



Compatibility Guide

ver. 4.9.0



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Overview

The **Catalogic DPX Compatibility Guide** outlines an at-a-glance view of the different operating systems, applications such as databases, and storage solutions that can be protected by using the Catalogic DPX data protect solution.

Virtual Environments

Use Catalogic DPX Agentless Backup with the following virtual environments:

- Agentless Backup for VMware (page 22)
- Agentless Backup for Microsoft Hyper-V (page 23)

Operating Systems

Both block-level and file-level backup features are available for major versions of the following operating systems:

- Microsoft Windows (page 24)
- Red Hat Enterprise Linux (RHEL) (page 27)
- CentOS Linux (page 29)
- Oracle Linux (page 31)
- SUSE Linux Enterprise Server (SLES) (page 32)
- Canonical Ubuntu (page 34)

File-level backup features are available for major versions of the following operating systems.

- Debian (page 34)
- Micro Focus Open Enterprise Server (OES) (page 35)
- IBM AIX (page 36)
- FreeBSD (page 36)

Applications

Block-level and file-level backup features are available for major versions of the following applications:

- Microsoft SQL Server (page 39)
- Microsoft Exchange Server (page 42)
- Microsoft SharePoint Server (page 43)

File-level backup features are available for major versions of the following applications:

- IBM Db2 (page 40)
- SAP HANA (page 41)
- SAP R/3 (page 41)
- Micro Focus GroupWise (page 44)
- HCL Notes and HCL Domino (page 45)

General Information

Contents in the Catalogic DPX 4.9.0 Compatibility Guide solely applies to Catalogic DPX 4.9.0. For other versions of the Catalogic DPX series, go to the Catalogic Software MySupport website (mysupport.catalogicsoftware.com) and see the Compatibility Guide for the version that you are using.

Scope

The Catalogic DPX Compatibility Guide contains the latest system requirements and compatibility details regarding supported hardware, file systems, applications, operating systems, and service packs.

Terms

Catalogic DPX Master Server: A server appliance that contains the DPX product, including the catalog and modules that control media management, scheduling, and distributed processing. This is deployed in the form of a VMware OVA or Microsoft Hyper-V template and may be referenced as the DPX Master, DPX Master Server virtual appliance, or DPX virtual appliance.

Device Server: A node to which one or more storage devices (tape, VTL, disk) are attached.

DPX Management Interfaces: A graphic interface that users can use to operate the Catalogic DPX Master Server instead of using the operating system interface such as Bash for Linux and Microsoft Windows desktop. There are the HTML-5-based DPX Management Interface and the Java-based DPX Management Interface.

Basic Client: A computer that contains the data, applications, and operating systems that are protected at file-level.

DPX Block Data Protection (Block Backup): A protection and recovery model that comprehensively backs up open systems such as Windows and Linux to disk-based storage using Catalogic Software's block-level agent. Features include block-level incremental snapshot technology, Instant Access and Instant Virtualization, source and target side data reduction, Bare Metal Recovery, and application recovery. DPX Block Data Protection supports the following features:

- **Catalogic DPX Open Storage Server (OSS; formerly called AROS or DOSS):** A computer that can store protected data on local or attached disk storage. This is one destination for Block backups. This feature applies to DPX 4.2 and later.
- **Catalogic DPX Client:** A computer that contains the data, applications, volumes, and operating systems that are protected with Block backup.
- **Bare Metal Recovery (BMR):** A feature that provides point-in-time server recovery of a DPX Client using Block backups.
- **Application Recovery:** A DPX Block Protection feature that rapidly recovers data from Microsoft SQL Server, Microsoft Exchange, and Oracle.
- **Instant Access (IA):** A feature that provides instantly writable access to data and application recovery points. A Block backup snapshot is mapped to a target server where it can be accessed, copied, or put immediately into production use as needed.
- **Instant Virtualization (IV):** A feature that enables customers to create a virtual machine in the VMware ESXi server from any recovery point on any Windows and Linux physical or virtual server. IV creates a virtual machine in the virtual machine host without restoring data from the selected recovery point. This operation does not physically transfer data to the virtual machine and makes it possible to complete a disaster recovery operation of a physical or virtual server in minutes, without recovery storage requirements.
- **Full Virtualization (FV):** A feature that enables customers to create a virtual machine in an ESXi server from any recovery point on any Windows and Linux physical or virtual backed up instance. FV creates a virtual machine in

the virtual machine host that contains a clone of the backed-up server. If the backed-up server is physical, FV performs a physical-to-virtual (P2V) operation.

- VMware Backup: A feature that exploits VMware vStor application programming interface for data protection and Change Block Tracking to enable off-host backup of vSphere virtual machines through the Catalogic DPX proxy servers, eliminating the need to install and run a backup agent on virtual machines or the VMware ESXi servers.
- Microsoft Hyper-V Backup: A feature that allows for the off-host backup and the restoration of Microsoft Hyper-V virtual machines to a primary backup destination such as the vStor Server.

Catalogic vStor: A physical or virtual appliance that can serve as your DPX primary backup destination. vStor servers can store with Block, Microsoft Hyper-V, or VMware backups.

SAN Device Server: A device attached to Storage Area Network. Catalogic Software supports any combination of UNIX, Windows, NetWare/OES, Linux, and NDMP/NAS in a SAN.

Image Backup for seeding: A technology used to transfer a Block Backup base to a remote location via tape. This is useful for initiating the Block Backup relationship when nodes exist across low bandwidth WAN links.

Application Interfaces: A set of features that interface with Microsoft Exchange, Microsoft SQL Server, Microsoft SharePoint, Oracle, IBM DB2, IBM Lotus Notes, Novell (Micro Focus) GroupWise, and SAP R/3.

NDMP Backup: A feature that uses Network Data Management Protocol (NDMP) to coordinate backup and restore operations between NDMP compliant devices using vendor-specific data formats. NetApp supports DUMP and SMTAPE data formats. Other vendors may support TAR or other data formats. Vendor data formats are proprietary, thus restore operations must be performed to systems similar to the backup source.

Backward Compatibility of Catalogic DPX Master Server and Clients

Catalogic DPX Master Server, device server, Open Storage Server (OSS) and all nodes operating as proxy servers for NDMP communication and for Virtualization functions must be on the same release version.

Catalogic DPX Master Server supports Catalogic DPX Clients with the same version and the past two versions, that is, DPX 4.8, DPX 4.6, and DPX 4.5. This backward compatibility is intended for migrating user's Enterprises.

Table 1. Catalogic DPX Master Server versions and life cycles

Catalogic DPX Master Server	Compatible Catalogic DPX Clients
Catalogic DPX Master Server 4.9	Catalogic DPX Client 4.9, 4.8, 4.7
Catalogic DPX Master Server 4.8 (reference)	Catalogic DPX Client 4.8, 4.7, 4.6
Catalogic DPX Master Server 4.7 (reference)	Catalogic DPX Client 4.7, 4.6, 4.5*
Catalogic DPX Master Server 4.6 (reference)	Catalogic DPX Client 4.6, 4.5*, 4.4*

* Catalogic DPX 4.4 and 4.5 are no longer supported by the Catalogic support policy.

To assure the most reliable operation and enable the most efficient support, it is strongly recommended that clients be upgraded to the same version as the master server as soon as it is practical and that all components (servers and clients) are kept current to the latest patch level for their release version.

New features or enhancements to features in a new release will not be available for prior versions. New technical issues found with older client software may require upgrade to correct or continue troubleshooting.

Catalogic DPX Master Server and Requirements

You can deploy the Catalogic DPX Master Server virtual appliance on either VMware or Microsoft Hyper-V by using the template file. The default deployment template will include the following configuration.

