ActiveImage Protector 2022 Server Setup Guide

6th Edition February, 2024



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1. Overview

ActiveImage Protector is a data protection solution supporting various system environments, including physical and virtual machines and cloud environments. This set-up guide will show you how to install and configure ActiveImage Protector 2022 Server (February 2024 Update: Version. 7.0.3.8919). We recommend you read this manual before using ActiveImage Protector 2022 to configure backups. Please visit our online help for more detailed information (<u>https://webhelp.actiphy.com/AIP/2022/en_US/</u>).

System Requirements

Please ensure your computer meets these minimum system requirements before using ActiveImage Protector 2022 Server (Version. 7.0.3.8919):

CPU	Pentium 4 or newer.
Main Memory (RAM)	4GB of RAM or greater. (8GB or more is recommended.)
Hard Disk	1.5GB of available disk space or greater.
Supported	Windows:
Operating Systems	Windows Server 2022
	Windows Server 2019
	Windows Server 2016
	Windows Server 2012 R2
	Windows Server IoT 2019 / 2022 for Storage
	Windows Storage Server 2016
	Windows Storage Server 2012 R2
	Hypervisor:
	• Windows Server 2022 Hyper-V
	Windows Server 2019 Hyper-V
	Windows Server 2016 Hyper-V
	Windows Server 2012 R2 Hyper-V
	• VMware vSphere ESX[i] 6.0 / 6.5 / 6.7 / 7.0 / 8.0
	Citrix Hypervisor 8.2
	• Proxmox VE 7.2-1
	Nutanix Acropolis Hypervisor (AHV) 20190916.276
	 * ActiveImageProtector 2022 Server also supports these operating systems as the guest OS on supported hypervisors.
	* Please refer to our <u>knowledge Base</u> for information on the backup source OS for HyperAgent.

*For the latest system requirements for this product, please visit Actiphy's Web site. (<u>https://www.actiphy.com/en-us/support/system-requirements/</u>)

2. Installation

The following steps will show you how to install ActiveImage Protector on the computer you wish to keep backed up:

 Insert the installation disc into your computer. Windows should automatically launch the ActiveImage Protector install screen. If Windows doesn't automatically start the installer, double-click on the *launch.exe*. Or run *setup.exe* files in Setup folder on the installer disc. Once you have the ActiveImage Protector install screen running, click on [ActiveImage Protector] → [Install].



2. Next, insert your product key in the "Install Licensed Components with Product Key" field and click the **[Install]** button to start the installation process.



3. The program will begin installing ActiveImage Protector on your computer and show you its progress.

🕅 Actiphy	- x
ActiveImage Protector 2022	
Version 7.0.3.8919	
Installation In Progress:	
Installing ActiveImageProtector	
Installing ActiveImageProtector	
Action 17:47:26: CA_CheckProcesses.	
Cancel	

4. Click on the **[Done]** button when the installer has finished. You do not need to reboot your system after installation.



3. Product Activation

ActiveImage Protector supports three types of activation:

- Activating your product online.
- Actiphy Authentication Service (AAS).
- Using a license file.

The easiest method is to activate your product online using the Actiphy License Server.

If you need to activate ActiveImage Protector on a PC that doesn't have internet access, please use the **Actiphy Authentication Service (AAS)** or **License File** options to activate your product.

For detailed information on activating your product, please refer to the Activation Guide for your product on Actiphy's website:

- ActiveImage Protector 2022 Server: <u>https://www.actiphy.com/global/activation_guide/actiphy_activeimage_protector_2022_server</u>
- ActiveImage Protector 2022 Desktop: https://www.actiphy.com/global/activation_guide/actiphy_activeimage_protector_2022_desktop
- ActiveImage Protector 2022 Linux: https://www.actiphy.com/global/activation_guide/actiphy_activeimage_protector_2022_linux
- ActiveImage Protector 2022 Virtual :
 https://www.actiphy.com/global/activation_guide/actiphy_activeimage_protector_2022_virtual
- AAS Docker: <u>https://www.actiphy.com/global/activation_guide/aas_docker/</u>
- Remove license/bundle file: <u>https://www.actiphy.com/global/activation_guide/actiphy_activeimage_protector_2022_license_recovery_guide</u>

4. Configure backup settings and run backup tasks

4-1. Volume Backup: One Time Only

Use the following steps to run ad hoc backup tasks:

- 1. Launch ActiveImage Protector by clicking on the Windows Start menu and then navigating to [Actiphy] \rightarrow [ActiveImage Protector].
- 2. Once inside ActiveImage Protector, click on [Backup] \rightarrow [Volume Backup].

Operation View Preferences Utilities Help Image: Participation Image: Participation Image: Participation Image: Participation Image: Participation Image: Participation Image: Parting <td< th=""><th></th></td<>	
Dashboard Backup	
💒 Backup	
Volume Backup	
File Backup Create local disk or volume backup task.	
HyperBack	
🕎 Standby 🔸	
Recovery > File Backup	
Create file or folder backup task.	
In-Cloud Recov	
💩 In-Cloud Standby	
HyperBack Create virtual machine agentiess backup task.	
🛃 Local Host 🛛 🔭 🔲	
Host Name: demo_svr04 Domain: WORKSROUP	
IP Address: 192.168.100.54	
Logon User: Administrator	
RescueBoot: Enabled	
Mounted: No	
Task: None	
0.0%	

3. Select a backup source. The following example shows the entire disk selected for the backup source. Click [Entire Disk] and check the checkbox for [Disk 0] and [Disk 1]. When the backup source is selected, click [Next].

Operation View Preferences	Utilities Help			
📓 demo_svr04 🔹 🔹				
📮 Dashboard	Volume Backup			
🔮 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup	Entire Disk Volume			
📔 File Backup 🔁 HyperBack	Volume Name File System	Volume Size Used Space	e Associated	
🕎 Standby 🔹 🕨	Car DIX (c) NTFS Local Dixk (c) EFI Car Unallocated	450.0 MB 347.2 MB 99.0 MB 29.4 GB 21.7 GB 60.0 GB	Disk 0 Disk 0 Disk 0 Disk 0 Disk 0	
Recovery >	■ Disk1 □ ポリューム(E) NTFS	99.9 GB 110.9 MB	Disk 1	
In-Cloud Recov	🖂 Basic 😤 Dynamic disk 🖼 Vole	ume 📟 Dynamic volume		
In-Cloud Standby	Disk 0 Basic (GPT) 90.0 GB Build Used 1 22.0 GB Build State 11 Build 1 22.0 GB Build State 1 Build 1 22.0 GB Build State 1 Build 1 22.0 GB Build State 1 Build 1 22.0 GB Build 1 20.0 GB Buil	Local Disk () 7940 BAD EH 204 GB	sk (C) NTPS	ad ins. 5
Local Host Host Host Marne: demo_3vr04 Domain: WORKGROUP IP:Address: Iogon User: Administrator	(#) Disk 1 Back (697) 100 GB # Used : 110.9 MB			
RescueBoot: Enabled Mounted: No	Unaflocated Primary			
Task: None 0.0 % #			1	Next > Cancel

4. Select a destination folder for the backup image. The following example shows **\\192.168.100.55\\disk** in the network shared folder as the destination. Click the **[Select Folder]** button.

