Oracle® DIVArchive

Supported Environments Guide

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Preface

This document outlines the technical environments supported by the Oracle DIVArchive Suite 7.5. Included are package compatibility, supported hardware, supported libraries and drives, supported Oracle DIVArchive Partial File Restore formats, supported sources and destinations, and supported Avid Interplay releases and transcoders.

Audience

This document is intended for System Administrators and Oracle Installation and Delivery Team personnel.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

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Related Documents

For more information, see the Oracle DIVArchive documentation set for this release located at https://docs.oracle.com/en/storage/#csm.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction

This chapter provides a brief overview of the Oracle DIVArchive Suite and available options and licensing information.

Oracle DIVArchive Overview

The Oracle DIVArchive architecture allows the integration of many different types of servers and technologies, such as Broadcast Video Servers, Storage Area Networks, and Enterprise Tape Libraries. DIVArchive 7.5 can support interoperability among systems, helping to ensure long-term accessibility to valued content, and keeping up with evolving storage technologies.

The installation of DIVArchive varies from site to site. The exact configuration of your specific DIVArchive platform is not covered in this guide. For details on your specific DIVArchive System installation and configuration, refer to your DIVArchive System Configuration and consult with the Oracle Installation and Delivery Team.

Oracle DIVArchive 7.5 supports system installations in the Oracle Linux 7 x86_64 and later (64-bit) environment. Oracle Linux enables selection of specific languages during system installation, but the main Linux installation must be in English. To use a language other than English (after installation), you must create a user configured for the language. All Windows installations must be in English only.

The System Configuration is a document prepared by Oracle (or an affiliated system integrator) after installation of DIVArchive at your site. It is a complete record of the configuration of the DIVArchive sub-systems and third party interfaces, site details and contacts, user names and passwords, and remote access codes.

Oracle DIVArchive Options and Licensing

The following table identifies DIVArchive options and licensing metrics.

Part Number	Description	Licensing Metric
L101163	Oracle DIVArchive Nearline Capacity	Per TB
L101164	Oracle DIVArchive Archive Capacity	Per Slot
L101165	Oracle DIVArchive Actor	Per Server
L101166	Oracle DIVArchive Manager	Per Server
L101167	Oracle DIVArchive Partial File Restore	Per Wrapper
L101168	Oracle DIVArchive Avid Connectivity	Per Server
L101169	Oracle DIVArchive Application Filtering	Per Server

Part Number	Description	Licensing Metric
L101170	Oracle DIVArchive Storage Plan Manager (2 storage plans are included with a DIVArchive Manager License)	Per Server
L101171	Oracle DIVAnet	Per Server
L101172	Oracle DIVAdirector	Per User
L101918	Oracle DIVArchive Export / Import	Per Server
L101919	Oracle DIVArchive Additional Archive Robotic System	Per Tape Library
L101920	Oracle DIVArchive Automatic Data Migration	Per Server

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DIVA Product Compatibility

This chapter describes compatibility between DIVArchive 7.5 and other DIVA product lines, and includes the following information:

- Oracle Database and DIVArchive Backup Service
- Oracle DIVAnet
- Oracle DIVA Enterprise Connect and DIVArchive WS API

Oracle Database and DIVArchive Backup Service

The DIVArchive Oracle Database and Backup Service components are installed as an integral part of the standard DIVArchive system installation. The components are typically installed on the same server as the Oracle DIVArchive Manager.

The Oracle Database is backed up using the RMAN and RSYNC components that are distributed as part of the Oracle Database package.

Scheduled backups using the DIVArchive Backup Service are configured in it's configuration file. The DIVArchive Backup Service manages and monitors the entire backup process.

- Windows only supports DIVA Oracle Database 12.1 package `OracleDivaDB_3-0-0_12_1_0_2_0_SE2_Windows_64-bit.zip` and later. *No previous database package will work with DIVArchive 7.5 and later*.

  The `OracleDivaDB_3-0-0_12_1_0_2_0_SE2_Windows_64-bit.zip` and later releases no longer includes the 32-bit Oracle database client.

- DIVArchive 7.5 in a Linux environment only supports DIVA Oracle database package `OracleDivaDB_3-0-0_12_1_0_2_0_SE2_OEL7_x86_64.sh` and later.

Oracle DIVAnet

DIVAnet 2.1 is a new release for compatibility with DIVArchive 7.5 Linux-based installations. DIVAnet 2.1 also runs on Windows-based systems, but it is not backward compatible to releases before DIVArchive 7.3.1. You must use either DIVAnet 2.0 or Legacy DIVAnet (Release 1.0) when running DIVArchive releases earlier than DIVArchive 7.3.1.

The Legacy Oracle DIVAnet (Release 1.0) is still available for connecting DIVArchive systems with different software release levels, and releases before DIVArchive 7.3.1.

If you are operating a DIVArchive release earlier than 7.3.1, refer to the *DIVAnet Installation, Configuration, and Operations Guide* in the *Oracle DIVAnet 2.0 Documentation*

library, or the appropriate Legacy DIVAnet documentation in the *Oracle DIVArchive Legacy library* (for releases 6.5 and 7.2).

Oracle DIVA Enterprise Connect and DIVArchive WS API

The software release containing the Oracle DIVArchive WS API has been renamed to *Oracle DIVA Enterprise Connect 1.0*. This release of DIVA Enterprise Connect is compatible with DIVArchive 7.4 and later, and DIVAnet 2.1 and later. DIVAnet 2.2 and later is required for the HTTP-based transport to the DIVAnet ManagerAdapter.

The current DIVA Enterprise Connect software release is 1.0. DIVA Enterprise Connect 1.0 supports the 2.2 release of the DIVArchive Web Services API; earlier API releases are not supported on release 1.0. This is true for both SOAP and REST.

3

Hardware and Software Requirements

This chapter describes the minimum hardware and software requirements to install and operate the DIVArchive 7.5 software. Refer to "General Storage Requirements" for detailed disk configuration information.

