRZ SHTML ICO INFO INLINE JBIG JNG

JP2 JPC JPEG MAT MIFF MONO MOV MNG M2V MPEG MPC MPR MRW MSL MTV MVG
MXF NEF ORF OTB P7 PALM PAM PBM PCD PCDS PCL PCX PDB PEF PFA PFB PFM PGM
PICON PICT PIX PNG PNG8 PNG24 PNG32 PNM PPM PS PSD PTIF PWP RAD RAF RGB
RGBA RLA RLE SCT SFW SGI SHTML SUN SVG TGA TIFF TIM TTF TXT UIL UYVY VICAR VIFF
WBMP WMF WPG X XBM XCF XPM XWD X3F YCbCr YCbCrA YUV

Many types of metadata can be collected in images generated by graphics software or in digital photos, including EXIF, IPTC and XMP metadata standard. If you want to know if a specific type of metadata can be collected, please send an email to ada_info@atempo.com with a sample file containing metadata and in the email body the list of metadata to look for.

17. Atempo-Digital Archive – Application Integration & APIs

This section lists the plugins and integration maintained by Atempo.

17.1. Application Plugin

Application	Version
Avid Interplay / MediaCentral Production	Avid Interplay Production versions 2.7 to 2017.2 Avid MediaCentral Production version 2018.6 to 2019.6 Using Production Archive Engine (DET v2.x API)
Primestream FORK Production Suite	Integration with ADA is delivered by Primestream as an option to FORK. ³³

17.2. API Platform

API Type	Platform
C++ API	Please refer to the list of ADA Server platforms
SOAP/REST Web Services	Web services are operated by the ADA Server. Please to the list of ADA Server platforms.

³³ Please contact Primestream for more information on the option and service required to integrate with FORK.

18. Atempo-Digital Archive – Language Availability

Interface	Languages
Administration Console	English, French, Japanese, Korean, Simplified Chinese
Native End-User Interface	English, French, Japanese, Korean, Simplified Chinese
End-User Interface (Java)	English, French, Japanese, Korean, Simplified Chinese
Web Interface	English, French
CLIs	English, French

19. Network & Protocols

- LDAP implementation supported: Active Directory by Microsoft
- Supporting NFS v2.x, v3.x and v4.x
- Gateway: the choice between CIFS and NFS must be done depending on the Gateway's OS used with the ADA Agent accessing the NAS:
 - CIFS if the ADA Agent is running on Windows – No CIFS support on Linux/Unix or macOS Agents
 - NFS if running on macOS or Linux/Unix – No NFS support on Windows Agents
- No support for:
 - IPv6 host names are not supported
 - pNFS
 - AFP is not supported
 - No CIFS support on Linux/Unix or macOS Agents
 - No NFS support on Windows Agents

20. Atempo-Digital Archive – Specific Limitations

This section is listing limitations related to IT environment and infrastructure, not listed in above sections of this document:

- **Disk storage**
 - Extraction / unplugging of a removable disk is not supported by ADA
- **Virtual Tape Library/VTLs**
 - Are not supported by ADA/AMM