Activelmage Protector				
Operation View Preferences	<u>U</u> tilities <u>H</u> elp			
🔝 demo_svr04 🔹	-			
📮 Dashboard	Volume Backup			
📑 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup	Task Name:			Options: < Advanced Options
📫 File Backup	Backup_20220713_1304			
HyperBack	Destination folder:			Compression: Deduplication Compression
🕎 Standby 🔷 🗲	Comments:	•	Select folder	Level 2 (Optimized) Change temp file folder
📩 Recovery 🔹 🗲				Standard Compression Fast Password Protection
In-Cloud Recov	Destination Isolation Options:	·		Patronetel
In-Cloud Standby	Annual process of the difference of the second seco			Strength:
-	Select Network Interface ·			AES 128 bit
🧕 Image Manag 🕽	Jesett (Vetiviola injuniace			
🖬 Local Host 🛛 🕴 🖡	2			
Host Name: demo_svr04 Domain: WORKSROUP				
IP Address: 192.168.100.54				
Logon User: Administrator				
RescueBoot: Enabled				
Mounted: No				
Task: None				
0.0 % (4)			< Back	Next > Cancel

 Enter \\192.168.100.55\\disk as the destination in the shared folder field and press the [Enter] key. Next, enter your credentials to log into the destination folder. For example, enter 192.168.100.55\\Administrator in the [User Name] field and your password in the [Password] field. Finally, click on the [Connect] button.

Select Folder					×
< \\192.168.100.55\disk\					
E Cocal Desktop Documents Local Disk (C:) E ジ CD/DVD ROM (D:) デリューム (E:)	N		e\username or domain'	Password:	•• onnect Cancel Version
 Network Actiphy StorageServer MS Azure Amazon S3 Wasabi Yeutrix Cloud Storage SFTP 					
	<	-			3
Folder	\\192.168.100.55	\disk\		Select Folder	Cancel
	Directory only		•	Show base image file	e

6. Ensure you have correctly specified the destination shared folder and click the **[Select Folder]** button.

Select Folder						×
 Close Job Job Strate Coal Disk (C:) Documents Local Disk (C:) CD/DVD ROM (D:) ボリューム (E:) AIPBE (F:) Network 192.168.100.55 MIS Azure Amazon S3 SFTP 	Name	-	Date Modified	Image File Type	Size	
Folder:	\\192.168.100.55\disk			Select Folder	Canc	el
	Directory only		-	Show base image fi	le	

 Ensure you have selected a shared folder for the destination. Then, click the [Next] button. The Destination Isolation feature, and compression & encryption options are available at the bottom and the right side of the screen. Please refer to section 4-2 Volume Backup: Scheduled Backups of this document for more information.

Operation View Preferences	Utilities Help			
🖬 demo_svr04 🔷 💌				
Dashboard	Volume Backup			
📤 Backup	1 Source 2	Destination	3 Schedule	4 Summary
Volume Backup	Task Name			Options: < Advanced Options
File Backup	Backup_20220713_1304			Compression:
HyperBack	Destination folder: 😧			Deduplication Compression
Standby	\\192.168.100.55\disk	•	Select folder	Level 2 (Optimized) Change temp file folder
- soundary - s	Comments:			Sandard Compression
Recovery				Fast -
				🔑 🔄 Password Protection 😨
In-Cloud Recov	Destination Isolation Options: 📀			
				Confirm Password Strength:
In-Cloud Standby				Strength:
Image Manag>	Select Network Interface •			AES 128 bit
Local Host 🕴				
fost Name: demo_svr04				
Address: 192.168.100.54				
ogon User: Administrator				
escueBoot: Enabled				
founted: No				
ask: None				
0.0 5 0.0			< Back	Next > Cancel

8. Select **[Backup Once]** for the Task Type and click **[OK]**.

Base (_	kup Once	e 🔘 Sche	dule Bac	kup		Increme	ental 🔞					
⊮ Ma	onthly		•	_		×	Vee Wee	ekly		*		_	×
1	2	3	4	5	6	7	Sun	Mon	Tue	Wed	Thu	Fri	Sat
8	9	10	11	12	13	14							- Out
15	16	17	18	19	20	21	Maltr-	times					
22	23	24	25	26	27	28	Start T	ime:	V End J	îme:	Interval:		
						20					-		
29 Execute	30 Time: 13	22	EOM			20	07:05	në time or	21:00 dyi 13:22	Loui	50	Minut	es 🔻
	Time: 13		EOM					në fimë or	dys 13,23		50	Minut	es. 🔻
Execute Add Ne	Time: 13	22	EOM				e br	në fimë or	dys 13,23		50	Minut	€5. ▼

Click [Next] in this example.

Activelmage Protector				- 🗆 X
Operation View Preferences L	Itilities Help			
Dashboard	Volume Backup			
🛋 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup	Task type: Effective From: Base (Full): Incremental:	Backup Once 7/13/2022 1:22 PM		
		Edit Sch	edule 👘	
🕎 Standby 🔹 🕨	Post-backup Process			
📥 Recovery 🔉	BootCheck Unconfi		nconfigured 🥽 Cons	olidation: Unconfigured
 In-Cloud Recov In-Cloud Standby 	Number of image sets to ret		Full (tion Priority @ Base): owest Low Medium High
🚺 Image Manag >	Task failed			mental: owest Low Medium High
Local Host Itora Host Itora				
Task: None 0.0 % U C			< Back	Next > Cancel

9. Review the summary for the configured settings and click **[Done]** to start the backup task.

Operation View Preferences	Utilities Help			
🕍 demo_svr04 🛛 🛪				
Dashboard	Volume Backup			
🚵 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup				
a financia e se contra de	Backup Source:			
ڬ File Backup	Backup Type:	Entire Disk		
HyperBack	Backup Source:	0; 1		
Standby	Destination:			
	Estimated image file size:	16.6 GB		
Recovery >	Destination folder:	\\192.168.100.55\disk		
necovery *	Comments:	None		
In-Cloud Recov	T Options:			
	Task Name:	Backup_20220713_1304		
In-Cloud Standby	Compression:	Standard Compression (Fast)		
	Password:	None		
Image Manag>	Designate a separate image	Disabled		
Innage Wanag	Ignore bad sectors:	Enabled		
Local Host 🕴 🗊	Backup disk meta-data:	Enabled		
	Ignore Inaccessible volume(s):	Enabled		
Host Name: demo_svr04	Force Component Mode:	No		
Domain: WORKGROUP	Excluded files:	pagefile, hiberfi, volume informa	tion	
IP Address: 192.168.100.54				
Logon User: Administrator	Schedule:			
RescueBoot: Enabled	Regularly schedule backup task			
Mounted; No	Effective From:	7/13/2022 1:22 PM		
Task: None	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			

10. Select **[Run Now]** and click **[OK]** to start backup task. **[Post Backup Operation]** may be selected to shut down or restart the system upon the completion of backup.