This chapter includes the following information:

- DIVArchive Architecture
  - System Component Interconnectivity
- Intel, Microsoft Windows, and Oracle Linux
  - DIVArchive Operating System Compatibility
  - DIVArchive Manager
  - DIVArchive Manager Cluster
  - DIVArchive Actor
  - DIVArchive Actor and Manager (Single Computer)
  - Oracle DIVAnet 2.x
  - Oracle DIVAdirector
- General Storage Requirements
  - DIVArchive Manager
  - Oracle DIVArchive Actor

DIVArchive Architecture

A DIVArchive system uses a combination of software modules which can run on a single computer, or can be distributed across different systems.

The main DIVArchive components are as follows:

Oracle DIVArchive Manager
The core component of the archive also hosting the archive system database.

DIVArchive Manager Cluster
Based on the Microsoft Cluster configuration. *DIVArchive Manager Cluster is only valid in a Windows-based environment, not in Linux.*

Oracle DIVArchive Actor
Responsible for all data transfers (Archive, Restore, Copy, Repack, and so on).

DIVArchive Actor and Manager (Single Computer)
Systems running both Actor and Manager functions on a single computer. You must try to avoid this configuration for performance reasons. This is only usable for entry level configurations.

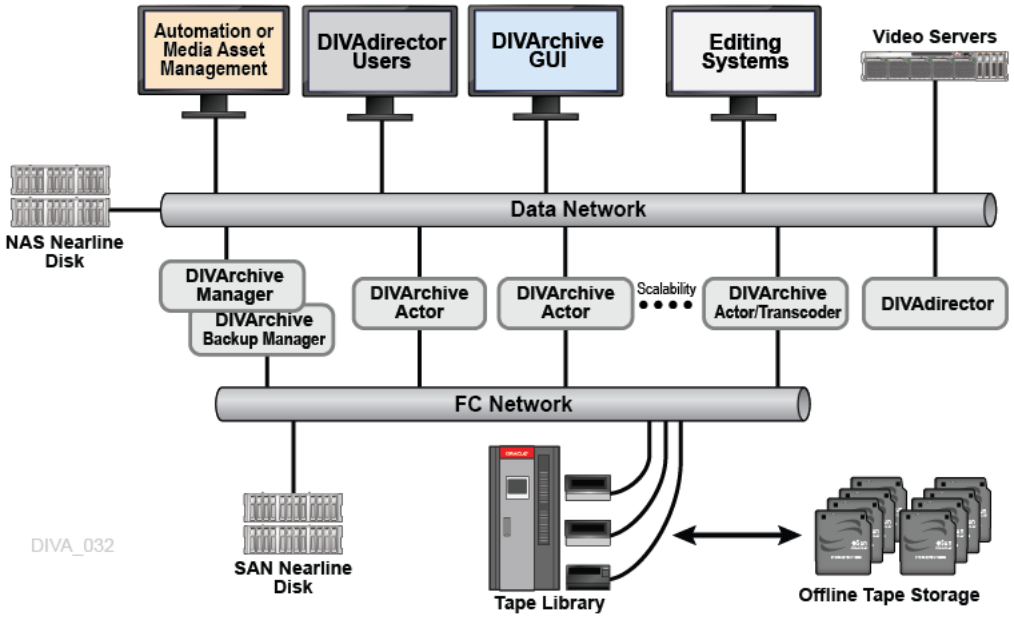
Oracle Legacy DIVAnet and DIVAnet 2.0
Used in DIVAnet configurations for unified access. Legacy DIVAnet is part of the DIVArchive installation process and referred to as the *Access Gateway*. DIVAnet 2.0 installation is a separate process and therefore not a drop-in replacement for the legacy Access Gateway.

Oracle DIVAnet 2.1
Used in DIVAnet configurations for unified access. DIVAnet 2.1 is not a drop-in replacement for the legacy Access Gateway. DIVAnet 2.1 is specifically for compatibility with DIVArchive 7.5 Linux and Windows installations, and not backward compatible with earlier DIVArchive releases before 7.3.1.

Oracle DIVAdirector
A web-based application to search and browse the archive.

DIVArchive Control GUI and Configuration GUI
Used for configuring, monitoring and managing the DIVArchive system.

The following figure represents a DIVArchive configuration with the main DIVArchive software components installed on different servers. DIVAnet (used to access multiple DIVArchive systems) is not represented and is generally installed on a dedicated server.



System Component Interconnectivity

On the data path, a DIVArchive solution is connected on the storage side to the tape library and (or) the shared disks. On the source and destination side, it is connected to the video servers, NLE, or file servers.

Storage Connection

Storage Area Networks (SAN), Network Attached Storage (NAS) or Direct Attached technologies can be used. Different types of interfaces are required on the servers to support the different types of storage devices as follows:

- Fiber Channel Host Based Adapter (HBA) for SAN
- SCSI Bus or HBA for Direct Attach
- 10 Gigabit Ethernet (GbE) for NAS

Video Server Connections

Connections to video servers generally uses standard GbE or 10 GbE LAN technologies. Grass Valley legacy profile video servers come with two types of interfaces

- Universal Interface Module (UIM) uses GbE
- The legacy profile with direct Fiber attachment is now End of Life for Grass Valley and no longer supported by Oracle.

Intel, Microsoft Windows, and Oracle Linux

Oracle can deliver x86 architecture servers matching or exceeding the recommendations provided in the following sections (except the Windows license to be purchased). Partners can also purchase servers from other vendors if the minimum requirements are met. Oracle does not qualify or recommend specific models from other vendors.

Caution: The operating system installed on all computers must be installed in the English language. Oracle cannot support DIVArchive computers that have the operating system installed in other languages.

DIVArchive Operating System Compatibility

When upgrading your DIVArchive installation to release 7.5, use the following table to confirm that you have the proper operating system installed for each computer in the system.

