

Hitachi Application Protector for Microsoft® Applications Version 2.8.0 Release Notes

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About this document

This document describes the revisions that were made to Hitachi Application Protector for Microsoft® Applications, software version 2.8.0. It describes the related enhancements, any known problems and solutions, and resolved issues. It supplements the main user documents for Hitachi Application Protector.

Intended audience

This document is intended for customers and Hitachi, Ltd. partners who license and use Hitachi Application Protector for Microsoft Applications (hereafter referred to as 'Application Protector').

Getting help

If you need to call the Hitachi Data Systems Support Center, please provide the following information:

- The circumstances about the error or failure
- Debug information acquired by executing the HAPRO_DUMP command

For details about the HAPRO_DUMP command, refer to the *CLI Guide for Microsoft® Applications* (MK-91HAP021).

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: <https://portal.hds.com>

About this release

This software release provides fixes to previously reported known issues, and it introduces important new features. We recommend that you upgrade your software to version 2.8.0.

Product package contents

Item	Details
Software	Hitachi Application Protector for Microsoft Applications, version 2.8.0
Release Notes	Hitachi Application Protector for Microsoft Applications Release Notes, RN-91HAP008-16

Item	Details
Documentation	<ul style="list-style-type: none"> • Hitachi Application Protector Quick Install and Configuration Guide for Microsoft® Applications (MK-91HAP009) • Hitachi Application Protector User Guide for Microsoft® Exchange Server (MK-91HAP005) • Hitachi Application Protector User Guide for Microsoft® SharePoint Server® (MK-91HAP006) • Hitachi Application Protector User Guide for Microsoft® SQL Server® (MK-91HAP007) • Hitachi Application Protector CLI Guide for Microsoft® Applications (MK-91HAP021) • Hitachi Application Protector Troubleshooting Guide for Microsoft® Applications (FE-91HAP010)

Related documentation

Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service User's Guide (MK-09DF8197).

Software and Hardware Support

The software and hardware listed below is supported by this release. Hardware and software that is not listed in following tables are not supported by this release.

Supported Operating Systems

Application Protector supports the following operating systems:

Application Protector Server:

Operating System	Remarks
Microsoft Windows Server 2008, R2 Enterprise Edition x64	Server Core option is not supported.
Microsoft Windows Server 2008 R2 Enterprise Edition x64 SP1	Server Core option is not supported.
Microsoft Windows Server 2012 Datacenter Edition x64	Server Core option is not supported.
Microsoft Windows Server 2012 R2 Datacenter Edition x64	Server Core option is not supported.

Application Protector Client:

Operating System	Remarks
Microsoft Windows Server 2008, R2 Enterprise Edition x64	Server Core option is not supported.
Microsoft Windows Server 2008, R2 Enterprise Edition x64 SP1	Server Core option is not supported.
Microsoft Windows Server 2012 Datacenter Edition x64	Server Core option is not supported.
Microsoft Windows Server 2012 R2 Datacenter Edition x64	Server Core option is not supported.

Supported Microsoft Applications for Application Protector

The following table describes information about the supported Microsoft® Windows Operating System versions and the supported Microsoft Applications for Application Protector.

Microsoft® Application	Version	Microsoft® Windows Operating System		
		Win2008 R2 SP1 64-bit	Win2012 64-bit	Win2012 R2 64-bit
Microsoft® Exchange Server	2007 SP1	x	x	x
	2007 SP2	x	x	x
	2007 SP3	✓	x	x
	2010	✓	x	x
	2010 SP1	✓	x	x
	2010 SP2	✓	x	x
	2010 SP3	✓	✓	x
	2013	✓	✓	x
	2013 SP1	x	x	✓
Microsoft® SQL Server®**1	2005 SP3	✓	x	x
	2005 SP4	✓	x	x
	2008 SP1	✓	x	x
	2008 SP2	✓	x	x
	2008 SP3	✓	x	x
	2008 R2 SP1	✓	x	x
	2008 R2 SP2	✓	x	x
	2008 R2 SP1 MSFC	**2	x	x
	2008 R2 SP2 MSFC	**2	x	x
	2012	✓	✓	✓
	2012 SP1	✓	✓	✓
Microsoft® SharePoint Server®	2007 SP1	x	x	x
	2007 SP2	✓	x	x
	2007 SP3	✓	x	x
	2010 SP1	✓	x	x