Activelmage Protector	×
When do you want start backup? Run Now Run manually later Post Backup Operation 	
None 🔻	
<u>Cancel</u> OK	1

11. When a backup task starts, you can monitor the progress in the Dashboard window.

ActiveImage Protector	- 🗆 X
Operation View Preferences Utilities Help	
💆 demo_svr04 🔹 🚯 [Backup_20220713_1304] : [21.6%] completed at [6.2 GB/min]. Remaining [5 min 15 sec].	
Dashboard Dashboard	Dashboard
A HyperAgent	Selected Task
Backup > System Health Status	Pause Task
Standby > Current Task	Day Cancel Task
Status Task Start Time Progress (%)	^
Recovery > Running Backup_20220713_1304 7/13/2022 1:15:00 PM 21.6 %	
Backup 20220713	
In-Cloud Recov Creating image of C	
Disk Throughput 6.16-GB/min (Read)	
In-Cloud Standby Compression 38.3% Image Throughout 2.75 GB/min (Write)	
Image Manag>	
Virtualization > Schedule	-
Disk Information	-
Utilities Volume Name File System Volume Size Used Space Associated	
Local Host 🕴 📄 👘 🔤 👘 👘 👘 👘 👘 👘 👘	
pst Name: demo_svr04 Cal Local Disk (): EFI 99.0 MB Disk 0 Cal Local Disk (): NTFS 29.4 GB 21.7 GB Disk 0	
main: WORKGROUP Basic Dynamic disk Car Volume Control Dynamic volume	
Address: 192.168.100.54	
Agon User: Administrator Disk 0	
excueBoot: Enabled Basic (GPT) 90.0 G8 Elif et Local Dirk (1) Local Dirk (2) Understand 450.0 MB NTES PROFILE 254.0 B NTES	
Iounted: No Lised : 22.0 GB 450.0 MB NTFS 79.0 MB EF1 29.4 GB NTFS Rooma	
ask: Backup 20220713 1304 Dub 1	
Baser (GPT)	
21.6 5 9 - 100 100 - 100 - 100	v

12. ActiveImage Protector has finished the backup when the progress bar reaches 100%.

Activelmage Protector		- 🗆 🗙
Operation View Preferences Utilit	lies Help	
Me demo svr04 -	😪 Successi [Backup.20220713_1304]. Process Time [2 min 55 sec].	
Dashboard	Dashboard	Dashboard .
		- Refresh
🛋 Backup 🔉	HyperAgent	Selected Task
	1 System Health Status	Do Pause Task
👜 Standby 🔹 🕨	Current lask Status Task Statt Time Progress (%)	Cancel Task
4	Done Backup_20220713_1304 7/13/2022 1:15:00 PM	
Recovery >	Backup_20220713	
In-Cloud Recovery	Backing unlettered Running: 100.0%	
- In cloud necorcity	volume (6) to image Disk Throughput GB/min (Read)	
In-Cloud Standby	Image size 11.6 GB Image Throughput GE/min (Write) Compression 42.7%	
-		
🧾 Image Manage 🕽	© Task log	
Virtualization	iii Schedula	
Virtualization	Disk Information	
Utilities >	Volume Name File System Volume Size Used Space Associated	
V tocal Hest	Oisk 0	
Host Name: demo svr04	Lar Local Disk (:) EFI 99,0 MB Disk 0 → Local Disk (C) NTFS 29,4 GB 21.7 GB Disk 0 ✓	
Domain: WORKGROUP	Basic S Dynamic disk C Volume Dynamic volume	
IP Address: 192.168.100.54	^	
Logon User: Administrator RescueBoot: Enabled	Disk 0 Basic (GPT)	
Mounted: No	90.0 GB 450 c Mis MT 5 99.0 MB C 1 29.4 GB NT 5 99.0 MB C 1 29.4 GB NT 5 10 0 1	
lask: None	Disk 1	
0.0 % (*) (*)	Basic (GPT) Inter of the State	
	Unallocated Primary	

4-2. Volume Backup: Scheduled Backups

Please use the following steps to configure regularly scheduled backups (**NOTE**: These steps describe the process of creating the backup schedules depicted in the screenshots. You may want to create different backup settings than depicted here):

- 1. Start ActiveImage Protector by clicking on the Windows Start menu and selecting [Actiphy] \rightarrow [ActiveImage Protector].
- 2. Once in ActiveImage Protector, click on [Backup] \rightarrow [Volume Backup].

Activelmage Protector		- 🗆 X
Operation View Preferences Utilities Help		
Ma demo_svr04 •		
Dashboard Backup		
🚢 Backup		
Volume Backup	Volume Backup	
ڬ File Backup 🦓 HyperBack	Create local disk or volume backup task.	
🕎 Standby 🔸		
Recovery	File Backup Create file or folder backup task.	
In-Cloud Recovery		
In-Cloud Standby	HyperBack	
🚺 Image Manage >	Create virtual machine agentless backup task.	
🚂 Local Host 🏾 🌮 🖻		
Host Name: demo_svr04 Domain: WORKGROUP		
IP Address: 192.168.100.54		
Logon User: Administrator RescueBoot: Enabled		
Mounted: No		
Task: None		
0.0 % (ii) 🖷		
*		

3. Select the backup source from the list of volumes. We will select the entire disk as the backup source in this example. Click [Entire Disk] and then click the checkboxes for [Disk 0] and [Disk 1]. Once you have selected the backup source(s), click the [Next] button.

Activelmage Protector				- 🗆 X
	iities Help			
🖬 demo_svr04 🔹	And the second se			
Dashboard	Volume Backup			
🚵 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup	Entire Disk O Volume			
HyperBack	Volume Name File System	Volume Size Used Space	Associated	
🕎 Standby 🔉	Local Disk (c) NTFS Local Disk (C) EFI Local Disk (C) NTFS Local Disk (C) NTFS	450.0 MB 347.2 MB 99.0 MB 29.4 GB 21.6 GB 60.0 GB	Disk 0 Disk 0 Disk 0 Disk 0 Disk 0	
Recovery >	■ 図 回時1	99.9 GB 110.9 MB	Disk 1	
In-Cloud Recovery	🔜 Basic 😤 Dynamic disk 🖙 Volu	me 🖙 Dynamic volume		
 In-Cloud Standby Image Manage > 	Disk 0 Basic (GPT) 90.0 GB & Used: 21.9 GB	Local Disk (1 99.0 MB EFI 29.4 GB NTFS	time and the second	atet
Local Host Host Name: demo_svi04 Domain: WORKGROUP	Z Disk 1 Basic (GPT) 100.0 GB # Used : 110.9 MB 52.9 GE MTPS			
IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Enabled				
Mounted: No	Unallocated Primary			
Task: None 0.0 %			I	Next > Cancel

