

Hitachi Data Instance Director (HDID)

Support Matrix: File Systems

Introduction: Agent-Based and Agentless Protection

HDID can provide consistent protection either with or without the use of a host agent.

- Agent-based protection performs the application interaction required to provide application-aware consistency.
- Agentless protection ensures the application data is protected on disk and therefore provides crash consistency. Pre-execution script- and post-execution scripts can be called as part of a policy to enable application aware consistency.

This support matrix describes the environments supported by either method of protection.

Agent-Based Protection

Agent-based protection provides application consistent protection support with the following operating systems and configurations.

Operating System ⁽¹⁾		Supported Protection Types		
		Host Based	Storage Based	
		Repository	Hitachi VSP Family	Hitachi NAS Platform
Microsoft Windows	Windows Server 2008 (32-bit) Windows Server 2008 (64-bit) Windows Server 2008 R2 (64-bit) Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Windows 10 Windows Server 2016 (64-bit) ⁽²⁾ Windows Server 2019 ⁽²⁾	✓ (NTFS, ReFS)	✓ (NTFS, ReFS)	✗
Microsoft Windows (Desktop)	Windows 7 SP1 Windows 8 and 8.1 Windows 10	✓ (NTFS)	✗	✗
Linux ⁽³⁾	RHEL 6 x64 (6.3 and newer) RHEL 7 x64 (7.0 and newer) OEL 6 x64 (6.3 and newer) OEL 7 x64 (7.0 and newer) SUSE 11 x64 (11.3 and newer) SUSE 12 x64 (12.0 and newer)	✓ (EXT3, EXT4, LVM, NFS, ASM)	✓ (EXT3, EXT4, LVM, ASM)	✓ (NTFS)
IBM® AIX®	AIX v7.x (7.1 TL4 and newer)	✓ (JFS2, NFS, ASM)	✓ ⁽⁴⁾ (JFS2, ASM)	✗
Oracle Solaris (Intel)	Solaris 11 (11.0 and newer)	✓ (ZFS, NFS, ASM)	✓ (ZFS, ASM)	✗
Oracle Solaris (SPARC)	Solaris 11 (11.0 and newer)	✓ (ZFS, NFS, ASM)	✓ (ZFS, ASM)	✗

NFS = network file system, EXT3 = third extended file system, EXT4 = fourth extended file system, LVM = logical volume manager, NFS = network file system, ZFS = zettabyte file system or z file system, HNAS = Hitachi NAS Platform, ASM = Automated Storage Management

Operating Systems ⁽¹⁾	Host-Based Backup		Hitachi Block Hardware ⁽⁵⁾⁽⁶⁾			Hitachi NAS Platform	
	Backup	Real-Time/Continuous Data Processing	Snapshot (TI)	Live Replicate (SI, TC, UR, ⁽⁷⁾ GAD)	Batch Replicate (TI, SI)	Directory Clone	File Replication
Microsoft Windows (Server)	✓	✓	✓	✓	✓	✗	✗
Microsoft Windows (Desktop)	✓	✓	✗	✗	✗	✗	✗
Linux	✓	✗	✓	✓	✓	✓	✓
IBM® AIX® ⁽⁸⁾	✓	✗	✓ ⁽⁴⁾	✓ ⁽⁴⁾	✓ ⁽⁴⁾	✗	✗
Oracle Solaris (Intel) ^{(8) (9)}	✓	✗	✓	✓	✓	✗	✗
Oracle Solaris (SPARC) ^{(8) (9)}	✓	✗	✓	✓	✓	✗	✗

TI = Hitachi Thin Image, SI = Hitachi ShadowImage, UR = Hitachi Universal Replicator, GAD = global-active device

Agentless Protection

Agentless protection provides crash-consistent protection for any operating system version and configuration as follows (subject to operating system and application vendor support):

Application Configurations	Host-Based Backup		Hitachi Block Hardware		Hitachi NAS	
	Batch	Real Time and Continuous Data Processing	Snapshot (TI)	Replicate (SI, TC, UR,GAD)	Directory Clone	File Replication
"LDEV Based"	✘	✘	✔	✔	✔	✔
VMware	Not Applicable					

TI = Hitachi Thin Image, SI = Hitachi ShadowImage, UR = Hitachi Universal Replicator, GAD = global-active device

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- (1) Note: Support only where standard vendor support is available
 - (2) Supported only with features compatible with Windows 2012.
 - (3) It is recommended that Linux source nodes have a logical volume manager (LVM) on each volume group that is to be backed up. A minimum of 10GB of free space is required in the "unused" portion of the LVM, which is in addition to the required space for the allocated storage area. For example, if 100GB of usable storage is required, then the total disk size will be 110GB (100GB of usable storage and 10GB of unused storage).
 - (4) Includes support for VIO where disks are attached using either physical ports or virtual Fibre Channel ports (via VIO). Virtual SCSI disks provided by VIO are not supported.
 - (5) In virtual environments, the volumes must be VMware physical raw device mapping (pRDM) or Microsoft Hyper-V pass-through disks.
 - (6) A VMware proxy node must be configured on the master to support mounting to VMware Virtual machines.
 - (7) Operating-system-consistent remote SI/TI are not supported in conjunction with Hitachi Universal Replicator.
 - (8) ACLs or extended attributes are not protected; if they are present on data that is backed up, then they will not be restored.
 - (9) For a system that has zones on it, install Hitachi Data Instance Director on the "global" system. Then, back up the data from the zones, instead of installing HDID on all of the zones individually. HDID does not support the backup and restore of whole zones.

Revised: August 2019

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09 May 2018