Component	DIVArchive Release	Operating System Compatibility (for upgrades only)
Manager	7.5	Windows Server 2012 R2 (64-bit) Oracle Linux 7 x86_64 and later (64-bit)
Manager	7.4	Windows Server 2012 R2 (64-bit) Oracle Linux 7 x86_64 and later (64-bit)
Manager	7.3	Windows Server 2008 R2 (64-bit) Windows Server 2012 R2 (64-bit)
Actor	7.5	Windows Server 2012 R2 (64-bit) Oracle Linux 7 x86_64 and later (64-bit)[1]
Actor	7.4	Windows Server 2012 R2 (64-bit) Oracle Linux 7 x86_64 and later (64-bit)[1]

Component	DIVArchive Release	Operating System Compatibility (for upgrades only)
Actor	7.3	Windows Server 2008 R2 (64-bit only) Windows Server 2012 R2 (64-bit only)
DIVAnet	2.1	Windows 2012 R2 (64-bit) Oracle Linux 7 x86_64 and later (64-bit)
DIVAnet	2.0	Windows 2012 R2 (64-bit)
DIVAnet	Legacy	Windows Server 2008 R2 (64-bit) Windows Server 2012 R2 (64-bit)

[1] UNC paths are supported for SMB Source/Destinations and Managed disks if the UNC path is directly mounted on the Windows Actor. Linux-based Actors only support Vantage transcoding operations

DIVArchive Manager

The following server platform is the minimum requirement recommended for the installation of the DIVArchive Manager software:

- Rack mount chassis
- One Xeon E5-2420 CPU (six cores, 1.9 GHz)
- 16 GB RAM
- Two 300 GB HDD 10,000 RPM (configured in RAID 1) system disks

> **Note:** If you use DIVArchive to archive complex objects like DPX, it is advisable to ask for a specific recommendation based on the estimated traffic (in terms of size and number of objects to be archived per day). In general, if complex objects need to be archived, Oracle recommends using a minimum of two 900 GB HDD with 10,000 RPM. This recommendation is also valid for the Backup Manager or an Actor if an Actor server is used for the Backup Manager.

- Redundant power supply and fans
- Two onboard GbE interfaces (copper RJ45 interfaces)
- One Fiber Channel Host Bus Adapter (HBA) for tape library control

> **Note:** A Fiber Channel HBA is not required with SONY Petasite libraries (controlled through the PCS software and a network API) or with Oracle StorageTek libraries if the ACSLS software is used in the configuration.

- Windows Server 2012 R2
- Oracle Linux 7 x86_64 and later

Important: If ACSLS virtual libraries are used, an HBA will be required (consult with Oracle for more information).

DIVArchive Manager Cluster

The following server platform (two identical servers) is the minimum requirement recommended for the installation of the DIVArchive Manager software in a cluster

environment. *DIVArchive Manager Cluster is only valid in a Windows-based environment, not in Linux.*

- Rack mount chassis
- One Xeon E5-2420 CPU (six cores, 1.9 GHz)
- 16 GB RAM
- Two 300 GB HDD 10,000 RPM (configured in RAID 1) system disks

> **Note:** If you use DIVArchive to archive complex objects like DPX, it is advisable to ask for a specific recommendation based on the estimated traffic (in terms of size and number of objects to be archived per day). In general, if complex objects need to be archived, Oracle recommends using a minimum of two 900 GB HDD with 10,000 RPM. This recommendation is also valid for the Backup Manager or an Actor if an Actor server is used for the Backup Manager.

- Redundant power supply and fans
- Two onboard GbE interfaces (copper RJ45 interfaces)
- One SAS or FC HBA (for the shared disk bay connection)

> **Note:** A shared disk bay with dual RAID controller (SAS or FC Interface) and seven 300 GB SAS disks connected to both servers to accommodate the Oracle database.

- One Fiber Channel HBA for tape library control

> **Note:** A Fiber Channel HBA is not required with SONY Petasite libraries (controlled through the PCS software and a network API) or with Oracle StorageTek libraries if the ACSLS software is used in the configuration.

- Windows Server 2012 R2

DIVArchive Actor

The following is the minimum server configuration recommended for the installation of the DIVArchive Actor software:

- Rack mount chassis
- One Xeon E5-2420 CPU (six cores, 1.9 GHz)
- 16 GB RAM
- Two 300 GB HDD 10,000 RPM (configured in RAID 1) system disks
- RAID5 disk space for cache, at least four 1TB disks
- Optional RAID5 disk space for Nearline storage (DIVAgrid Architecture)

> **Note:** The DIVAgrid Architecture consists of aggregating direct-attached disks from multiple DIVArchive Actors into one single DIVArchive Array. The DIVArchive Manager distributes content it needs to store on this array across the different Actors composing the array. This provides a cost effective, high performance solution for Nearline disk storage and is ideal in workflows requiring temporary disk storage to enable the creation of multiple object instances and transcoding.

- Redundant power supply and fans
- Two onboard GbE interfaces (copper RJ45 interfaces)
- One 10 GbE interface (optional)
- One Fiber Channel HBA for the connection to an external shared disk (optional)
- One Fiber Channel HBA for the connection to the tape drives
- Windows Server 2012 R2
- Oracle Linux 7 x86_64 and later

> **Note:** Linux-based Actors do not support UNC paths for CIFS sources and destinations. Linux-based Actors only support Vantage transcoding operations.

DIVArchive Actor and Manager (Single Computer)

The following is the minimum server configuration recommended for the installation of the DIVArchive Actor and DIVArchive Manager software on a single computer. This configuration should be limited to entry level systems for performances reasons:

- Rack mount chassis
- One Xeon E5-2420 CPU (six cores, 1.9 GHz)
- 16 GB RAM
- Two 300 GB HDD 10,000 RPM (configured in RAID 1) system disks

> **Note:** If you use DIVArchive to archive complex objects like DPX, it is advisable to ask for a specific recommendation based on the estimated traffic (in terms of size and number of objects to be archived per day). In general, if complex objects need to be archived, Oracle recommends using a minimum of two 900 GB HDD with 10,000 RPM. This recommendation is also valid for the Backup Manager or an Actor if an Actor server is used for the Backup Manager.