Table 2. Default configurations of the Catalogic DPX Master Server virtual appliance

System Component	Default configuration
CPU	Four virtual CPUs
Memory (RAM)	16GB
Operating system	AlmaLinux 8.5 for Catalogic DPX Master Server
Data Disk subsystem	Required: 270GB HDD space
Network adapter	Recommended: 10Gbps Minimum: 1Gbps

Alternatively, you can also install the Catalogic DPX Master Server application on a generic, dedicated server that meet the following recommendations:

Table 3. Recommended system configuration for the Catalogic DPX Master Server appliance

System Component	Specification
CPU	Recommended: 4 CPUs
Memory (RAM)	Recommended: 16GB
Operating system	Linux or Microsoft Windows
Network adapter	Recommended: 10Gbps Minimum: 1Gbps

Catalogic vStor Server Requirements

For a quick, safe, complete, and versatile data protection and recovery strategy, Catalogic has developed the vStor server. The vStor server, connected to disk storage pools, is a reliable streamlined tool that can serve as your DPX primary backup destination.

- You can deploy the Catalogic vStor virtual appliances in VMware or Microsoft Hyper-V environments. Or, you can install the Catalogic vStor server on a generic Linux machine that satisfies the system requirement.
- For backups to and recoveries from a vStor server, both Block backups and Agentless backups are supported. File, NDMP, or archive backups are supported if DPX is installed on the vStor server and scanned in as a DPX node.
- BMR recovery is supported for Windows and Linux Block backup to vStor servers. Linux client node requires kernel 3.10 or later.
- For Block backups to vStor, the Backup client must be running DPX 4.5.2 or later. For Agentless backups to vStor, the virtualization proxy server must be running DPX 4.5.2 or later.
- Disk to vStor to media archiving is supported for Block and Agentless backups.

Before you deploy the Catalogic vStor virtual appliance for VMware or Microsoft Hyper-V, review the following specification of it:

Table 4. Specification of the Catalogic vStor virtual appliance for VMware or Microsoft Hyper-V

System component	Default configuration
CPUs	Four virtual CPUs
Memory	16 GB
Operating system	AlmaLinux 8.7 for Catalogic vStor
Hard disks	System disk (50 GB) and Starter disk (100 GB)

Ensure that the system resources for the virtual machines are exclusively reserved in the hypervisor so that it does not share or reallocate with other virtual machines. Also, review the following table that summarizes the recommended configurations of the disks and network adapters:

Table 5. Recommended configuration of the Catalogic vStor virtual appliance

System component	Recommended configuration
Data disk subsystem	Direct-attached storage (DAS); Physical raw device mappings (physical RDMs or pRDMs)*; at least 120 MB/s of bandwidth
Log disks	Two 10-GB disks with LUNs
Cache disk	100GB
Network adapter	10 Gigabit Ethernet (10GbE)

Alternatively, you can install the Catalogic vStor for Linux on a generic machine that meets the following system requirement:

Table 6. Required configurations for the Catalogic vStor for Linux

System component	Required configurations
CPUs	At least 4 CPUs or 4 CPU cores
Memory	At least 32 GB without deduplication; or At least 64 GB with deduplication.
Operating system	AlmaLinux 8.7*
Data disk subsystem	Direct-attached storage (DAS) At least 120 MB/s of bandwidth RAID 5 with hot-spare disks
Network adapter	10 Gigabit Ethernet (10GbE)

Note: Although Catalogic Software has tested Catalogic vStor with AlmaLinux 8.5 only, Red Hat Enterprise Linux and its variants such as Rocky Linux and Oracle Linux Red Hat Compatibility Kernel are very likely to work too. Use Version 8.5 or later minor versions of the 8 series such as 8.7. Do not use Version 9 or later. Do not use Oracle Linux Unbreakable Enterprise Kernel (UEK) or CentOS Stream 8.

Support Lifecycle Schedule

The Support Lifecycle Schedule provides advanced notification of planned changes in product support. This information helps customers and partners with product planning and information technology decisions. Catalogic regularly reviews system and application popularity and will include and exclude various features on a regular basis.

Full support includes software maintenance updates, content updates, software fixes, knowledge base support and access to Catalogic support engineers per terms of the maintenance agreement. Releases of Catalogic DPX typically reach General Availability (GA) approximately once a year.

The extended support starts when full support has ended and includes access to Catalogic support engineers per terms of the maintenance agreement, access to already existing software updates/fixes and knowledge base support but excludes new software maintenance and new content updates. The investigation of new issues is limited and does not include any software development.

Catalogic support of operating systems and applications parallels that of the third-party vendors: when third-party vendor products go into extended support, self-serve support, or end of life, Catalogic generally does the same.

End-of-Support Schedule for Catalogic DPX versions

Release	Release Date for GA	End of Full Support	End of Extended Support
Catalogic DPX 4.9	December 15, 2022	December 15, 2024	December 15, 2026
Catalogic DPX 4.8	January 13, 2022	December 13, 2023	December 13, 2025
Catalogic DPX 4.7	November 30, 2020	November 30, 2022	November 30, 2024
Catalogic DPX 4.6	November 11, 2019	November 11, 2021	November 11, 2023
Catalogic DPX 4.5 (Reference)	April 28, 2017	June 25, 2019	June 25, 2021

End-of-Support announcement

Catalogic DPX features listed in the table below are not available for sale. Extended support for these features will be available through the dates shown.

The extended support includes access to Catalogic support engineers per terms of the maintenance agreement, access to already existing software updates/fixes and knowledge base support but excludes new software maintenance and content updates. The investigation of new issues is limited and will not include any software development.

Attention! Catalogic Software strongly recommends using solutions that are under support by the original software vendors. Contact the original software vendors for the latest product support policies.

The following table is a list of the Microsoft Windows operating systems that you can protect by using Catalogic DPX until the End of Extended Support by Catalogic Software:

Table 7. Supported Microsoft Windows systems that are ending support periods

Supported Microsoft Windows operating systems	End of Support Date by vendors	End of Extended Support by Catalogic Software
Microsoft Windows Server		
Microsoft Windows Server 2012	October 10, 2023	April 10, 2024
Microsoft Windows Server 2012 R2	October 10, 2023	April 10, 2024
Microsoft Windows		
Microsoft Windows 8.1	January 10, 2023	July 10, 2023

Table 8. Supported Linux systems that are ending support periods

Supported Linux operating systems	End of Support Date by vendors	End of Extended Support by Catalogic Software
Red Hat Enterprise Linux (RHEL)		
Red Hat Enterprise Linux 6 series	June 30, 2024	December 30, 2024
Oracle Linux		
Oracle Linux 6 series	June 1, 2024	December 1, 2024
CentOS Linux		
CentOS Linux 7 series	July 30, 2024	January 30, 2025
Debian		
Debian 9 ("Stretch")	June 30, 2022	November 11, 2022
Novell SUSE Linux Enterprise Server (SLES)		
Novell SUSE Linux Enterprise Server 11	March 31, 2022	September 30, 2022

Table 9. Supported UNIX operating systems and lifecycles

Supported UNIX operating systems	End of Support Date by vendors	End of Extended Support by Catalogic Software
IBM AIX		
IBM AIX 7.1 TL5	April 30, 2023	October 30, 2023
IBM AIX 7.2 TL3	September 30, 2021	March 30, 2022
IBM AIX 7.2 TL4	November 30, 2022	May 30, 2023

Table 10. Supported applications and lifecycles

Supported applications	End of Support Date by vendors	End of Extended Support by Catalogic Software
Oracle Database		
Oracle Database Enterprise Edition 12.1	July 1, 2022	January 1, 2023
Microsoft SQL Server		
Microsoft SQL Server 2012 Service Pack 4	July 12, 2022	January 12, 2023
IBM Db2		
IBM Db2 9.5	September 30, 2022	March 30, 2023
IBM Db2 10.5	April 30, 2023	October 30, 2023
Microsoft SharePoint Server		
Microsoft SharePoint Server 2013 Service Pack 1	April 11, 2023	October 11, 2023
Microsoft Exchange Server		
Microsoft Exchange Server 2013 Service Pack 1	April 11, 2023	October 11, 2023

Table 11. Supported storage controllers and lifecycles

Supported storage controllers	End of Support Date by vendors	End of Extended Support by Catalogic Software
NetApp Clustered Data ONTAP		
NetApp Clustered Data ONTAP 8.2	January 31, 2022	July 31, 2022
NetApp Data ONTAP 7-mode		
NetApp Data ONTAP 7-mode 8.2	December 31, 2025	June 30, 2026
Macro Focus Open Enterprise Server (OES)		
Macro Focus Open Enterprise Server 2018 Service Pack 2 (OES 2018 SP2)	July 31, 2022	January 31, 2023

Notable unsupported solutions

In general, Catalogic DPX does not support any third-party solutions that are not listed in the Catalogic DPX Compatibility Guide.