4. Select a destination folder to save the backup image files to. In this example, we have selected the network shared folder **\192.168.100.55\disk** as the destination. Click **[Select Folder]** or click on the "▼" icon on the right-hand side of the **[Destination folder]** text box to select a location to save your backup.

peration View Preferences	<u>Utilities</u> <u>H</u> elp		
🜃 demo_svr04 🛛 🔻			
Dashboard	Volume Backup		
Backup	1 Source 2 Des	tination 3 Schedule	4 Summary
Volume Backup	Task Name:		Options: < Advanced Option
ڬ File Backup	Backup_20220713_1323		
HyperBack	Destination folder: 2		Q V Compression: Q Deduplication Compression
Standby	Comments	✓ Select folder	Level 2 (Optimized) Change temp file folder
Recovery >			Fast
In-Cloud Recov	Destination Isolation Options: Q		Patronord
			Confirm Pressonth
In-Cloud Standby	a second second second second		Strength:
Image Manag>	Select Network Interface •		AES 128 bit
Local Host #			
ost Name: demo_svr04			
omain: WORKGROUP			
Address: 192.168.100.54 sgon User: Administrator			
escueBoot: Enabled			
lounted; No			

Specify a shared folder for the destination storage and press the [Enter] key. Also, enter the destination folder's login credentials and click the [Connect] button. (In this screenshot, we're using \\192.168.100.55\disk as the destination folder and 192.168.100.55\Administrator as the username).

Select Folder < \\192.168.100.55\disk\	>	< •
< (\192.108.100.55\disk) Local Desktop Local Disk (C:) Local Disk (C:) Local Disk (C:) Local Disk (C:) 同志(C) DVD ROM (D:) 同志(C) Network Actiphy StorageServer AMS Azure Amazon S3 Wasabi SFTP SFTP	User Name: 32,168.100.55\Administrator Password:	
Folder:	\\192.168.100.55\disk\ Directory only Cancel	>

6. Specify the shared folder for the destination and click [Select Folder].

A Select Folder						X
< \\192.168.100.55\disk						•
 Local Desktop Documents Local Disk (C:) CD/DVD ROM (D:) CD/DVD ROM (D:) AIPBE (F:) Network 192.168.100.55 disk disk disk SFTP 	Name	*	Date Modified	Image File Type	Size	
Folder:	\\192.168.100.55\disk			Select Folder		Cancel
	Directory only		+	Show base image f	le	

7. On the Volume Backup screen, ensure you have filled in the Destination Folder field correctly and click **[Next]**. We will review the **[Destination Isolation Options]** and **[Options]** sections later in this document.

Activelmage Protector				- 🗆 X
Operation View Preferences U	Itilities <u>H</u> elp			
🔛 demo_svr04 🔹 🔻				
📮 Dashboard	Volume Backup			
📥 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Image: Standby > Image: Manage> >	 Take the destination (.cca) F Eject the destination USB Hall 	om Local Hard Orst after backlip completer Mild Disk offine after backlip completer ard Disk after backlip completer connection after backlip completer	Select folder	Options: Advanced Options: Deduplication Compression Level 2 (Optimized) Change temp file (Folder @) Standard Compression Fast Password Protection @) Pessword Pessword Confirm Password Strengti: Enable Erdpription AES 128 bit
Domain: WORKGROUP IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Enabled Mounted: No				
Task: None 0.0 % 🔍 👁			< Back	Next > Cancel

- 8. Configure the backup schedule. The steps below shows an example of configuring a schedule:
 - Select [Schedule Backup] for the Task Type and configure the Weekly backup schedule settings.
 - Set the Base backup schedule to Weekly.
 - Set the Incremental backup schedule to Weekly.
 - Set the Execute Time of the Base backup to **Sundays at 1:00 am**.
 - Set the Incremental Backup schedule to Monday to Saturday at 1:00 am.
 - After configuring all options, click the **[OK]** button.

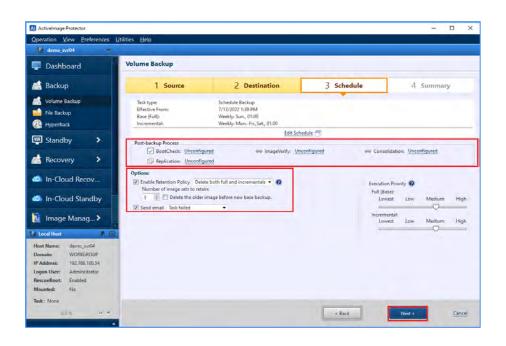
Backup_20220713_1323 Effective Date/Time:	2022/07/13 13:37 🗸 ~ 2023/07/13 13:37 🗸 🔽 Not Specific
Task Type: 🔘 Backup Once 🖲 Schedule Backup	
Base 🙆	Incremental 🔞
🗹 Weekly 👻 📉 🗙 🛞	Weekly 🗸
Sun Mon Tue Wed Thu Fri Sat	Sun Mon Tue Wed Thu Fri Sat
	Start Time: Interval: Interval: Interval:
Add New Base	Add New Incremental
Add New Base Event Backup: Shutdown/Reboot Back and Incremental	Add New Incremental Option: Auto run if a scheduled task is missed.

The following example shows how to set up a multi-scheduled backup:

- Click the [Add New Base] link on the Schedule Settings page.
- Configure the settings for your additional schedule.
- In addition to a weekly schedule, you can configure backups to occur on specific days, such as the month's second and fourth Fridays, using the [Designate Specific Days] option.

Designate	Specifi	ic Days	•			- ;	× 💌	
Month: 1	2 3	4	5 6	7 8	3 9	10 1	1 12	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
Week 1:								
Week 2:								
Week 3:								
Week 4:								
Week 5:								
Final Week:								
Execute Time:	01:00	*						
	_							¥
Add New Base	2							

 You can configure your [Enable Retention Policy] and [Send Email] settings on the [Schedule] tab. Then, click the [Next] button for the settings to take effect. We will cover details about Post-backup Process in the next chapter.



(1) Enable Retention Policy

The Retention Policy defines how many sets of backup files to retain before deletion. In this example, we've enabled the retention policy by checking the [Enabling Retention Policy] checkbox. We've also configured the program to keep the three most recent backups in the destination folder and delete any backups older than those. The default setting for the [Number of image sets to retain] field is 3.

NOTE: Each set of ActiveImage Protector backup files consists of one base backup image and any associated incremental backup files.

Enable Retention Policy Delete both full and incrementals					
Number of image sets to retain:					
3 🚔 🔲 Delete the	older image before new base backup.				

(2) Send Email

Enable this option to receive status emails for each task based on the task's completion status (i.e., **[Task succeeded]**, **[Task failed]**, **[Task succeeded or failed]**).

If you select the **[Task failed]** option, the system will only send you an email if the backup task fails.

You must configure your email settings in [Preference] \rightarrow [Notification] before using the [Send Email] functionality.

Send email	Task failed	Ŧ
	Task succeeded	
	Task failed	
	Task succeeded or failed	

(3) E-Mail Setting

To configure your email settings, go to [Preferences] \rightarrow [Notification].