- RAID5 disk space for cache - at least four 1 TB disks
- Optional RAID5 disk space for Nearline storage (DIVAgrid Architecture)

Note: The DIVAgrid Architecture consists of aggregating direct-attached disks from multiple DIVArchive Actors into one single DIVArchive Array. The DIVArchive Manager distributes content it needs to store on this array across the different Actors composing the array. This provides a cost effective, high performance solution for Nearline disk storage and is ideal in workflows requiring temporary disk storage to enable the creation of multiple object instances and transcoding.

- Redundant power supply and fans
- Two GbE interfaces
- One 10 GbE interface (optional)
- One Fiber Channel HBA for the connection to an external shared disk (optional)
- One Fiber Channel HBA for the connection to the tape drives

Note: An additional port maybe required for the tape library control.

- Windows Server 2012 R2
- Oracle Linux 7 x86_64 and later

Note: Linux-based Actors do not support UNC paths for CIFS sources and destinations. Linux-based Actors only support Vantage transcoding operations.

Oracle DIVAnet 2.x

The DIVAnet configuration provides a consolidated view of a distributed DIVArchive system. The following is the minimum server configuration recommended for the installation of DIVAnet 2.x:

- Rack mount chassis
- One Xeon E5-2420 CPU (six cores, 1.9 GHz)
- 16 GB RAM
- Two 300 GB HDD 10,000 (configured in RAID 1) system disks
- One 10 GbE interfaces (optional)
- Oracle Linux 7 x86_64 and later
- Windows Server 2012 R2

Oracle DIVAdirector

DIVAdirector is Oracle's archive content management application providing a user friendly web-based window into assets stored in the DIVArchive system. DIVAdirector can play proxy releases of the archived clips, and can store the proxy files on local disks, SAN, or NAS disk storage. The following is the minimum server configuration recommended for the installation of DIVAdirector:

- Rack mount chassis

- Two Xeon E5-2440 CPUs (six cores, 2.4 GHz, 15 MB cache)
- 16 GB RAM
- Two 300 GB HDD (configured in RAID 1) system disks
- Redundant power supply and fans
- RAID5 disk space proxy storage five 3 TB (if stored locally)
- Two onboard GbE interfaces
- One 10 GbE interface (optional)
- Fiber Channel HBA for the connection to an external shared disk for proxy storage (optional)
- Windows Server 2012 R2

General Storage Requirements

The following table describes the main storage characteristics of the various components:

Server	CPU	System Disks	Cache and Disk	Data Disks
Manager Cluster[1]	1	RAID1	No	No
Manager	1	RAID1	No	No
Actor	1	RAID1	RAID5	Nearline (optional)
Actor and Manager	1	RAID1	RAID5	Nearline (optional)
Actor and Transcoder	2	RAID1	RAID5	Transcoding area plus optional Nearline disk.
DIVAnet	1	RAID1	No	No
DIVAdirector	2	RAID1	No	RAID5 if no proxy external storage is attached.

[1] DIVArchive Manager Cluster is only valid in a Windows-based environment, not in Linux.

DIVArchive Manager

The DIVArchive Manager server specification requirements for CPU, memory, disk, and network depend on the size of the system and the number of requests you plan on processing with the Manager. The following server specifications are the minimum recommended requirements for installation of the DIVArchive Manager software:

Processor

Single quad-core processor. A 64-bit computer must be used for running Windows Server 2012 R2 and Oracle Linux 7 update 2.

RAM

Minimum of 16 GB.

Ethernet

Two Gigabit Ethernet connections.

Fibre
This is optional. However, if the tape library is SCSI controlled then Dual Fibre Channel is recommended.

Disk
The following are the minimum partition sizes for the Manager computer. These minimum sizes are also valid for Manager Backup configuration or an Actor used as a Backup Manager.

Caution: All partitions must be protected by RAID.

Windows Partition	Linux Partition	Minimum Size	Recommended Block Size	Comments
`C:\DIVA`	`/home/diva`	10 GB	Operating System Default	DIVArchive Software
`C:\app`	`/u01`	Windows: 10 GB Linux: 10 GB	Operating System Default	DIVArchive Oracle Database Binaries
`D:\`	Not applicable	100 GB	Operating System Default	DIVArchive Software (*for Cluster only*).
`E:\`	`/u02`	30 GB	8 kb	DIVArchive Oracle Database Data Files
`F:\`	`/u03`	Windows: 5 GB (exactly) Linux: 5 GB	4 kb	DIVArchive Oracle Database Archive Logs
`H:\`	`/u04`	100 GB	64 kb	DIVArchive Oracle Database Backup Folder
`G:\`	`/u05`	150 GB	Operating System Default	DIVArchive Complex Object Metadata Database (optional). See Complex Objects.

Oracle DIVArchive Actor

The DIVArchive Actor server specification requirements for CPU, memory, disk, and network depend on the size of the system and the total throughput required. You can add additional Actor servers to acquire additional throughput. The following server specifications are the minimum recommended for installation of the DIVArchive Actor software:

Processor
Single quad-core processor. A 64-bit computer must be used for running Windows Server 2012 R2 and Oracle Linux 7 update 2.

RAM
Minimum of 16 GB.

Ethernet
Two Gigabit Ethernet connections. Ten Gbe is recommended.

Fibre
Dual Fibre Channel is recommended for tape drive control.

Disk

The following are the minimum partition sizes for the Actor computer:

Caution: All partitions must be protected by RAID.