Table 12. Notable unsupported virtualization systems

Unsupported solution	Support status
VMware vSphere 6.0	Support ended.
Microsoft Windows Server 2012 Hyper-V	Unsupported in Catalogic DPX 4.9.0 and earlier.

Table 13. Notable unsupported operating systems

Unsupported solution	Support status
Microsoft Windows Server 2008 R2	Support ended.
Microsoft Windows 11	Unsupported for data protection in Catalogic DPX 4.9.0 and earlier. You can use the HTML5-based interfaces for Catalogic DPX and Catalogic vStor on Microsoft Windows 11.
Apple macOS series	Unsupported for data protection in Catalogic DPX 4.9.0 and earlier. You can use the HTML5-based interfaces for Catalogic DPX and Catalogic vStor on Apple macOS.

Table 14. Notable unsupported applications

Unsupported applications	Support status
Microsoft SharePoint Server 2010	Support ended.
Amazon Relational Database Service (RDS)	Use Catalogic CloudCasa® instead.
Kubernetes	Use Catalogic CloudCasa.
Red Hat OpenShift	Use Catalogic CloudCasa.

Cloud Storage

You can use Catalogic DPX with supported cloud storage services to store your backup or archive data.

Supported cloud storage services for file-level backup and NDMP-level backup

You can use the following cloud storage services for file-level backups and NDMP-level backups:

Table 15. Supported cloud storage and destination devices for the NDMP-level backups

Cloud Storage	Destination Device
NetApp AltaVault	Disk Directory
Amazon Web Services (AWS)*	Disk Directory and Virtual Tape Library (VTL)

* AWS Storage gateway and virtual tape libraries are support. For NDMP and agentless archive are supported on Catalogic vStor via S3 API.

Supported cloud storage services for agentless archive, block archive, and NDMP-level backups

You can use Catalogic DPX with the following Amazon S3 series:

- Amazon S3 Standard
- Amazon S3 Glacier
- Amazon S3 Glacier Deep Archive

In addition to the Amazon S3 series, you can use the following generic cloud storage services for the Agentless Archive, Block Archive, and NDMP-level backups. These storage services can be on-premise or cloud devices:

- Backblaze B2
- Cloudian HyperStore
- MinIO
- NetApp StorageGRID
- Scality RING
- Wasabi Object Storage

And you can use the following cloud storage solutions:

- Microsoft Azure Blob Storage
- Alibaba Cloud

Cloud storage features

You can use Catalogic DPX with the following features for cloud storage solutions:

Table 16. Available features of cloud storage with supported cloud storage

Cloud Storage	Object Lock
Amazon S3 series	•
Backblaze B2	•
MinIO	
NetApp StorageGRID	
Cloudian HyperStore	
Scality RING	
Wasabi Object Storage	•
	•
	Microsoft Azure Blob Storage
	Alibaba Cloud

Restriction: Specifying the retention periods or placing legal holds for each storage object is not supported.

NetApp Support

Catalogic DPX supports NetApp storage systems, running Data ONTAP. DPX supports the following features with NetApp:

- Block backup
- NetApp OSSV backup
- SnapVault management

Table 17. Available features and requirements for protecting NetApp solutions

Data ONTAP Versions	NetApp Software	Supported Agents	Requirements
9.7, 9.6, 9.5, 9.4, 9.3, 9.2, 9.1, 9.0[8]; 8.3.0 or later, 8.2.3 or later [1]	Clustered Data ONTAP (CDOT)	<ul style="list-style-type: none"> • Catalogic DPX Agentless [9] • Catalogic DPX Agent for Windows [6] • Catalogic DPX Agent for Linux [7,9] 	<ul style="list-style-type: none"> • FlexClone license is required • iSCSI license is required. • NFS license is required only for DPX Agent for Windows
8.2.0 or later, 8.1.0 or later, 8.0.1 or later, 7.3.1 or later [1,2,3]	Data ONTAP 7-mode	<ul style="list-style-type: none"> • Catalogic DPX Agentless [5,9] • Catalogic DPX Agent for Microsoft Windows and Linux [9] • NetApp OSSV Agent for Oracle Solaris and IBM AIX [4] • Data ONTAP SnapVault Primary to Secondary (controller to controller) [4] 	<ul style="list-style-type: none"> • SnapVault Secondary license is required • FlexClone license is required • iSCSI license is required

Note:

1. Compression is supported for Data ONTAP 8.0.1P4 or later; NetApp's Advanced Single Instance Storage (A-SIS) deduplication is supported for Data ONTAP 7.3.1 or later.
2. NetApp ONTAP Edge-T is supported as a data protection target.
3. vFiler use (MultiStore licensing) for NDMP and Block backup is only supported for Data ONTAP 8.2.1 and later.
4. SnapVault support is limited to 7-mode. SnapVault backup between 7-mode and Clustered Data ONTAP is not supported.
5. DPX Agentless supports Data ONTAP 8.1 and later.
6. Backup of Oracle on Windows to a NetApp CDOT target is not supported.
7. Uses iSCSI transport protocol. Support for remote locations is limited.
8. Supported with compatibility mode only. DPX does not support new features specifically introduced in ONTAP 9.x release.
9. BMR recovery for machines using GPT disk is now supported for Linux. Instant Virtualization and Full Virtualization for machines using GPT disk are now supported for Linux.

NDMP Backup Support

All NetApp supported versions of Data ONTAP are supported for NDMP Backup SMTAPE incremental is not supported.

NAS devices from other vendors that fully support NDMP V3 or V4 can be supported for NDMP backups.

Encryption Support

Catalogic DPX Software Encryption Support

The requirements for the Catalogic DPX Device Servers in the following list must be met for software encryption. Encryption support is limited to the Catalogic DPX Basic Clients. The following Device Servers support software encryption compatibility:

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- SUSE Linux Enterprise Server 15 and later
- SUSE Linux Enterprise Server 12 and later
- SUSE Linux Enterprise Server 11 SP1 and later
- Red Hat Enterprise Linux and CentOS Linux 7 and later
- Red Hat Enterprise Linux and CentOS Linux 6 and later
- IBM AIX 6 or later

Catalogic DPX Hardware Encryption Support

You can use the Catalogic DPX hardware encryption with the following tape media:

Device Server (File support) / Proxy Server (NDMP support)	IBM LTO [1,2]	HPE LTO [1,3]	Quantum LTO [1,4]
Microsoft Windows Server 2012 R2	•		
Microsoft Windows Server 2012	•		
SUSE Linux Enterprise Server 11 SP1 and later	•	•	•
Red Hat Enterprise Linux 6 or later, CentOS Linux 6 and later	•	•	•
IBM AIX 6 and later	•	•	•
NetApp [5]	•	•	•

Note:

1. Encryption support is limited to the Catalogic DPX Basic clients.
2. IBM Drives with IBM driver.
3. HP Drives with BEXSPTAPE interface.
4. Quantum Drives with BEXSPTAPE interface.
5. NDMP hardware encryption requires that the tape device be connected to a NetApp Storage System. Clustered Data ONTAP virtual storage server (Vserver) support is available in Catalogic DPX 4.2.0 and later with Data ONTAP 8.2 and later. Tape Drive is local or connected to another NetApp controller.