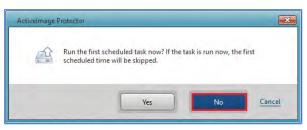
After configuring your email settings, click the **[Test Email Notification]** button to ensure your email notification settings are correct. Once you have received the test email, click the **[Apply]** button to save your configuration.

🗊 General	E-Mail:
Proxy	From: Lange @actiphy.com
Notification	To: 🚥 🖬 📫 р @actiphy.com
X Deduplication	Subject: ActiveImage Protector
Alert	Use this SMTP server:
Console	Account Name:
HyperBack	Test E-Mail Notification
🚰 Hypervisor	 Send tasks summary notification Daily 21:00 Weekly SUN 21:00 Monthly 1 21:00 Send notification email 7 days before license expires.

10. After setting up your backup schedule, you should see a summary of your configuration. Please review your backup configuration. If everything looks correct, click the **[Done]** button.

Image Manag> Volume Eackup In-Cloud Recov In-Cloud Recov Image Manag> Comment: Inage Manag> Standed Compression (Fao) Incloud Standby Destination Incloud Standby Standed Compression (Fao) Incloud Recov Standed Compression (Fao) Incloud Recov Standed Compression (Fao) Incloud Standby Standed Compression (Fao) Patients: Name Standed Compression (Fao) Standed Compression (Fao) Patients: Name<	Operation View Preferences]	<u>Itilities H</u> elp			
Volume Backup Volume Backup <td< th=""><th>Charles and the second s</th><th>Volume Backup</th><th></th><th></th><th></th></td<>	Charles and the second s	Volume Backup			
Pice Backup Backup Source: Backup S	🚵 Backup	1 Source	2 Destination	3 Schedule	4 Summary
In-Cloud Recov.r. In-Cloud Standby In-Cloud Standby Standard compression (Fast) In-Cloud Standby Task Name In-Cloud Standby Standard compression (Fast) In-Cloud Standby Standard compression (Fast) In-Cloud Standby Task Name In-Cloud Standby Standard compression (Fast) In-Cloud Standby Task Name In-Cloud Standby Standard compression (Fast) In-Cloud Standby Task Name In-Cloud Standby Standard compression (Fast) In-Cloud Standby Fastondt In-Cloud Standby Fastondt In-Cloud Standby Fastondt In-Cloud Standby Fastondt Fastondt Designate asparate image Designate asparate image Daskied Ignore Inaccessible volumeig Enabled Ignore Inaccessible volumeig Enabled Ignore Inaccessible volumeig Enabled Ingene Use: Administration Produmes: York Compression Ingene Use: Regularity schedule taskup task Recourtedios: Fastled Ingene Use: <	File Backup	Backup Type:			
Copusation Copusation Copusation Copusation Compression Compression Compression Compression Sundard Compression Compression Sundard Compression Compr		Estimated image file size: Destination folder:	\\192.168.100.55\disk		
Instage Manage Ignore bad sectors: Enabled Iscal Host If Backup disk meta-data: Inabled Host Name: demo_svolt Backup disk meta-data: Inabled Host Name: VORKSROUP Force Component Mode: No Proderse: VORKSROUP Excluded files: pagefile,hiber filvolume information Proderse: VORKSROUP Excluded files: pagefile,hiber filvolume information Proderse: VORKSROUP Escluded files: pagefile,hiber filvolume information Proderse: VORKSROUP Escluded files: pagefile,hiber filvolume information No Effective from: 7/13/2022 1:39 PM		Task Name Compression:	Standard Compression (Fast)		
Logen User: Administrator The Schedule: Rescuelbost: Frabiled Regularly schedule backup task Mounted: No Effective from: 7/13/2022 1:39 PM	Local Host T Host Name: demo_svi04 Domain: WORKSROUP	Ignore bad sectors: Backup disk meta-data: Ignore inaccessible volume(s): Force Component Mode:	Enabled Enabled Enabled No		
Task: None	Logon User: Administrator RescueBoot: Enabled Mounted: No	Regularly schedule backup task	7/13/2022 1:39 PM		

11. Next, you'll see a dialog asking if you want to run the initial backup now. If you click the **[No]** button, the system will take you back to the Dashboard, and your initial backup will run according to your schedule. If you click the **[Yes]** button, the system will immediately run the initial backup and skip the first scheduled backup.



12. Go to [Dashboard] \rightarrow [Schedule] to modify or monitor your scheduled tasks.

🔟 demo_svr04 🛛 🔫		
Dashboard	Dashboard	Dashboard
Lasinodala	Provide and	Refresh
🔓 Backup 🔹 🗲	(2) HyperAgent	Schedule
	A System Health Status	Create New
Standby >	Current Task	X Delete all
	C Task log	Selected Schedule
Recovery >	III Schedule	Run full backu
	Name Task Valid From Last Run Date/Time Next Run Date/Time Backup, 20220713, 1323 Agent-based 7/13/2022 1:39:00 PM N/A 7/14/2022 1:00:00 AM	- Run incremen
In-Cloud Recov	encody_overanty_taka ingenicoased // larvez hasourin ivia // hereez house han	Ø Disable
In-Cloud Standby		
		🖉 Edit
		Z Edit X Delete
Image Manag>		
Image Manag>		1
Image Manag>	E Disk Information	× Delete
Image Manag>	Volume Name File System Volume Size Used Space Associated	
Image Manag> Virtualization > Utilities >	Volume Name File System Volume Size Used Space Associated IP Disk 0 Image: Compared System Image: Compared S	× Delete
Image Manag> Virtualization > Utilities > ccal Hest 2	Volume Name File System Volume Size Used Space Associated IP Dnk 0	× Delete
Image Manag> Virtualization > Utilities > ocal Hate (Constraint) It Name: WORKGROUP	Volume Name File System Volume Size Used Space Associated IP Disk 0 Image: Compared System Image: Compared S	× Delete
Image Manag> Virtualization > Utilities > Local Host // Image Construction at Name: demo_swork mailer: WORKBROUP Address: 1921.061.00.54	Volume Name File System Volume Size Davb 0 Associated Image: Davb 0 Davb 0 NTTS 450.0 MB 3472.0 MB Disk 0 Image: Davb 0 NTTS 450.0 MB 3472.0 MB Disk 0 Image: Davb 0 NTTS 450.0 MB 3472.0 MB Disk 0 Image: Davb 0 NTTS 450.0 MB 3472.0 MB Disk 0 Image: Davb 0 NTTS 450.0 MB 21.6 GB Disk 0 Image: Davb 0 Dynamic disk Volume Dynamic volume	× Delete
Image Manag> Virtualization > Utilities > toral Hoat VORKBROUP Address 192.166.100.54 gon Use Administration	Volume Name File System Volume Size Used Space Associated Image: Dark 0 Dark 0 State Dark 0 Dark 0 Image: Dark 0 MTPS 450.0 MB 347.2 MB Dark 0 Image: Dark 0 MTPS 29.4 GB Dark 0 Image: Dark 0 Dark 0 Dark 0	× Delete
Image Manag> Virtualization > Utilities > Local Host // Image Construction at Name: demo_swork mailer: WORKBROUP Address: 1921.061.00.54	Volume Name File System Volume Size Used Space Associated Image: Disk 0 Disk 0 Disk 0 Disk 0 Disk 0 Image: Disk 0 FIT 940.M8 Disk 0 Disk 0 Image: Disk 0 FIT 234.06 21.6 G8 Disk 0 Image: Disk 0 Disk 0 Disk 0 Disk 0 Image: Disk 0 Disk 0 Disk 0 Disk 0 Image: Disk 0 Disk 0 Disk 0 Disk 0	× Delete

13. If you right-click on the name of your schedule, you can use the drop-down menu to:

- Immediately run a full backup task.
- Immediately run an incremental backup task.
- Disable the schedule.
- Edit the schedule.
- Delete the schedule.