Windows Partition	Linux Partition	Minimum Size	Recommended Block Size	Comments
`C:\DIVA`	`/home/diva`	10 GB	Operating System Default	DIVArchive Software
`H:\`	`/u04`	100 GB	64 kb	DIVArchive Oracle Database Backup Copy (optional)

Cache Disk

This disk is only used for caching, tape to tape copying, tape spanning, and tape repacking operations. The cache does not have to be on a RAID protected disk, but it is recommended.

The size of this disk must be at least the size of your largest object. The cache disk can be a Local Disk, SAN, NFS, or SMB connected. Oracle recommends setting the cache disk block size to, at least, 64kb.

Storage or Storage and Nearline

The disk will be used for storing DIVArchive objects and also Nearline operations. The storage size depends on the amount of space desired to store objects. This disk must be RAID protected.

You can use a storage disk for cache too. The storage disk can be a Local Disk, SAN, NFS, or SMB connected. Oracle recommends setting the storage disk block size to at least 64 kb.

4

Libraries and Drives

This chapter describes the various libraries and drives supported by DIVArchive 7.5, and includes the following information:

- Supported Libraries and Control Software
- Supported Drives
  - Sony ODA Optical Drives
    * DIVArchive 7.5 New Drive Compatibility

Supported Libraries and Control Software

The following table identifies libraries and associated control software supported by DIVArchive 7.5. *LibAttach is only valid in a Windows-based environment, not in Linux.*

Manufacturer	Library	Control Software	Robot Manager Module
Dell	TL4000/TL2000[1]	Direct SCSI/FC	Robot_SCSI
	ML6010[2]	Direct SCSI/FC	Robot_SCSI
HP	StoreEver	Direct SCSI/FC	Robot_SCSI
	ESL G3-700	Direct SCSI/FC	Robot_SCSI
	ESL G3-1500	Direct SCSI/FC	Robot_SCSI
	ESL G3-3000	Direct SCSI/FC	Robot_SCSI
	ESL G3-5000	Direct SCSI/FC	Robot_SCSI
	MSL-2024	Direct SCSI/FC	Robot_SCSI
	MSL-2048	Direct SCSI/FC	Robot_SCSI
	MSL-6480	Direct SCSI/FC	Robot_SCSI
IBM	TS3100	Direct SCSI/FC	Robot_SCSI
	TS3200	Direct SCSI/FC	Robot_SCSI
	TS3310	Direct SCSI/FC	Robot_SCSI
	TS3500	Direct SCSI/FC	Robot_SCSI
	TS4500	Direct SCSI/FC	Robot_SCSI

Manufacturer	Library	Control Software	Robot Manager Module
Oracle StorageTek	SL8500[3]	LibAttach 1.4.2[5]	Robot_ACSLS
	SL500[4]	Direct SCSI/FC	Robot_SCSI
	SL150	Direct SCSI/FC	Robot_SCSI
	9310	ACSLS 7.1	Robot_ACSLS
	5500	ACSLS 7.2	Robot_ACSLS
	L180	ACSLS 7.3 or Direct SCSI/FC	Robot_ACSLS or Robot_SCSI
	L7000	ACSLS 8.0 or ACSLS 8.2	Robot_ACSLS
	SL24	LibAttach 1.4.2[5]	Robot_ACSLS
	L80	Direct SCSI/FC	Robot_ACSLS
	L40	Direct SCSI/FC	Robot_ACSLS
	L20	Direct SCSI/FC	Robot_ACSLS
	L1400M	Direct SCSI/FC	Robot_ACSLS
Oracle StorageTek	SL3000	LibAttach 1.4.2[5]	Robot_ACSLS
		Direct SCSI/FC	Robot_SCSI
Qualstar	TLS-5000	Direct SCSI/FC	Robot_SCSI
	RLS-85210	Direct SCSI/FC	Robot_SCSI
Quantum (ADIC)	Scalar i6000	Direct SCSI/FC	Robot_SCSI
	Scalar i500	Direct SCSI/FC	Robot_SCSI
	Scalar i40/i80	Direct SCSI/FC	Robot_SCSI
	Scalar i3/i6	Direct SCSI/FC	Robot_SCSI
	Scalar 100	Scalar DLC or Direct SCSI/FC	Robot_ADIC or Robot_SCSI
	Scalar 1000	Scalar DLC or Direct SCSI/FC	Robot_ADIC or Robot_SCSI
	Scalar 10000	Scalar DLC or Direct SCSI/FC	Robot_ADIC or Robot_SCSI
	Scalar 12000	Scalar DLC or Direct SCSI/FC	Robot_ADIC or Robot_SCSI
	Scalar i2000[6]	Scalar DLC or Direct SCSI/FC	Robot_ADIC or Robot_SCSI
Sony Petasite	S60	PSC 5.00	Robot_Sony
Sony ODA	ODS-L10	Robot Manager	Robot_SCSI
	ODS-L30M	Robot Manager	Robot_SCSI
	ODS-L60E	Robot Manager	Robot_SCSI
	ODS-L100E	Robot Manager	Robot_SCSI
Spectralogic	T-Finity	Direct SCSI/FC	Robot_SCSI
	T950	Direct SCSI/FC	Robot_SCSI
	T680, T380, T200	Direct SCSI/FC	Robot_SCSI
	T120	Direct SCSI/FC	Robot_SCSI
	T50e	Direct SCSI/FC	Robot_SCSI

1 The Dell TL2000 is an IBM TS3100 library.
2 The Dell ML6010 is an AIDC i500 library.
3 Operational upon robot failure when configured with multiple LSMs and one robot per LSM.
4 The SL500 library will be transitioned to End of Life (EOL) soon.

[5] DIVArchive only supports 32-bit LibAttach and not 64-bit.
[6] Auto-clean is not supported, but the Scalar i2000 with partitioning is supported.

Supported Drives

This section describes drives supported by DIVArchive 7.5.