NDMP Encryption Compatibility

The requirements for the Catalogic DPX proxy servers in the table below must be met. NDMP hardware encryption requires that the tape device be connected to a NetApp Storage System. Clustered Data ONTAP SVM support is available in Catalogic DPX 4.2 and later with Data ONTAP 8.2 and later. The following platforms are supported for NDMP Proxy servers:

- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 and 2008 R2
- SUSE Linux Enterprise Server 11 SP1 or later
- Red Hat Enterprise Linux and CentOS Linux 6 or later

Hardware Compatibility

Supported CPU architectures

The Catalogic DPX Master Server, the Catalogic DPX Client, the Java-based DPX Management Interface, and Catalogic vStor support CPUs with the x86-64 architecture. Catalogic Software has tested the HTML5-based DPX Management Interface on the supported browsers and systems for the x86-64 architecture.

The Catalogic DPX solution partially supports IBM AIX and IBM Db2 with the IBM POWER® series. For more information about the product support for the IBM POWER solutions, see “IBM AIX” on page 36 and IBM Db2 on page 40.

Tape Libraries, Virtual Tape Libraries, and Standalone Tape Device

Catalogic DPX supports tape devices that are compliant with the SCSI-2 standard. Tape drives must support variable length records and allow a minimum transfer size of 32 KB.

Catalogic DPX supports media changers that are compliant with the SCSI-2 standard. Additionally, media changer support on Microsoft Windows requires Microsoft Windows NT SCSI Pass-Through support from the HBA driver or a vendor-supplied media changer driver supporting Microsoft Windows NT SCSI Pass-Through.

Unless otherwise advised by Catalogic Data Protection Technical Support, the operating system of the Device Server that connects the tape or tape library device should have properly installed drivers that are recommended by the device manufacturer.

No troubleshooting or bug fix support is offered for devices that are no longer supported by the hardware vendor. Minimal troubleshooting and no new development will be done for devices connected to operating systems that are no longer supported by the vendor.

Catalogic DPX treats a Virtual Tape Library (VTL) device as a regular tape library and supports it the same way it does for tape libraries.

Catalogic Software has qualified Catalogic DPX with the following tape media:

Hewlett Packard Enterprise (HPE)

- HPE LTO-5, HPE LTO-6, HPE LTO-7, HPE LTO-8, HPE LTO-9*

IBM

- IBM LTO-5, IBM LTO-6, IBM LTO-7

Catalogic Software has qualified Catalogic DPX with the following tape libraries:

Dell Technologies

- Dell PowerVault TL2000

HPE

- HPE StoreEver MSL3040, HPE StoreEver MSL6480

Oracle

- Oracle StorageTek SL150

Overland Tandberg

- Overland Tandberg NEOxl 80

Quantum

- Quantum Scalar i500, Quantum Scalar i6000

Note:

* The LTO Generation 9 (LTO-9) mandates the “initial calibration” for every LTO-9 media cartridge when it is being used for the first time. The media initialization process may take up to 2 hours (see <https://www.lto.org/faqs-about-lto>). New LTO-9 media cartridges need to be initialized first before using them with Catalogic DPX write operations (labeling and backup).

Catalogic DPX Management Interfaces

There are two types of Catalogic DPX Management Interfaces: the HTML5-based DPX Management Interface that you can use on your web browser and the Java-based DPX Management Interface, which is a cross-platform desktop application.

HTML5-based DPX Management Interface

To use the HTML5-based Management Interface, ensure that you are using the latest version of either one the following web browsers:

- Mozilla Firefox
- Mozilla Firefox Extended Support Release (ESR)
- Google Chrome
- Microsoft Edge
- Apple Safari for Apple macOS

Moreover, ensure that you are using either one of the following operating systems on your workstation to use the HTML5-based DPX Management Interface:

- Microsoft Windows
- Apple macOS

Some features are only available in the Java-based DPX Management Interface which does not support Apple macOS.

Java-based DPX Management Interface

Each release of the management console has specific requirements for the Oracle Java Runtime Environment (JRE). The following Java versions are required for the DPX Management Interface operations:

- Java Runtime Environment (JRE) 1.8 TLS protocol must be enabled on NetApp targets.

Note: Oracle Corporation has changed its licensing model for Oracle Java Runtime Environment. An alternative to JRE is Oracle OpenJDK 8, 9, or 10 for Microsoft Windows nodes or Linux nodes. For more information about Oracle OpenJDK versions, see the following website:

- AdoptOpenJDK (adoptopenjdk.net/releases.html)

Access Catalogic DPX Master Server with the Java-based DPX Management Interface of the same appliance. Do not access Catalogic DPX Master Server from the Java-based DPX Management Interface of different appliances, especially when these two have different versions.

Virtual Environment Support

Catalogic DPX provides agent-based block backup and agentless backup.

Agent-based Block Backup

Agent-based Block Backup for Virtualization is a Virtual Machine (VM) backup solution in which DPX client software is installed on each VM you want to protect. Catalogic DPX supports agent-based Block Backup for Virtualization with VMware vApps, vFolders and resource pools.

Agent-based Block Backup is recommended for protecting applications such as Microsoft Exchange, Microsoft SharePoint, and Microsoft SQL Server residing on a virtual machine, assuring application consistent backups and proper transaction log truncation. In addition, tools of KLDISCOVERY, formerly Kroll, provide granular application object recovery support. KLDISCOVERY Ontrack tool provides for granular search and recovery of individual mailbox items (emails, calendar, contacts, etc.), and provides for search and recovery of entire Microsoft SharePoint sites or individual Microsoft SharePoint server objects such as documents, lists, libraries, and folders. KLDISCOVERY SQL tool provides the ability to preview table contents and to restore SQL tables without restoring the entire database.

The current version supported by Catalogic DPX is KLDISCOVERY OnTrack PowerControls 9.0.

Agentless Backup for VMware

Agentless VMware Backup eliminates the overhead of installing and maintaining a backup agent on each VM. Catalogic DPX backs up the VMs through the VMware vCenter and the Catalogic DPX virtualization proxy server, each of which must be added to the Catalogic DPX Enterprise. The Catalogic DPX virtualization proxy server handles VMware snapshot processing and communicates with the storage destination and master server. Agentless VMware Backup supports auto-discovery and protection of new and modified VMs. For a complete list of operating system versions, please refer to VMware Compatibility Guide at VMware website.

Using Agentless VMware Backup to protect VMs has significant advantages, including simplified administration and tight integration with VMware vCenter. Users have a wide range of recovery options available. These include the same Instant Virtualization and Full Virtualization features available with DPX agent-based backups. In addition, "Instant VMDK" allows rapid mapping of VMDK (Virtual Machine Disk) images back to the same VM or an alternate VM. VMDKs can also be mapped to physical servers to share data across physical/virtual boundaries.

DPX supports crash-consistent backup of all guest operating systems that are supported by vSphere 6.0 and later using the VADP interface and DPX's agentless feature. Please refer to VMware's compatibility website (vmware.com/resources/compatibility/search.php) for a complete list of operating system versions.

DPX supports application-consistent backup using DPX's Agentless feature. Refer to the Agentless VMware Backup Chapter in DPX Users Guide.

Supported VMware vSphere

- VMware vSphere 7.0
- VMware vSphere 6.7
- VMware vSphere 6.5

Restrictions:

- Catalogic DPX supports Virtual Volume (VVol) datastore for Agentless VMware backup to NetApp and vStor storage. VMware Virtual SAN (vSAN), a network-based storage solution with direct attached disks, does not support the SAN transport mode for VADP backup. Because vSAN uses modes that are incompatible with SAN transport mode, if the virtual disk library detects the presence of vSAN, VADP SAN transport modes are automatically disabled. The other transport modes for VADP backup will continue to operate.
- Rapid Return to Production (RRP) requires a Storage vMotion and valid ESXi license on vSphere. See the "Rapid Return to Production" section in the DPX User's Guide.
- Ensure the latest version of VMware Tools is installed for your vCenter version.

Agentless Backup for Microsoft Hyper-V

Catalogic Software provides DPX Block and Agentless data protection for virtualization to protect Microsoft Hyper-V environments. The DPX agent must be installed on each guest virtual machine that is protected by DPX. Both hosts and clusters are supported.