✓: Supported, x: Not supported

**1 Application Protector does not support configurations in which the SQL Servers of different versions are mixed.

**2 In Windows 2008, Microsoft® Cluster service is known as Microsoft Failover Cluster (MSFC). Application Protector supports MSFC in 2 Node Active-Passive configurations. For more details, see the section for configuring and protecting database entities in a Cluster setup, in the *Hitachi Application Protector for SQL Server User Guide*.

Hardware Prerequisites

The following table describes the hardware prerequisites for Application Protector:

Item	Description
System Processor	1.5 GHz (Dual Core Recommended)
System Memory	2 GB
Install Free Disk Space	20 MB (Minimum)
Networking	Gigabit Ethernet Recommended

Software Prerequisites

The following table describes the software prerequisites for Application Protector:

Item	Description
Supported Operating Systems	Microsoft® Windows Server 2008 R2 SP1 Microsoft® Windows Server 2012 Microsoft® Windows Server 2012 R2
Application Software	Microsoft® Exchange Server 2007 SP1,SP2,SP3 Microsoft® Exchange Server 2010 Non-SP, SP1, SP2, SP3 Microsoft® Exchange Server 2013 Non-SP, SP1 Microsoft® SQL Server® 2005 SP3,SP4 (x86 & x64) Microsoft® SQL Server® 2008 SP1,SP2,SP3 (x86 & x64) Microsoft® SQL Server® 2008 R2 SP1,SP2 (x86 &x64) Microsoft® SQL Server® 2012 Non-SP, SP1, (x64) Microsoft® SharePoint Server® 2007 SP2,SP3 Microsoft® SharePoint Server® 2010 SP1
Hitachi Applications	Hitachi HNAS VSS Provider v 8.1, 8.2, 10.0, 10.2, 11.0, 11.1 Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service V04.11.0
Other Applications	Microsoft .NET Framework 3.5 SP1 Microsoft .NET Framework 4.5 (In case of using Exchange Server 2013 only) MMC v3.0

Virtualization Environment

Application Protector supports the following virtual environments:

Virtual environment	Remarks
VMware ESX Server 4.1 Update3	Only the iSCSI connection is supported, and only when Hitachi HNAS VSS Provider is used.
VMware ESX Server 5.0	Only the iSCSI connection is supported, and only when Hitachi HNAS VSS Provider is used.
VMware ESX Server 5.0 Update1	Only the iSCSI connection is supported, and only when Hitachi HNAS VSS Provider is used.
VMware ESX Server 5.1	Only the iSCSI connection is supported.
VMware ESX Server 5.1 Update1	(1) iSCSI connected storage and (2) FC connected block storage (when using RDM Physical Compatibility Mode) are supported.
Hyper-V 2.0	Only the iSCSI connection is supported.
Hyper-V 3.0	iSCSI connection and Virtual Fibre Channel are supported.
Hyper-V (Windows Server 2012 R2)	iSCSI connection and Virtual Fibre Channel are supported.

Cluster Software

Application Protector supports the following cluster software:

Cluster Software	Remarks
Microsoft Failover Cluster(MSFC)	Exchange Server 2007 CCR is supported. SQL Server 2008 R2 is supported.
Microsoft Cluster Service(MSCS)	Exchange Server 2007 CCR is supported.