Operation View Preferences U	tilties Help	
demo_svr04 T		
	Dashboard	Dashboard
P Dashboard	Destroying	Refresh
Backup >	HyperAgent	Schedule
a backup	System Health Status	Create New
Standby	Current Task	X Delete all
	Task log	Selected Schedule
Recovery	Schedule	Run full backup
	Name Task Valid From Last Run Date/Time Next Run Date/Time	
In-Cloud Recov	Backup_20220713_1333 4 10 20120033 439:00 PM N/A 7/14/2022 1:00:00 AM	📫 Run incrementa.
	Nun incremental backup	🥝 Disable
In-Cloud Standby	Ø Disable	📝 Edit
🗴 Image Manag >	∠2 Edit ★ Delete	× Delete
🖉 Virtualization 🔸	H Disk Information	
Utilities	Volume Name File System Volume Size Used Space Associated	*
Local Host 🕴 🖬 🖬	● all Disk 0 car BOM (c) NTPS 450.0 MB 3472 MB Disk 0 car Local Disk (c) IFF 950 MB Disk 0 car Local Disk (c) NTPS 234.4 G8 21.6 G8 Disk 0	
Domain: WORKGROUP	🔤 Basic 😤 Dynamic disk 🖙 Volume 🖙 Dynamic volume	
P Address: 192,168,100,54 ogon User: Administrator lescueBoot: Enabled Mounted: No	Disk 0 Ball (6) <	
ask: None	Disk 1 8444 (597) 1000 A28 731 - 24 (5)	

- 14. When necessary, you can enable the **[Destination Isolation Option]** and configure the **[Option]**, **[Advanced Settings]**, and **[Post-backup Process]** settings. Here are some examples:
 - (1) Destination Isolation Options:

Enabling the **[Destination Isolation Options]** causes the system to disconnect network access to the backup image's storage drives or sets the destination disk *offline* once the backup task is complete. The **[Destination Isolation Options]** feature protects the backup storage location and the backups stored there from potential malware or ransomware attacks.

Turning [Destination Isolation Options] on gives you access to the following options:

Destination Isolation Options:

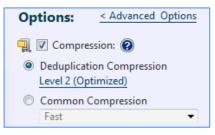
- O Un-assign the drive letter from Local Hard Disk after backup completes
- Take the destination Local Hard Disk offline after backup completes
- © Eject the destination USB Hard Disk after backup completes
- Disable destination Network Connection after backup completes
 Ethernet0
 Select Network Interface
 Ethernet0
- Un-assign the drive letter from the local hard disk after completing the backup: When this option is enabled, ActiveImage Protector will unassign the local hard disk's drive letter once the backup process is complete.
- Take the destination local hard disk offline after completing the backup: When you enable this option, Activelmage Protector will set the destination disk to *offline* once the backup is complete.
- Eject the destination USB hard disk after completing the backup: Enabling this option causes ActiveImage Protector to eject the destination drive once the backup is complete if you save your backups to removable media, such as a USB drive.
- **Disable the destination network connection after completing the backup:** This option will disconnect the network connection to your backup destination once the backup is complete if you save backups to a network drive.

(2) Options:

Compression:

ActiveImage Protector provides two types of compression: **[Standard Compression]** and **[Deduplication Compression]**. The compression ratio differs depending on the type of compression you choose.

The **[Standard Compression]** option will produce a backup image around 70% of the size of the backup source. The **[Deduplication Compression]** option will produce backup images around 50% of the size of the backup source.



 Password Protection: Enabling this option protects the backup image file by assigning a unique password. This additional security prevents anyone from mounting, exploring, or restoring the image file without a password. • Enable Encryption: There are three levels of encryption to choose from: "RCS," "AES128 bit", and "AES256 bit." Encrypting your backups will protect any backup image files you save to a remote location from cyber attacks.

🔑 👿 Password Protection 🔞
•••••
•••••
Strength: Strong
Enable Encryption
AES 256 bit 🔹

- (3) Advanced Backup Options: The Advanced Backup Options section contains the following settings:
- **[Designate a separate image file set per disk]**: This option tells ActiveImage Protector to create a separate backup file for each disk in your backup plan.
- [Split image into xx MB files]: This option lets you split your backup images into multiple smaller files.
- **[Ignore bad sectors]**: This option will cause the backup to skip over bad sectors on the source disk.
- [Create an MD5 file for the image]: This option tells ActiveImage Protector to create an MD5 hash for each backup image. ActiveImage Protector will store MD5 hashes in a separate file in the same directory where it saves your backup images.
- **[Ignore inaccessible volumes]**: ActiveImage Protector will skip any inaccessible volumes during the backup process if you enable this option. If this option is disabled, ActiveImage Protector will produce an error if it can't access a volume and halt the backup process.
- **[Use network throttle xx (Max KB/Second)]**: This option lets you throttle the amount of network bandwidth ActiveImage Protector can use during the backup process.
- **[Use network write caching]**: This option can make the backup process more stable when copying files across a network; however, it can also cause ActiveImage Protector to process large files more slowly.
- **[Make backup image file P2V ready]**: This option tells ActiveImage Protector to prepare an image file for virtualization later. Please note that this option does not virtualize the file. It only prepares the image so you can virtualize it at a later time.
- [Make backup images Cloud Standby ready]: This option prepares virtual copies of your backup images that you can use to launch virtual machines in either AWS or Azure.

Advanced Backup Options:			
General			
Designate a separate image file set per disk	Use network throttle: 0 (Max KB/Second)		
Split image into 0 MB files.	Use network write caching.		
Ignore bad sectors.	🗐 Backup timeout: 12 🚔 Hours		
Create an MD5 file for image			
Ignore inaccessible volumes(s).			
Clean and overwrite the pool when creating full backup.			
Image Preparation			
V Make backup image file P2V ready. 🔞 🔲 Make back	up image Cloud Standby ready. 🔞		
Image Preparation Image Preparation Image Preparation Image Preparation Image Preparation Image Preparation	up image Cloud Standby ready. 🔞		

• [Scripting]: You can write scripts to run before and after ActiveImage Protector creates snapshots or backups. For example, when backing up non-VSS-savvy databases, you need to stop the service before starting the backup task to maintain the integrity of the data. You can specify a script or batch file to stop the database service before ActiveImage Protector takes a snapshot and then start it again once the backup is complete.