Manufacturer	Drive Model
HP	LTO-3 LTO-4 LTO-5 LTO-6 LTO-7
IBM	LTO-1 LTO-2 LTO-3 LTO-4 LTO-5 LTO-6 LTO-7[1] 3592 TS1120 TS1140 TS1150
Matsushita	LFD30xx
Oracle StorageTek	Titanium 10000-A Titanium 10000-B Titanium 10000-C Titanium 10000-D 9840A 9840B 9840C 9840D 9940A 9940B
Sony (Optical)	ODS-D55U ODS-D77F The following drives are supported in DIVArchive 7.4 and later: ODS-280F ODS-280U[2]

[1] Drivers for the IBM LOT-7 drive currently only exist for Windows Server 2012, not for Windows Server 2008.
[2] The ODS-280U has not been qualified for use with DIVArchive 7.5.

Sony ODA Optical Drives

Sony ODA Blu-ray Optical Drives are supported in DIVArchive 7.5 on Windows only. The drives are viewable as a Tape Drive and Cartridge (having UDF format) under the **Disk Drives** tab in the Control GUI.

The drives must be configured using the Optical Disk Archive Utility before configuring DIVArchive on the system.

The Windows Device Manager will display the drives as an *Unknown Device* because there are no drivers available for them. Several configuration files must be modified to include these drives in the DIVArchive System. See the *Oracle DIVArchive Installation and Configuration Guide* for detailed information.

DIVArchive 7.5 New Drive Compatibility

DIVArchive 7.5 supports a new type of ODA drive from Sony. The details of these drives are as follows:

- Sony released a new generation of ODA drives: *ODS-280F* and *ODS-280U*. DIVArchive has only been tested with the Fibre Channel type. These drives are twice as fast as the *Gen1* drives. The *ODS-280U* has not been qualified for use with DIVArchive 7.5.
- A new type cartridge is available for this drive: *ODC3300R*. This is a WORM drive with a 3.3 TB capacity.
- *Gen2* drives can read content written on *Gen1* media with *Gen1* drives. DIVArchive does not support the READ-ONLY media-drive compatibility. Oracle recommends isolating *Gen1* media from *Gen2* media in the configuration (no cross-generation compatibility), and there must be at least one *Gen1* drive in a library containing *Gen1* cartridges.

5

Oracle DIVArchive Partial File Restore Formats

This chapter contains various matrices indicating what formats have been tested successfully with the Oracle DIVArchive Partial File Restore operation. Testing with samples provided by the customer is recommended to confirm interoperability. Oracle makes no commitment if variations in the encoding profiles cause issues with the Partial File Restore feature. All formats support **AUTO_DETECT**.

Contact Oracle Support for more details about each implementation.

This chapter includes the following information:

- General Exchange Format (GXF)
- Material Exchange Format (MXF)
- Audio Video Interleaved (AVI)
- Audio Video Interleaved (AVI) with Separate WAV Files
- QuickTime
  - QuickTime Self-Contained Clips
- Leitch Exchange Format (LXF)
- DIF with Separate WAV Files
- Broadcast WAV (BWAV)

General Exchange Format (GXF)

GXF Partial File Restore is supported on Windows in the following formats:

- Aurora Edit
  - MPEG2 D10 MPEG2 I-frame
  - MPEG2 D10 MPEG2 LGOP
- BitScream
  - DV25
- DIVArchive TMCommunicator
  - DV25
  - DV50
  - MPEG2 D10
- K2 Media System

  - MPEG2 D10 MPEG2 I-frame
  - MPEG2 D10 MPEG2 LGOP
- K2 Media System / Summit
  - AVC-I
  - DVCPRO
  - XDCAM HD
- Mseries
  - MPEG2 D10 MPEG2 I-frame
  - MPEG2 LGOP
- NewsEdit
  - DV25
  - DV50
  - MPEG2 D10 MPEG2 I-frame
- PDR
  - MJPEG
- Profile XP
  - DV25
  - DV50
  - MPEG2 D10 MPEG2 I-frame

Material Exchange Format (MXF)

MXF standard specification (SMPTE377M) defines multiple operational patterns. Only OP1a is supported. MXF Partial File Restore is supported on Windows in the following formats:

Manufacturer	Product	Release	Qualified Video Essence
AmberFin, Ltd.	iCR	4.0.3, 4.5.1	MPEG2 LGOP HD
Avid	TRMG	2.97 1.00, 3.00 3.00	MPEG D10 DV25 XDCAM HD
Canopus Company, Ltd.	EDIUS	5.00	XDCAM HD
EVS - OpenCube	MXFTk Advanced	2.1.10.0 2.2.4.0	DV50, DV100 DNxHD
Harris Corporation	Nexio	1.0.0.0	DV50
Leitch	VR475	1.00	DVCPRO HD, DV50
Ligos Corporation	MediaRig	Ligos MXF 1.0	MPEG2 D10
Matrox Electronics	DSX	50.46.48.0	XDCVAM HD

Manufacturer	Product	Release	Qualified Video Essence
MOG	MXFspeedrail	Toolkit 4.2.1.326	MPEG2 D10
OC[1]	OCTk	2.1	MPEG2 D10
Omneon Video Networks	Omneon Media Subsystems	4.6.0.0 4.7.0.0	MPEG2 D10 DV25
Oracle	Bitscream TMCommunicator TMCommunicator	3.1.0.90 3.1.0.74 4.1.1.245	DV25 MPEG2 D10, DV25, DV 50 DVCPRO HD, DNxHD
Quantel	GenerationQ	C3.0 rev 13.18 C2.1 rev 22.43 V2.1 22 T4.0 R&D, C3.6 11.003	MPEG D10 MPEG D10 MPEG D10 AVC-i
SAMMA Systems	MXF for Oracle SAMMA MJPEG2K	0.2.0.41	MJPEG2K
SeaChange[2][3]	MediaClient	2.3.0.12	MPEG2 D10
Snell & Wilcox, Ltd.	iCR	3.0.0	MPEG2 LGOP HD
Sony	Opt Opt eVTR HA XDCAM Transfer	1.00 1.21, 1.22 1.00 1.00 Sony MXF SDK 2.1.0.0	MPEG2 D10 XDCAM HD MPEG2 D10 MPEG2 D10 XDCAM HD
Telestream	Flip Factory[4]	3.00	MPEG2 D10, XDCAM HD
Thomson Broadcast and Media Solutions, Inc.	Universal Interface Module	2.0.6.3, 2.0.14.2	MPEG2 D10
Thomson Grass Valley, Inc.	K2 Media Systems	Engineering Release Toolkit 9.8.7.0	MPEG2 D10 XDCAM HD