Storage Systems

Application Protector supports the following storage systems:

Model	Micro Version	Snapshot Type Supported
Hitachi Adaptable Modular Storage 2010/2100/2300/2500	Follow the prerequisites for the Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service.	Shadow Image and Copy-on-Write Snapshots
Virtual Storage Platform	Follow the prerequisites for the Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service.	Shadow Image and Copy-on-Write/Thin Image Snapshots
Hitachi Unified Storage 110/130/150	Follow the prerequisites for the Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service.	Shadow Image and Copy-on-Write Snapshots
Hitachi Unified Storage VM	Follow the prerequisites for the Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service.	Shadow Image and Copy-on-Write/Thin Image Snapshots
Virtual Storage Platform G1000	Follow the prerequisites for the Hitachi Storage Adapter for Microsoft® Volume ShadowCopy Service.	Shadow Image and Thin Image Snapshots
Hitachi NAS powered by BlueArc	Follow the prerequisites for the Hitachi HNAS VSS Provider.	Snapshots (JetClone)

Changes in This Release

New features and important enhancements

V02.8.0

- The VSP G1000 storage system is supported.
- Manual operation was needed when completing a restoration in the AlwaysOn Availability Groups configuration on a SQL Server; however, all automatic execution functions are implemented.
- Microsoft Exchange 2013 SP1 on Windows Server 2012 R2 is supported.

Improvements

V02.8.0

- The List output function of the CLI has been improved. Now, when `-r/--logfile` is specified, all List items are output without being truncated. Following are the Target commands:
 - List Snapshot
 - List of Schedule Occurrences
 - List Schedule
 - List Operations
 - List Log
 - List Config
 - List Service Account
 - List License
 - List Entity
 - List User Scripts
- Checking of input values has been strengthened within the GUI.
- If the creation of a Snapshot fails, and a V-vol remains in the storage, then the target V-vol is automatically removed.
- Normal removal function and complete removal function were integrated in the uninstallation function of Application Protector Server.
- In this release, HAPRO deletes snapshots in the background, and responds to user input during the deletion. The improved handling applies (1) when a user deletes a snapshot and (2) when HAPRO automatically deletes a snapshot because the snapshot rotation count was exceeded after completing a snapshot. However, new snapshots cannot be initiated before a previous snapshot has completely finished, including any necessary deletion of snapshots.

Known Problems

Item	Problem	Workaround
The consecutive execution of recovery fails.	Recovery cannot be executed by Application Protector for Exchange for the same Entity more than once.	Save the transaction logs before starting recovery. When you execute the recovery after the first time, return the saved transaction log to the original path, and then execute the recovery.
Create Snapshot which has been scheduled to be executed on the summer and winter switchover date may not be executed.	<p>Create Snapshot which has been scheduled to be executed at the end of summer and the beginning of winter switchover time may not be executed.</p> <p>Example: Schedule to be executed at between PST AM1:00 and 1:59 on 2014/11/2.</p>	<p>Set the schedule to execute Create Snapshot while avoiding the end of summer and the beginning of winter switchover time.</p> <p>If you want to create a Snapshot during the time zone shown above, create a Snapshot manually.</p> <p>Reference information: http://support.microsoft.com/kb/325413/en-us</p>
If the Trial License is expired, product license may not be installed.	In case that the product license is installed even if the Trial License is expired, a message to show that ActivateLicense has been succeeded is displayed. However, sometimes an installation of the product license may fail. If the installation of the product license fails, installed license is not displayed in View License Information.	Check that the product license has been installed successfully using View License Information. If the license has not been installed, execute the installation of the product license again.
Application Protector Client cannot be upgraded from Application Protector Client 2.1	When Application Protector Client 2.1 has been installed, Application Protector Client cannot be upgraded.	<ul style="list-style-type: none"> - When Application Protector Client 2.1 has been installed, install Application Protector Client after uninstallation of Application Protector Client 2.1. - Do not install or upgrade Application Protector Server before uninstallation of Application Protector Client 2.1. - Execute repair installation of Application Protector Server when Application Protector Client 2.1 was uninstalled after installation or upgrade.