Script to execute before the snapshot is taken:	Time-out Run on:
C:\temp\DB_shutdows.ps1	30 mins. Base and Incremental 🔻
Script to execute after the snapshot is taken:	
C:\temp\DB_startup.ps1	30 mins. Base and Incremental
Script to execute after image creation:	
	30 mins. Base and Incremental

(4) Post-backup Process:

The Post-backup process is executed upon completion of a backup task or at a specified time. You can select an option for Post-backup Process, i.e., **[BootCheck]**, **[Image Verify]**, **[Consolidation]**, or **[Replication]**.

· BootCheck:

BootCheck quickly tests if a created backup of the system volumes can successfully boot on the selected hypervisor. Click in the box to enable the **[Enable BootCheck]** option. Configure the Schedule settings, Sending Email options, etc.

ActiveImage Protector	- 🗆 X
Operation View Preferences Utilities Help	
🕼 demo_svr04 🛛 👻	
BootCheck ImageVerify Consolidation Replication	
Trable BootCheck	
Working Agent:	
Select Hypervisor	
5chedule	
Immediate	
After each 2 6 new image files being created	
() at (0.0) (1)	
Coll Settings	
Try previous images if BootCheck failed	
Time-out 600 🔄 seconds	
🖓 Option	
Sending Email Task failed	•
	Apply Done> Cancel

Image Verify:

•

Specify the options and timing to start the ImageVerify process. Click in the box to enable the **[Enable Verify Image]**. Configure the schedule settings.

ActiveImage Protector	- 🗆 X
Operation View Preferences Utilities Help	
📓 demo svr04 🔹	
BoetCheck ImageVerify Consolidation Replication	
😰 Enable Verify image	
🗇 Quick verify 🗿	
Deep verify	
Working Agent:	
This Computer -	
Schedule	
Immediate	
After each Image files being created	
O at two P	
Coptions	
III Skip verify base image III Verify latest new image file only	
Ending Email Task failed	
Apply	Done Cancel

Consolidation :

•

Consolidation can be scheduled to consolidate the incremental backups into a single backup image set reducing storage demands. Click in the box to enable the **[Enable Consolidation]** option. Configure the settings for **[Schedule]**, **[Sending Email]**, **[Performance]**, etc.

Offsite Replication

•

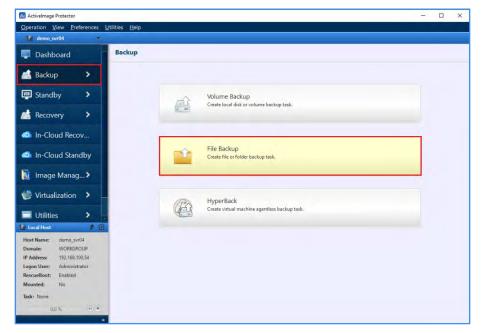
The Replication feature enables you to replicate backup image files to an offsite storage share including cloud storage. ActiveImage Protector Replication feature supports local storage, shared folder, WebDAV, FTP, Amazon S3, Azure Storage, OneDrive, Google Drive, and Dropbox, Wasabi, Neutrix Cloud.

ActiveImage Protector Operation View Preferences Utilities Help	– 🗆 X
	VO performance Light High
Add Target	
Apply	Danie> Cancel

4-3. File Backup : Schedule File Backup

Configure the file / folder backup schedule settings.

- 1. Start ActiveImage Protector. Go to Windows Start menu [ActiveImage Protector].
- 2. Click [Backup] \rightarrow [File Backup].



3. Select backup source.

The following example shows that folders "data01" and "data02" in the "share" folder of "D:" drive are selected for backup. To exclude files from the selected folder you can click on [< Specify Exclusions]. You can specify a path to the file (ex: C:\test\EULA.txt), the file extension (ex: EULA.txt), or a wild card "*" (Ex: *.txt, EULA.*). After configuring the settings, click **[Next]**.

Activelmage Protector							- 🗆 X
Operation View Preferences	<u>U</u> tilities <u>H</u> elp						
🚺 demo_svr04 🔹							
Dashboard	File Backup						
🚵 Backup	1 Source	2	Destination	3 :	Schedule	4 s	ummary
🔬 Volume Backup						< Sr	pecify Exclusions
📫 File Backup	< D:\share	+ 10		Date Modified	File Type	Size	
HyperBack	E 🔂 Local		data01	7/13/2022 2:23 PM 7/13/2022 2:24 PM	Folder Folder		_
🕮 Standby 🔸	Documents Local Disk (C:) New Volume (D:)			7/13/2022 2:24 PM	Folder		
📩 Recovery 🔹 🕨	B- C SRECYCLE.BIN						
In-Cloud Recov	- 🚞 data01 🚞 data02 🚞 work						
In-Cloud Standby	AIPBE (F:)						
Image Manag ≯							
🔛 Local Host 🛛 🕴 🗹							
Host Name: demo_svr04							
Domain: WORKGROUP IP Address: 192.168.100.54							
Logon User: Administrator							
RescueBoot: Enabled Mounted: No							
Task: None	-						
0.0 % 11 (*)						Next>	Cancel
40 M						Hell >	Curico

4. Select a destination folder for the backup image.

The following example shows that a network shared folder ,"\\192.168.100.55\disk1", is specified as the destination folder. Click **[Select Folder]** to browse to a location. Or click " $\mathbf{\nabla}$ " on the right hand of the text box, to select a location previously used as a destination in other backup tasks.

Operation View Preferences				
	Utilities Help			
🚺 demo_svr04 🛛 🔻				
Dashboard	File Backup			
🔹 Backup	1 Source	2 Destination	3 Schedule	4 Summary
🚯 Volume Backup	Task Name			Options:
File Backup	Backup_20220713_1437			Backup
HyperBack	Destination folder:			🖹 Backup ACL 😨
Standby >	File Name: 😧		Select folder	Image File:
Recovery >	img_20220713_1437		afb	Desiverd
Recovery	Comments:			Confirm Password
In-Cloud Recov				Strength: Strong
In-Cloud Standby	Destination Isolation Options:			RCS -
Local Host 🕴 🖬	Select Network Interface 👻			
Host Name: demo_svr04				
Domain: WORKGROUP				
IP Address: 192.168.100.54 Logon User: Administrator				
RescueBoot: Enabled				
Mounted: No				
Task: None				
0.0 % H =			< Back	Next > Cancel

Specify a shared folder as the destination storage. Enter a network location "<u>\\192.168.100.55\disk1</u>" as the destination folder and press the [Enter] key. At the top of screen enter the credentials to log into the target destination. The following example shows "192.168.100.55\Administrator" is entered as [User Name] and the password for [Password]. Click [Connect].