1 MXF files created by OCTk are the files created by Oracle SAMMAsolo.

2 MXF generated by Seachange are supported as standalone MXF files (no `.pd` or `.vix` file).

3 Starting with DIVArchive 7.2.2, the Vstream protocol is no longer supported for Seachange sources and destinations. This applies to the source types SEACHANGE_BMC and SEACHANGE_BML when no -ftp option is specified (indicating Vstream protocol is in use, not FTP).

4 DIVArchive 7.5 ends Oracle support for Telestream Flip Factory. Oracle will provide best efforts to assist customers to transition to other transcoding solutions.

Audio Video Interleaved (AVI)

The applicable wrapper format is a single AVI file per object, and may contain audio tracks. This Partial File Restore is supported by **AUTO_DETECT** only.

Adobe Premiere

Supports DVSD and PCM video and audio essences.

Harris Corporation Nexio 3600

Supports DVSD and PCM video and audio essences.

Audio Video Interleaved (AVI) with Separate WAV Files

The applicable file format is a single AVI file with separate WAV files. The AVI file contains a single video track, and the WAV files contain a PCM sample format. This Partial File Restore is supported by **VIDEO_FORMAT_AVI** and **AUTO_DETECT**.

Manufacturer	Product	Release	Supported Video and Audio Essence
Insipiens	AVI Writer	1.0.0.0	MPEG2 LGOP
Matrox	MQSink Filter Format 4	2.0.0.271	DV25, DV50
	MQSink Filter Format 6	2.0.0.271	Dv25, DV50, DVSD
	MQSink Filter for MPEG Format 4	2.0.0.270, 2.0.0.271	MPEG2 LGOP, MPEG2 I-Frame[1]
	DSX AVI File Format 6	1.0.0.362, 1.0.0.401	MPEG2 LGOP[2], M701 HD
Telestream	Flip Factory[3]	Unknown	DVSD, MPEG2 LGOP
		6.0, 6.1	M701 HD

[1] MPEG2 I-Frame supported on 2.0.0.271 only.

[2] MPEG2 LGOP supported on 1.0.0.362 only.

[3] DIVArchive 7.5 ends Oracle support for Telestream Flip Factory. Oracle will provide best efforts to assist customers to transition to other transcoding solutions.

QuickTime

QuickTime is a file wrapper and may contain multiple tracks of various types (audio, video, and so on). QuickTime self-contained clips are supported using **OMNEON** and **AUTO_DETECT**.

QuickTime Partial File Restore is supported by Windows Actors only.

Partial File Restore support for QuickTime with MPEG2 LGOP (XDCAM HD 422 with sixteen tracks of audio) is supported as follows, regardless of the type of video or audio content:

- The number of tracks per clip is currently limited to thirty.
- Tracks must have the same duration and start time.
- QuickTime standards support advanced edit list features that are not supported by Partial File Restore.
- Each track must be composed of a single valid edit list entry that may or may not start from zero.

Some content types are not supported, including some video and audio combinations. The following table identifies supported types:

Supported Track Types	Cardinality
Video	One video track per clip
Video	Two video tracks per clip[1]
Audio	Zero or multiple tracks per clip
Closed Caption[2]	One track per clip
Timecode with a single entry	One track per clip

Supported Track Types	Cardinality
Timecode with multiple entries	One track per clip

[1] When a Quicktime clip contains two video tracks, the tracks must be synchronized and have the same duration and start from 00:00:00:00.

[2] Empty Closed Caption tracks are supported.

QuickTime Self-Contained Clips

The format of the video essence is not a criterion in QuickTime Self-Contained clips. In theory, the Partial File Restore for QuickTime should be able to support any type of video essence. Partial file restore is not recommended for the following variations in the video essence format:

- Where the video quality supports 420 or 422
- Where the number of pixels is not a factor
- Where the clip is bit rate independent

The following table describes what has already been tested and does not guarantee that Partial File Restore will support it. The only supported audio formats are AIFF and WAV (LPCM).

Manufacturer	Product	Release	Supported Video Essence
Dalet			DVCPRO100
Omneon	Spectrum	5.x	DV25, DVCPRO, DVCPRO50, DVCPRO HD, MPEG2 D10, MPEG2 I-Frame, MPEG2 LGOP, MPEG2 LGOP HD
Oracle	SAMMAsolo	Unknown	DV25
Telestream	Flip Factory[1]		MPEG2 LGOP

[1] DIVArchive 7.5 ends Oracle support for Telestream Flip Factory. Oracle will provide best efforts to assist customers to transition to other transcoding solutions.

Leitch Exchange Format (LXF)

Leitch Exchange Format (LXF) is well defined and Partial File Restore supports specific releases of the file format regardless of the source of the clip (Nexio, Flip Factory, and so on). The supported request format is either **AUTO_DETECT** or **VIDEO_FORMAT_LEITCH**.