Item	Problem	Workaround
<p>An error may be output after HAPRO_DUMP executed.</p>	<p>The following error event logs may be displayed in the OS event log after executing HAPRO_DUMP.</p> <p>-----</p> <p>Source: Hitachi Application Protector Server Event ID: 3 Level: Error Description: E7003202 b7: Can not get service handle for service SQLWriter.</p> <p>-----</p>	<p>- When SQL Server has been installed in the Server on which HAPRO_DUMP executed: Take an appropriate action according to the workaround for the message.</p> <p>- When SQL Server has not been installed in the Server on which HAPRO_DUMP executed: Ignore this error.</p>

Fixed Problems

V02.8.0

- Fixed the problem that the LogLevel output is different from the settings in ListConfig of the CLI.
- Fixed the problem that an application error occurs when the number of output message characters is larger than 16000 characters.
- Fixed the problem that the schedule information is not displayed correctly when wildcards are specified in List schedule of CLI.
- Fixed the problem that paths including \$ symbol cannot be specified in the metadata output folder (Export Metadata and Snapshot Path).
- Fixed the problem that the schedule information is not displayed correctly when SQL Server with the instance name was specified in the List schedule of CLI.
- Fixed the problem that tasks remain in the OS task scheduler after executing Import Metadata.
- Fixed the problem that an error occurs when a path including brackets ([]) is specified for -client and -server options of HAPRO_DUMP.
- Fixed the problem that Snapshot is kept imported when the "Replace Target Database Files with Revert" option is specified in the SQL Server environment.
- Fixed the problem that Snapshot cannot be used from Pre/Post script when the "Replace Target Database Files with Revert" option was specified in the SQL Server environment.
- Fixed the problem that Snapshot management information may remain even after a Snapshot is deleted.
- Fixed the problem that Snapshot cannot be mounted from another server even after the Application Protector license is activated.
- Fixed the problem that Snapshot operations cannot be executed even after the Application Protector license is activated when HUS VM is used.

Restrictions and Considerations

Features not included

- 3-Tier configurations of SharePoint are not supported.
- Due to an underlying restriction in the Microsoft VSS design, at most 64 LUNs may be snapshotted at once per server.
- SharePoint Server in Load Balance Cluster Configuration is not supported.
- SharePoint Server on SQL server configured with Microsoft Failover Cluster (MSFC)/Microsoft Cluster Service (MSCS) is not supported.
- SQL Server configurations with multiple log files (multiple LDFs) are not supported.
- SQL Server in a MSCS Cluster is not supported.
- Although revert operations are generally supported, they should not be performed on the following: A shared cluster database, a SQL server that is configured with Microsoft Failover Cluster, or on a Windows OS with Microsoft Failover Cluster.

Limitations

- If Snapshots are deleted directly on the storage (ex. using SN2, SNM2), Application Protector will not be aware of these snapshot operations and will continue to show the corresponding snapshots in Application Protector Metadata. When Snapshots are created directly with the storage function, Snapshots cannot be created up to the set value of the Application Protector rotation count.

Note: As part of best practices, snapshots created using Application Protector should only be deleted using Application Protector.

- The maximum snapshot rotation values for HUS, HNAS, AMS, VSP, HUS VM, and VSP G1000 must be set to a value that is 1 less than the upper snapshot limit for the primary LUN. Refer to the table below:

Storage	Snapshot Type	Snapshot Limit	Snapshot Rotation Count Limit
HUS	SI	8	NA
HUS	CoW	1024	1023
AMS	SI	8	NA
AMS	CoW	32	31
HNAS	JetClone	1024	1023

Storage	Snapshot Type	Snapshot Limit	Snapshot Rotation Count Limit
VSP	SI	3	NA
VSP	CoW	64	63
VSP	HTI	1024	1023
HUS VM	SI	3	NA
HUS VM	HTI	1024	1023
VSP G1000	SI	3	NA
VSP G1000	HTI	1024	1023

- Application Protector does not support a database with the following functions of SQL Server:
 - Full-text Catalog which was created by SQL Server 2005
 - FILESTREAM

For other restrictions and considerations, refer to the section, "Restrictions and Considerations for Operating Application Protector" of the *Hitachi Application Protector Quick Install and Configuration Guide for Microsoft® Applications* (MK-91HAP009).

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