Agentless Hyper-V Backup eliminates the overhead of installing and maintaining a backup agent on each VM. DPX backs up the VMs through the Hyper-V host by using an agent installed on each Hyper-V host or cluster which must be added to the DPX Enterprise. The agent handles Hyper-V snapshot processing and communicates with the storage destination and master server. Agentless Hyper-V Backup supports auto-discovery and protection of new and modified VMs. For a complete list of operating system versions, see the following web page:

- Microsoft: "Supported Windows guest operating systems for Hyper-V on Windows Server"

Backup and restore jobs for Microsoft Hyper-V can only be run through the HTML5-based DPX Management Interface.

Catalogic DPX supports crash-consistent backup of all guest operating systems that are supported by Microsoft Windows Server 2016 and later using the Catalogic DPX agentless feature.

You can use Catalogic DPX with the following Microsoft Hyper-V versions:

- Microsoft Hyper-V for Windows Server 2019
- Microsoft Hyper-V for Windows Server 2016

The VMs to protect must be the Microsoft Hyper-V configuration versions of 8.0 or later.

Operating System Support

You can install and operate Catalogic DPX Master Server on supported operating systems. Or, protect operating systems with various features. There are three types of supported operating systems: Microsoft Windows, Linux, and UNIX. Review this chapter and ensure that you are using the supported operating system series and versions.

Microsoft Windows

You can use Microsoft Windows for Catalogic DPX in multiple purposes; as the Catalogic DPX Master Server, as the backup source, and so on. For the product lifecycles of the Microsoft Windows operating systems for the Catalogic DPX solution, see End-of-Support on page 10.

Review the following table and notes to ensure that you are using the supported series and version of the Microsoft Windows operating systems:

Table 18. Compatibility matrix for Microsoft Windows

Operating System	Catalogic DPX Master Server	Device or SAN Device Server	DPX Open Storage Server (OSS)	Basic Client	Catalogic DPX Client	Java-based DPX Management UI	Open File Management	Image Backup for Seeding	BMR	NDMP Proxy	Cluster Support	Supported File Systems for Block Backup
Microsoft Windows Server 2022				• [2,6]	• [5,9]		• [6]	• [10,11]				NTFS [1,10], ReFS [11], DFS [12]
Microsoft Windows Server 2019	• [16]	•	• [14]	• [2,6]	• [5,9]	•	• [6]	• [10,11]	• [16,17]	• [7]	• [4,15]	NTFS [1,10], ReFS [11], DFS [12]
Microsoft Windows Server 2016	• [16]	•	• [14]	• [2,6]	• [5,9]	•	• [6]	• [10,11]	• [3,17]	• [7]	• [4,15]	NTFS [1,10], ReFS [11], DFS [12]
Microsoft Windows Server 2016 Core		•		• [2]	•		• [6]	•	• [3,17]	• [7]		NTFS[1][10]
Microsoft Windows Server 2012 R2	• [16]	•	• [14]	• [2,6]	• [5,9]	•	• [6]	• [10,11]	• [3,17]	• [7]	• [4,10,15]	NTFS [1,10], ReFS [11], DFS [12]
Microsoft Windows Server 2012 R2 Core Server	• [16]	•		• [2]	•		• [6]	•	• [3,17]	• [7]	• [4,10]	NTFS [1,10]
Microsoft Windows Server 2012	• [16]	•	• [14]	• [2,6]	• [5,9]	•	• [6]	• [10,11]		• [7]	• [4,10,15]	NTFS [1,10], ReFS [11], DFS [12]
Microsoft Windows Server 2012 Core Server	• [16]	•		• [2]	•		• [6]	•	• [3,17]	• [7]	• [4,10]	NTFS [1,10]
Microsoft Windows 10				• [2,6]	• [5]	•	• [6]	•	• [3,17]	• [7]		NTFS [1,10]
Microsoft Windows 8.1 Professional, Enterprise, Ultimate [8]				• [2,6]	• [5]	•	• [6]	•	• [3,17]	• [7]		NTFS [1,10]

Notes

1. a) Extended file system attributes are supported; b) FAT file system is not supported by Block backup.
2. File-level backup supports most operating system supported file systems including extended file system attributes support for NTFS.
3. a) Recovery to dissimilar hardware is supported; c) BMR is supported for GPT drives, including clusters; e).
4. a) Master server installation on cluster is not supported; b) Active directory on cluster or application node is not supported; c) Device / SAN device servers on physical nodes are supported, but device servers are not cluster-aware and will not follow failover. Refer to the "Cluster" chapter in Catalogic DPX Reference Guide for more details.
5. Active Directory can be backed up.
6. Can be used as a proxy for NDMP backup.
7. Supported only when the operating system is used as a server.
8. System level restore (IV/FV/BMR) has one limitation: Storage space configuration will not be restored.
9. Failover cluster is supported where resources are owned by one node at a time.
10. NTFS deduplication is supported with Block Backup: a) File History is not supported and disabled; b) Image Backup is not supported. Deduplication should be disabled on the server or volume for the duration of Image backup for seeding; c) Volume restore is optimized and selective file restore is not optimized; d) Do not enable deduplication on a DPX product volume for master and OSS, except the deduplication support for OSS; e) DPX Archive (sometimes refer to as Double protection) is not supported for client source volumes with deduplication set and OSS backup.
11. Microsoft ReFS is supported for Exchange 2016 and SQL Server 2016 and later on ReFS volumes. b) File History is not supported and disabled; c) Image Backup is not supported; d) DPX Archive is not supported.
12. Windows DFS support: a) Recovery to original location is supported; b) Restore to alternate location requires user intervention; c) DFS is not supported on Windows Cluster.
13. DPX open storage server supports direct attached storage, SAN, or iSCSI-attached storage devices. a) A minimum of 4 GB of available memory and a dual core CPU or two CPUs must be available; b) A highly reliable configuration such as RAID 5 with hot spares is recommended; c) This server is not supported on Windows Domain Controller machines; e) Backup data can be migrated from one Catalogic DPX Open Storage Server to another. See KB 46746 for details on setup and implementation;
14. Windows Server 2012 R2 with Cluster Shared Volumes (CSV) configuration has limited support. For Microsoft SQL Server support, refer to Microsoft SQL Server table.
15. When restoring from a Block Archive, only files and folders can be recovered. Bare metal recovery, instant virtualization, and full virtualization are not supported when restoring from Block Archive.
16. DPX Master Server can no longer be installed on Windows Servers. Users using DPX 4.5.4 can still upgrade DPX 4.5.4 to the most recent version. For new deployments, use the DPX Master Server virtual appliance.
17. DPX Data Protection does not support Veritas volume management and Veritas cluster.

Red Hat Enterprise Linux (RHEL)

Review Table 19 and notes to ensure that you are using the supported version of Red Hat Enterprise Linux. [1]

Table 19. Available features for Red Hat Enterprise Linux

Operating System	Catalogic DPX Master Server	Device or SAN Device Server	File-level Backup	Block-level Backup	Open File Management	Image Backup for Seeding	BMR	NDMP Proxy	Cluster Support	Supported File Systems for Block Backup
Red Hat Enterprise Linux 8.2		•	•	•	• [6]			•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 8.1		•	•	•	• [6]			•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 8.0		•	•	•	• [6]			•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 7.8		•	•	•	• [6]		• [5]	•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 7.7		•	•	•	• [6]		• [5]	•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 7.6	•	•	•	•	• [6]		• [5]	•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 7.5	•	•	•	•	• [6]		• [5]	•		Ext3, Ext4, XFS [9]
Red Hat Enterprise Linux 7.0-7.4	•	•	• [3]	• [4,11]	• [6]	• [7]	• [5]	• [8]		Ext3, Ext4 [2], XFS [9]
Red Hat Enterprise Linux 6.0-6.4 [8]		•	• [3]	• [4]	• [6]		• [5]	• [8]		Ext3, Ext4 [2]

Notes:

1. File-level support qualified up to V6.7 with DPX 4.4.0 and later. Agentless protection qualified.
2. Extended file system attributes are supported.
3. DPX file-level backup is supported with most OS supported file systems. Extended file system attributes are supported with EXT4/3/2, and XFS. File-level backup for XFS file system is not supported for partitions above 1 TB; use block level backup technology to back up XFS partitions more than 1 TB.
4. LVM2 is required. Only the default uniprocessor or SMP kernel packages provided by the Linux vendor for the distribution are supported.
5. For BMR: a) Restoring to IDE or GPT disks on the target machine is not supported, however DPX 4.5.1 and later supports RHEL/CentOS Linux 7.3 and 7.4 using UEFI boot with GPT disk; b) Recovery to dissimilar hardware is supported but manual driver installation may be needed; d) The physical disk size on the target machine must be less than 2 TB; e) Linux BMR support when the whole system is on multipath device is not supported. BMR for Linux using UEFI boot is unsupported.
6. Open file management is supported for block-level backup only.
7. Only base backup is supported (for seeding purpose).
8. Can be used as a proxy for NDMP backup.
9. XFS BLI support requires V7.2 or later; 64-bit inodes are not supported.
10. When restoring from a Block Archive, only files and folders can be recovered. Bare metal recovery, instant virtualization, and full virtualization are not supported when restoring from Block Archive.
11. The libnsl library must be installed for the Catalogic DPX Client support.

CentOS Linux

Review the following table and notes to ensure that you are using the supported version of CentOS Linux:

Table 20. Available features for CentOS Linux

Operating System	Catalogic DPX Master Server	Device or SAN Device Server	File-level Backup	Block-level Backup	Java-based DPX Management UI	Open File Management	Image Backup for Seeding	BMR	NDMP Proxy	Cluster Support	Supported File Systems for Block Backup
CentOS Linux 8.2		•	•	•		• [5]			•		Ext3, Ext4, XFS [9]
CentOS Linux 8.1		•	•	•		• [5]			•		Ext3, Ext4, XFS [9]
CentOS Linux 8.0		•	•	•		• [5]			•		Ext3, Ext4, XFS [9]
CentOS Linux 7.9	•	•	•	•		• [5]		• [4]	•		Ext3, Ext4, XFS [9]
CentOS Linux 7.8	•	•	•	•		• [5]		• [4]	•		Ext3, Ext4, XFS [9]
CentOS Linux 7.7	•	•	•	•		• [5]		• [4]	•		Ext3, Ext4, XFS [9]
CentOS Linux 7.6		•	•	•		• [5]		• [4]	•		Ext3, Ext4, XFS [9]
CentOS Linux 7.5		•	•	•	•	• [5]		• [4]	•		Ext3, Ext4, XFS [9]

Notes

1. Extended file attributes are supported.
2. DPX file-level backup is supported with most OS supported file systems. Extended file system attributes are supported with Ext2, Ext3, Ext4, and XFS. File-level backup for XFS file system is not supported for partitions above 1 TB; use block level backup technology to back up XFS partitions more than 1 TB.
3. LVM2 is required. Only the default uniprocessor or SMP kernel packages provided by the Linux vendor for the distribution are supported.
4. For BMR: a) Restoring to IDE or GPT disks on the target machine is not supported, however DPX 4.5.1 and later supports Red Hat Enterprise Linux/CentOS Linux 7.3 and 7.4 using UEFI boot with GPT disk; b) Recovery to dissimilar hardware is supported but manual driver installation may be needed; d) The physical disk size on the target machine must be less than 2 TB; e) Linux BMR support when the whole system is on multipath device is not supported. BMR for Linux using UEFI boot is unsupported.
5. Open file management is supported for block-level backup only.
6. Only base backup is supported (for seeding purpose).
7. Can be used as a proxy for NDMP backup.
8. File-level support qualified up to V6.7 with DPX 4.4.0 and later. Agentless protection qualified.
9. XFS BLI support requires V7.2 or later; 64-bit inodes are not supported.
10. When restoring from a Block Archive, only files and folders can be recovered. Bare metal recovery, instant virtualization, and full virtualization are not supported when restoring from Block Archive.
11. The libnsl library must be installed for the Catalogic DPX Client support.

Oracle Linux

Review the following table and notes to ensure that you are using the supported version of Oracle Linux:

Table 21. Available features for Oracle Linux

Operating System	Catalogic DPX Master Server	Device or SAN Device Server	File-level Backup	Block-level Backup	Open File Management	BMR	NDMP Proxy	VADP Proxy
Oracle Linux 8.2 [3]			• [1,2]	• [8]	• [9]			
Oracle Linux 8.1 [3]	•	•	• [1,2]	•	• [9]			
Oracle Linux 8.0 [3]	•	•	• [1,2]	• [7]	• [9]			
Oracle Linux 7.9			• [1,2]	• [6]	• [9]			
Oracle Linux 7.8	•	•	• [1,2]	• [5]	• [9]	•		•
Oracle Linux 7.7	•	•	• [1,2]	• [5]	• [9]		•	•
Oracle Linux 7.6			• [1,2]	• [5]	• [9]		•	•
Oracle Linux 7.5			• [1,2]	• [5]	• [9]		•	•
Oracle Linux 7.4	•	•	• [1,2]	•	• [9]			
Oracle Linux 7.3	•	•	• [1,2]	•	• [9]			
Oracle Linux 7.2	•	•	• [1,2]		• [9]			
Oracle Linux 7.1 [3,4]	•	•	• [1,2]		• [9]			
Oracle Linux 6.9	•	•	• [1,2]		• [9]			
Oracle Linux 6.8	•	•	• [1,2]		• [9]			

Notes

1. Extended file system attributes are supported.
2. Only the default uniprocessor or SMP kernel packages provided by the Linux vendor for the distribution are supported.
3. Block level support for Linux hosts using UEFI boot is supported.
4. The libnsl library must be installed for DPX client support.
5. Block backup, IA mapping, selective restore, volume restore, and Instant Virtualization are supported.
6. Block backup, IA mapping, selective restore, and Instant Virtualization are supported.
7. Block backup, IA mapping, selective restore, and volume restore are supported.
8. Block backup, IA mapping, and selective restore are supported.
9. Open file management is supported for block-level backup only.

SUSE Linux Enterprise Server (SLES)

Review the following table and notes to ensure that you are using the supported version of SUSE Linux Enterprise Server:

Table 22. Available features for SUSE Linux Enterprise Server

Operating System	Catalogic DPX Master Server	Device or SAN Device Server	File-level Backup	Block-level Backup	Open File Management	Image Backup for Seeding	BMR	NDMP Proxy	Cluster Support	Supported File Systems for Block Backup
SUSE Linux Enterprise Server 15 SP2		•	• [2]	• [3]	• [4]					Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 15 SP1		•	• [2]	• [3]	• [4]					Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 15		•	• [2]	• [3]	• [4]					Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 12 SP3 [14,15,16]	•	•	• [2]	• [3]	•		• [5]	•		Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 12 SP2	•	•	• [2]	• [3]	•	• [6]	• [5]	•		Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 12 SP1	•	•	• [2]	• [3]	•			•		Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 12	• [10]	•	• [2]	• [3]	•			•		Ext4 [1], Ext3 [1], ReiserFS [1,8], XFS [11]
SUSE Linux Enterprise Server 11 SP4	• [9]	•	• [2]	• [3]	•	• [6]	• [5]	•		Ext3 [1], ReiserFS [1,8]
SUSE Linux Enterprise Server 11 SP3	•	•	• [2]	• [3]	•	• [6]	• [5]	•		Ext3 [1], ReiserFS [1,8]

Notes

1. Extended file system attributes are supported.
2. File-level backup supports most operating systems supported file systems. Extended file system attributes are supported for EXT3/4, ReiserFS, and XFS. Extended file system attributes are supported for Ext4 for V11 SP2 and later.
3. LVM2 is required. Only the default uniprocessor or SMP kernel packages provided by the Linux vendor for the distribution are supported.
4. Open file management is supported for block-level backup only.
5. For BMR: a) Restoring to IDE or GPT disks on the target machine is not supported, however DPX 4.5.1 and later supports RHEL/Centos 7.3 and 7.4 using UEFI boot with GPT disk; b) Recovery to dissimilar hardware is supported but manual driver installation may be needed; d) The physical disk size on the target machine must be less than 2 TB; e) Linux BMR support when the whole system is on multipath device is not supported. BMR for Linux using UEFI boot is unsupported.
6. Only base backup is supported (for seeding purpose).
7. ReiserFS as data file system is supported. ReiserFS as /boot is not supported.
8. Block level support for Linux hosts using Linux Native Multipath.
9. Block level support for Linux hosts using UEFI boot is supported.
10. When restoring from a Block Archive, only files and folders can be recovered. Bare metal recovery, instant virtualization, and full virtualization are not supported when restoring from Block Archive.
11. 64-bit INODES are not supported for the XFS filesystem.