The LXF Release 0 supported video and audio essences are:

- MPEG2 I-frame Standard Definition (SD)
- MPEG2 LGOP SD
- DV
- DVCPRO
- DVCPRO50

The LXF Release 1 supported video and audio essences are:

- MPEG2 4:2:2 (1080i and SD only)
- DV SD
- DVCPRO SD

- DVCPRO50 SD
- DVCPRO HD

DIF with Separate WAV Files

The applicable file format is a single DIF or DV file with separate WAV files. WAV files contain the PCM sample format. This Partial File Restore supports Avid Liquid and Omneon Spectrum with DV25 and WAV PCM using either **AUTO_DETECT** or **VIDEO_FORMAT_OMNEON**.

Broadcast WAV (BWAV)

Broadcast WAV (BWAV) is a regular WAV file that includes additional information - `Bext` and `iXML` (optional). `Bext` is a broadcast extension containing metadata, including `TimeReference` (timecode reference in milliseconds). DIVArchive uses `Bext` as a timecode reference for Partial File Restore.

BWAV may also contain and optional metadata called `iXML`. The metadata `iXML` contains an additional `TimeReference` and a frame rate. When `iXML` and `Bext` are both present, DIVArchive uses `iXML` because it contains an accurate frame rate (useful to convert milliseconds to and from a timecode). Without `iXML`, the millisecond to timecode conversion is only an approximation.

6

Sources and Destinations

DIVArchive transfers content to and from external equipment such as broadcast video servers, video editing systems, and generic computer systems. The following are the certified interfaces and protocols supported by DIVArchive 7.5.

> **Note:** Starting with DIVArchive 7.2.2, the Vstream protocol is no longer supported for Seachange sources and destinations. This applies to the source types `SEACHANGE_BMC` and `SEACHANGE_BML` when no **-ftp** option is specified (indicating Vstream protocol is in use, not FTP).

Source and Destination Servers

The following table identifies the source and destination servers supported by DIVArchive 7.5.

Manufacturer	Server Model	Protocol	Unicode Support	OTU Support
Avid	See `FTP_STANDARD` table.	FTP	See the Oracle DIVArchive Avid Connectivity User's Guide.	No
DataExpedition	Expedat 1.15, Expedat 1.16	MTP	Yes	No
Disk (Local)	Internal disk	Direct	Yes	No
Disk (Network)	Shared File System, SAN, NAS	CIFS	Yes	No
EVS	Little Big Server, XT3	FTP	No	No
Grass Valley	NewsEdit, NewsFTP (Aurora Edit HD), UIM Gateway with MXF[1], K2[2]	FTP	Only K2 is supported.	No
Leitch	VR Series[3], Nexio 3600	FTP	Only Nexio 3600 is supported.	Only Nexio 3600 is supported
Omneon	Spectrum 4.6 SR2 Spectrum 4.7 SR2 Spectrum 5.0 SR1	FTP and AVI player FTP and AVI Player FTP and AVI Player	Only Spectrum 5.0 SR1 is supported.	Yes Yes Yes

Manufacturer	Server Model	Protocol	Unicode Support	OTU Support
Omneon	Spectrum 6.1 with System Manager 5.14	FTP Only	Yes	Yes
Omneon	MediaGrid[4] 1.1	Mapped drive using MediaGrid file system drivers	Yes	No
Quantel	SQserver regional server with ISA gateway[5]	FTP	No	No
Sony	News Base Hyper Agent	FTP	No	No
Various (UNIX, Windows, Mac)	Any standard FTP server (RFC-959)	FTP	No	No
	Secure FTP server V3 (limited support)	SFTP	No	No

1 UIM Gateway with MXF is supported for release 2.0.6.3.
2 GXF and MXF formats are supported.
3 Supported only using WanStreamer or ArchiveStreamer.
4 Linux does not support MediaGrid because the API it depends on is not Linux compatible.
5 MXF supports release 2.1-22.09. Release 2.1-22.10 supports intelligent archive in TAR format.

The following table identifies FTP servers supporting `FTP_STANDARD`.

Note: Oracle only supports Linux-based FTP servers for DIVArchive systems installed in the Linux operating system environment.

Manufacturer	Product Name	Actor Qualified	Unicode Support	DFM Qualified	OTU Qualified
Microsoft	IIS	Yes[1]	No	Yes[2]	Yes
FileZilla	FileZilla FTP Server	Yes	Yes	No	Yes
Gene6	Gene6 FTP Servers	Yes	Yes	No	No

1 Actor supports IIS with UNIX-like listing type configured.
2 DFM supports IIS with DOS-like listing type configured.

7

Oracle DIVArchive Avid Connectivity

This chapter gives an overview of Oracle DIVArchive Avid Connectivity support for DIVArchive 7.5. For detailed information see the *Oracle DIVArchive Avid Connectivity User's Guide* in the *Oracle DIVArchive 7.5 Additional Features documentation* library.

Avid Interplay Compatibility

The following table identifies current Avid Interplay and DIVArchive release compatibility for AMC and TMC.

Note: Use `AMCommunicatorI22` for all releases. Use 1.0 for Legacy workflows and 2.0 for Avid Direct workflows.

Interplay Release	TMCommunicator	TMCommunicator Binaries	AMCommunicator
2.2.x	Yes	`TMCommunicatorI22`	Yes
2.3.x	Yes	`TMCommunicatorI22`	Yes
2.4.x	Yes	`TMCommunicatorI22`	Yes
2.5.x	Yes	`TMCommunicatorI25`	Yes
2.6.x	Yes	`TMCommunicatorI26`	Yes
2.7.x	Yes	`TMCommunicatorI26`	Yes
3.0.x	Yes	`TMCommunicatorI30`	Yes
3.1.x	Not Supported	Not Supported	Yes
3.2.x	Only DHM	`TMCommunicatorI32` - *TMClient 3.1* is required, DET restore is not supported.	Yes
3.3.x	Only DHM	`TMCommunicatorI33` - DET restore is not supported.	Yes
3.4.x	Only DHM	`TMCommunicatorI33` - DET restore is not supported.	Yes
3.5.x	Yes	`TMCommunicatorI33`	Yes
3.6.x	No		Yes