Canonical Ubuntu

Review the following table and notes to ensure that you are using the supported version of Canonical Ubuntu:

Table 23. Available features for Ubuntu

Operating System	Device or SAN Device Server	File-level Backup	Block-level backup	Open File Management
Canonical Ubuntu 20.04 LTS [2,3]		•[1]	•	•[4]
Canonical Ubuntu 18.04 LTS [2,3]				
Canonical Ubuntu 16.04 LTS [2,3]				

Note:

1. File-level backup supports most operating systems supported file systems except extended file system attributes.
2. The libnss3 library must be installed for DPX client support.
3. The libnsl library must be installed for DPX client support.
4. Open file management is supported for block-level backup only.

Debian

The Catalogic DPX Block Data Protection is not available for Debian platforms. Review the following table and notes to ensure that you are using the supported version of Debian:

Operating System	Device or SAN Device Server	File-level Backup	Java-based DPX Management UI
Debian 10.0 - 10.7		•*	
Debian 9.x		•*	

Note: File-level backup supports most OS supported file systems except extended file system attributes.

Micro Focus Open Enterprise Server (OES)

Review the following table and notes to ensure that you are using the supported product version and Service Pack (SP) of Micro Focus Open Enterprise Server:

Table 24. Available features for Micro Focus Open Enterprise Server

Operating System	Device or SAN Device Server	File-level Backup	Java-based DPX Management UI	Cluster Support
Micro Focus Open Enterprise Server 2018 SP3	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 2018 SP2	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 2018 SP1	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 2018	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 2015 SP1	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 2015	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 11 SP3	•	• [1]		• [2,3]
Micro Focus Open Enterprise Server 11 SP2	•	• [1]		• [2,3]

Note:

1. a) DPX is fully NSS compatible; b) DPX file-level backup supports most other OS-supported file systems except extended file system attributes.
2. Device / SAN Device Servers on physical nodes are supported, but device servers are not cluster-aware and will not follow failover. Please refer to the Cluster Support documentation.
3. Cluster support is limited to NSS volumes.

IBM AIX

The Catalogic DPX Block Data Protection is not available for IBM AIX platforms. Review the following table and notes to ensure that you are using the supported version of IBM AIX:

Table 25. Available features for IBM AIX

Operating System	Device or SAN Device Server	File-level Backup	Java-based DPX Management UI	NDMP Proxy
IBM AIX 7.2 [2]	•	• [1]		
IBM AIX 7.1 [3]	•	• [1]		

Note:

1. File-level backup supports most operating system supported file systems except extended file system attributes.
2. Technology Level 3 – Technology Level 5 supported.
3. Technology Level 5 support only.

FreeBSD

The Catalogic DPX Block Data Protection is not available for FreeBSD platforms. Review the following table and notes to ensure that you are using the supported version of FreeBSD:

Table 26. Available features for FreeBSD

Operating System	Device or SAN Device Server	File-level Backup	Java-based DPX Management UI
FreeBSD 12.1		•*	

Note: File-level backup supports most operating system supported file systems except extended file system attributes.

Application Support

You can protect application data with dedicated features of Catalogic DPX. For example, you can use block-level backups for supported databases.

Oracle Database

The Catalogic DPX Block Data Protection for Oracle Database is for single-node standalone Oracle Database instances only. Advanced storage features such as Oracle ASM are currently not supported.

Review the following table and notes to ensure that you are using the supported version of Oracle Database and its operating systems:

Table 27. Available features for Oracle Databases for Microsoft Windows

Microsoft Windows	Oracle Database	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2019	Oracle 12c, Oracle 12c R2	• [2]			
Microsoft Windows Server 2016	Oracle 12c, Oracle 12c R2	• [2]	•	•	• [3]
Microsoft Windows Server 2012 R2	Oracle 12c, Oracle 12c R2	• [2]	•	•	• [3]
Microsoft Windows Server 2012	Oracle 12c, Oracle 12c R2	• [2]	•	•	• [3]
Microsoft Windows Server 2019	Oracle 12c, Oracle 12c R2	• [2]			

(See the next page for Oracle Database for Linux.)

Table 28. Available features for Oracle Databases for Linux

Linux	Oracle Database	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
CentOS Linux 7.5	Oracle 12c	• [2]	•	•	
Oracle Linux 7.3	Oracle 12c	• [2]	•	•	
Oracle Linux 7.2	Oracle 12c [6]	• [2]			
Oracle Linux 7.1	Oracle 12c Oracle 11g R2	• [2]			
Oracle Linux 6.8		• [2]			
Red Hat Enterprise Linux 7.4	Oracle 12c	• [2]	•	•	
Red Hat Enterprise Linux 7.3	Oracle 12c	• [2]	•	•	
Red Hat Enterprise Linux 7.2, 7.1, 7.0	Oracle 12c [6]	• [2]		•	
Red Hat Enterprise Linux 6.9, 6.8, 6.7	Oracle 12c [6]	• [2]	•	•	
SUSE Linux Enterprise Server 15 Service Pack 1	Oracle 12c [6]	• [2]	•	•	
SUSE Linux Enterprise Server 12 Service Pack 1 or 2	Oracle 12c [6]	• [2]	•	•	
SUSE Linux Enterprise Server 12	Oracle 12c [6]	• [2]	•	•	
SUSE Linux Enterprise Server 11 Service Pack 4	Oracle 12c [4,5]	• [2]	•	•	
SUSE Linux Enterprise Server 11 Service Pack 2 or 3	Oracle 12c	• [2]	•	•	• [3]
SUSE Linux Enterprise Server 11 Service Pack 1 or 2	Oracle 11g R2, Oracle 11g R1	• [2]	•	•	• [3]

Note:

1. Oracle Cluster File System 2 (OCFS2) is supported.
2. Supported through Oracle Recovery Manager (RMAN). Oracle RMAN verification is not supported.
3. For DPX file-level backup only. Cluster is supported through Oracle RMAN. Oracle RAC is only supported via file-level Oracle RMAN interface.
4. Qualified up to Oracle 12.1.0.2.0.
5. Qualified up to Oracle 12.2.0.1.
6. Qualified up to Oracle 11.2.0.4.

Microsoft SQL Server

Microsoft SQL Server Standard and Enterprise editions are supported. Microsoft SQL Server Express is not supported. Review the following table and notes to ensure that you are using the supported version of Microsoft SQL Server and its operating system:

Table 29. Available features for Microsoft SQL Server

Microsoft Windows	Microsoft SQL Server	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2019	Microsoft SQL Server 2019		• [3,9]	•	• [1]
Microsoft Windows Server 2016 [8]	Microsoft SQL Server 2017		• [3,9]	•	• [1]
	Microsoft SQL Server 2016		• [3,9]	•	• [1]
Microsoft Windows Server 2012 R2	Microsoft SQL Server 2016 with or without Service Pack [6]		• [3,9]	•	• [1]
	Microsoft SQL Server 2014 with or without Service Pack [5]	• [2]	• [8,9]	•	• [1]
	Microsoft SQL Server 2012 Service Pack 1 or later [4,7]	• [2]	• [9]	•	• [1]
Microsoft Windows Server 2012	Microsoft SQL Server 2014 with or without Service Pack	• [2]	• [9]	•	• [1]
	Microsoft SQL Server 2012 Service Pack 1 or later	• [2]	• [9]	•	• [1]

Note:

1. Catalogic DPX supports both Active/Active and Active/Passive clusters.
2. Microsoft SQL Server AlwaysOn Availability Groups are not supported.
3. For block-level protection, Microsoft SQL Server AlwaysOn Availability Groups is supported.
4. Qualified up to Microsoft SQL Server 2012 SP2 on Windows Server 2012 R2.
5. Qualified up to Microsoft SQL Server 2014 SP2 on Windows Server 2012 R2.
6. Qualified up to Microsoft SQL Server 2016 with AlwaysOn Availability Groups on Microsoft Windows Server 2012 R2 with CSV configuration. For issues related to SQL and CSV combination, refer to "Additional Considerations for CSV in DPX" under "Clustered Shared Volumes" of Reference Guide.
7. Qualified up to Microsoft SQL Server 2012 SP3 on Microsoft Windows Server 2012 R2.
8. Microsoft SQL Server 2016 ReFS is supported on Microsoft Windows Server 2016.
9. AlwaysOn Availability Groups are supported.

IBM Db2

The Catalogic DPX Block Data Protection is not available for IBM Db2. Review the following table and ensure that you are using the supported version of IBM Db2 and its operating system:

Table 30. Available features for IBM Db2

Operating System	IBM Db2	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
IBM AIX 7.1	IBM Db2 UDB EE / EEE 9.7	•			
Red Hat Enterprise Linux 7.2, 7.1	IBM Db2 UDB EE / EEE 10 series	•			
SUSE Linux Enterprise Server 12 (SP1)	IBM Db2 UDB EE / EEE 10 series	•			
SUSE Linux Enterprise Server 11 (SP4, SP3, SP2)	IBM Db2 UDB EE / EEE 10 series	•			
SUSE Linux Enterprise Server 11 (SP1)	IBM Db2 UDB EE / EEE 9.7	•			
	IBM Db2 UDB EE / EEE 9.5	•			
Microsoft Windows Server 2012 R2	IBM Db2 UDB EE / EEE 9.7	•			

SAP HANA

The Catalogic DPX Block Data Protection is not available for SAP HANA. Review the following table and notes to ensure that you are using the supported version of SAP HANA and its operating system:

Table 31. Available features for SAP HANA

Operating System	SAP HANA	Basic Client	Multitenant	Instant Availability	Cluster Support
SUSE Linux Enterprise Server 12 SP4	SAP HANA 2.0 SP4	•	•		•

SAP R/3

The Catalogic DPX Block Data Protection is not available for SAP R/3. Review the following table and notes to ensure that you are using the supported version of SAP R/3, its operating systems, and database:

Table 32. Available features for SAP R/3

Operating System	Database	SAP R/3	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2012 R2	Oracle Database*	SAP R/3 7 series, SAP R/3 6 series	•			
Microsoft Windows Server 2012	Oracle Database*	SAP R/3 7 series, SAP R/3 6 series	•			

Note:

* Database versions have to be supported by DPX. Please refer to compatibility information for Oracle, DB2 or SQL Server. SAP R/3 on Oracle is supported through BRBACKUP and BRRESTORE interfaces. SAP R/3 on DB2 or SQL Server is supported through corresponding database backup.

Microsoft Exchange Server

Review the following table and notes to ensure that you are using the supported version of Microsoft Exchange Server and its operating systems:

Table 33. Available features for Microsoft Exchange Server

Operating System	Microsoft Exchange Server	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2019 [2]	Microsoft Exchange Server 2019		• [1]	•	DAG, IP-less DAG
Microsoft Windows Server 2016 [2]	Microsoft Exchange Server 2016		• [1]	•	DAG, IP-less DAG
	Microsoft Exchange Server 2013 (SP1)		• [1]	•	DAG, IP-less DAG
Microsoft Windows Server 2012 R2 [2]	Microsoft Exchange Server 2016		• [1]	•	DAG, IP-less DAG
	Microsoft Exchange Server 2013 (SP1)		• [1]	•	DAG, IP-less DAG
Microsoft Windows Server 2012	Microsoft Exchange Server 2013 (SP1)		• [1]	•	DAG [2]
	Microsoft Exchange Server 2013 (SP1)		• [1]	•	DAG [2]

Note:

1. Recovery to alternate locations is supported.
2. Microsoft Exchange Server on Microsoft NTFS and ReFS is supported.

Microsoft SharePoint Server

Review the following table and notes to ensure that you are using the supported version of Microsoft SharePoint Server and its operating systems:

Table 34. Available features for Microsoft SharePoint Server

Operating System	Microsoft SharePoint	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2016	Microsoft SharePoint Server 2016 Feature Pack 1 (Dec 2016), Microsoft SharePoint Server 2013, Microsoft SharePoint Foundation 2013 Service Pack 1		• [1,2,3]	•	•
Microsoft Windows Server 2012 R2	Microsoft SharePoint Server 2016 Feature Pack 1 (Dec 2016), Microsoft SharePoint Server 2013, Microsoft SharePoint Foundation 2013 Service Pack 1		• [1,2,3]	•	•
Microsoft Windows Server 2012	Microsoft SharePoint Server 2013, Microsoft SharePoint Foundation 2013 Service Pack 1		• [1,2]	•	•

Note:

1. With farm configurations, Microsoft SQL Server can be any supported configurations of it. See Microsoft SQL Server on page 39.
2. Microsoft SharePoint 2013 with Microsoft SQL Server 2012 AlwaysOn Availability Groups is supported.
3. Qualified up to Microsoft SharePoint 2013 Service Pack 1 with Microsoft SQL 2014 Service Pack 1 AlwaysOn Availability Groups.

Micro Focus GroupWise

The Catalogic DPX Block Data Protection is not available for Novell GroupWise. Review the following table and notes to ensure that you are using the supported product version or Support Pack (SP) of Micro Focus GroupWise and its operating systems:

Table 35. Available features for Micro Focus GroupWise

Operating System	Micro Focus GroupWise	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Micro Focus Open Enterprise Server 2018 SP3	Micro Focus GroupWise 18 SP1	• [1]			
Micro Focus Open Enterprise Server 2018 SP1	Micro Focus GroupWise 18 SP1	• [1]			
Micro Focus Open Enterprise Server 2015 SP1	Micro Focus GroupWise 2014 R2 SP1 [2]	• [1]			
Micro Focus Open Enterprise Server 2015	Micro Focus GroupWise 18	• [1]			
	Micro Focus GroupWise 2014 [2,4]	• [1]			
Micro Focus Open Enterprise Server 11 SP1 or later	Micro Focus GroupWise 2014 [2,3]	• [1]			

Note:

- GroupWise cluster is not supported.
- GroupWise is supported through TSAFS using the ENABLEGW switch. For more information, see the following document:
 - Micro Focus Knowledge Base "TSAFSGW No Longer Ships With GroupWise 2012" (KB 7010095)
- Qualified up to GroupWise 2014 SP1 on Open Enterprise Server 11 SP2.
- Qualified up to GroupWise 2014 SP2 and Groupwise 2014 R2 SP1 on Open Enterprise Server 2015.

HCL Notes and HCL Domino

The Catalogic DPX Block Data Protection is not available for HCL Notes and HCL Domino. Review the following table and notes to ensure that you are using the supported version of HCL Notes, HCL Domino, and its operating systems:

Table 36. Available features for HCL Notes and HCL Domino

Operating System	HCL Notes and HCL Domino	File-level Backup	Block-level Backup	Instant Availability	Cluster Support
Microsoft Windows Server 2012 R2	HCL Notes and HCL Domino Server 9.0 series [2,3]	• [1]			
Microsoft Windows Server 2012	HCL Notes and HCL Domino Server 9.0 series [2,3]	• [1]			

Note:

1. Database restore and point-in-time restore are supported; mail-level restore is not supported.
2. Qualified up to HCL Domino 9.0.1 Fix Pack 4.
3. Qualified up to HCL Domino 9.0.1 Fix Pack 5.

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