Select Folder				×
 \\192.168.100.55\disk\ Local Desktop Documents Local Disk (C:) 		e: 32.168.100.55\Administ	-	Connect Cancel
 ■ よび CD/DVD ROM (D:) □ ボリューム (E:) ○ Network ◎ Actiphy StorageServer △ MS Azure △ Amazon S3 ③ Wasabi □ ↓ Neutrix Cloud Storage ③ SFTP 	Name	↓ Date Modified	Image File Type	Version
Folder: \\192.168.1 Directory c			Select Folder	Cancel

6. Specify a shared folder as the destination storage. The network location is now accessible in the folder tree to the left. Select the destination and click **[Select Folder]**.

Select Folder					×
< \\192.168.100.55\disk1\					•
Image: Construction of the system of the	Name	Date Modified	Image File Type	Size	
Folder:	\\192,168.100.55\disk1		Select Folder	Can	cel
	Directory only	-	Show base image fi	le	

7. You can specify a name. If necessary, select any options for the [Destination Isolation Option] and [Options].

Activelmage Protector				– 🗆 X
Operation View Preferences	Utilities Help			
🚺 demo_svr04 🔷 👻				
📮 Dashboard	File Backup			
🚢 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Image: Standby Image: Standby Image: Standby Image: Standby Image: Standby	Task Name Beckup, 20220713, 1437 Detination folder: (1)192.168.100.554.disk1 File Name: ang_2022020713_1437 Comment:		Select folder .afb	Options: Backup //CL @ Image File Possevord Protection @ Formation Confirm Research Stringth: Strong RCS *
In-Cloud Standby Image Manag> Image Manag> Iosal Host WORKGROUP PAddress: WORKGROUP PAddress: VORKGROUP PAddress: Vorkatare Recurdion: Snobled Mounted: No Task:: None			- Back	Not > Cancel

(1) Destination Isolation Options

Enabling Destination Isolation Option disconnects network access to backup image storage drives after backups complete rendering the specified destination storage inaccessible. The Destination Isolation feature protects the backup storage and backups from potential malware or ransomware attacks. Destination Isolation Options provide the following four options.

Destination Isolation Options:
 Un-assign the drive letter from Local Hard Disk after backup completes
 Take the destination Local Hard Disk offline after backup completes
 Eject the destination USB Hard Disk after backup completes
 Disable destination Network Connection after backup completes
 Ethernet0

- Un-assign drive letters from Local Hard Disks post backup : The drive letter assigned to the local hard disk is de-assigned upon completion of the backup process.
- Take destination Local Hard disks offline post backup : Sets destination disks to go offline once the backup process has finished.
- Eject destination Removable USB Hard disk post backup : After the backup process has finished, the system will eject removable hard disks, such as USB hard disks.
- Disable destination Network Connections post backup : The system will disconnect network connections to backup destinations once the backup process has finished.

(2) Option:

Backup ACL :

Enabling **[Backup ACL]** backs up the Access Control List for the backup source files. The system will restore Access Control Lists when restoring files.



Password Protection :

This option allows you to secure a backup image file by assigning it a password. This option will require users to enter a password before mounting, exploring, or restoring any of the image file's contents.

• Enable Encryption:

You can choose from three levels of encryption to secure your backup images:

- RCS.
- AES128 bit.
- AES256 bit.

By using encryption, you can protect backup image files that you save in remote locations from cyber attacks.



- 8. You can configure the times and frequency of your backups on the [Schedule Settings] screen. In this example:
 - We are configuring our base backup to run every Sunday at 1:00 a.m. in this window's [Base] section.
 - We are configuring our incremental backups to run weekly, Monday through Saturday, at 1:00 a.m. in this window's **[Incremental]** section.
 - You may also run your incremental backups multiple times daily, if you'd like, by selecting a **[Start Time]**, **[End Time]**, and the **[Interval]** to run the incremental backup tasks between those two times.

After configuring your schedule, click the **[OK]** button.

edule Setting Backup_202	5. A. A.	1437			Effective	e Date/Time:	2022/07/13	14:52	~ ~ 20	23/07/13	14:52 ~	V No	t Specified
Task Type: (Base (?) (Veek!		kup Once	e O Sche	edule Bac	kup	× •		ental @ ekly)	<u> </u>			- × @
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Add New I	Base							the second second		-	Interval:	Minut	es V
Event Bac		oot Ba	se and Ind	cremental	I	•		n if a sche Obate hat				s tast. (ves	been mis
										1	OK		Cancel

9. You can use the **[Enable Retention Policy]** and **[Send email]** settings to customize your retention policy and email notifications from the **[Schedule]** tab.

Once you have configured these options to your liking (see below for more details), click the **[Next]** button to continue.

Operation View Preferences Ut	ilities Help					
🚺 demo svr04 🔹						
📮 Dashboard	File Backup					
Backup	1 Source	2 Destination	3 Schedule		4 Summa	ry
Volume Backup	Schedule File Backup			2		
File Backup	Schedule type:	Schedule Backup				
HyperBack	Effective From: Base (Full):	7/13/2022 2:52 PM Weekly: Sun, 01:00				
Standby >	Incremental:	Weekly: MonFri, Sat., 01:00				
- okunerby		Edit Sched	de 🖱			
Recovery	Options:					
	Enable Retention Policy Delet Number of image sets to retain	te both full and incrementals = 🔞	Execution			
In-Cloud Recov	3 😨 📃 Delete older ima		Full (Base Lowes		Medium	High
In-Cloud Standby	Send email Task failed			~ ~ ~	- Ç-	-
			Incremen		Medium	High
Image Manag>			-		-Q-	-
Local Host 🕴 🔳						
fost Name: demo_svr04						
Paddress: 192,168,100,54						
ogon User: Administrator						
RescueBoot: Enabled						
Nounted: No						
ask: None				-		
0.05 0.0			< Back	Net :		Cancel

(1) Enable Retention Policy

The **[Enable Retention Policy]** option specifies how many sets of backup files ActiveImage Protector will retain before deletion. Click on the **[Enabling Retention Policy]** checkbox to enable the retention policy. By default, ActiveImage Protector will save the three most recent backup sets before it starts deleting them. You can change this default by increasing or decreasing the number of image sets to retain using the **[Number of image sets to retain]** setting.

Note: One generation of ActiveImage Protector backup image files represents one base backup image file and all associated incremental backup files.

Enable Retention Policy	Delete both full and incrementals	- 🕐
Number of image sets to	o retain:	
3 🌻 📃 Delete olde	r image before new base backup.	

(2) Send email

You can enable the **[Send email]** option if you want the system to notify you of a scheduled task's completion status by email. You can select from one of three options:

- [Task succeeded]
- [Task failed]
- [Task succeeded or failed].

If you select **[Task succeeded]**, the system will only notify you if a backup task succeeds. If you select **[Task failed]**, the system will only notify you if a backup task fails. If you select **[Task succeeded or failed]**, the system will send you a notification whenever it completes backup tasks, regardless of their status. Before enabling the **[Send email]** option, you will need to go to **[Preferences]** \rightarrow **[Notifications]** and configure your email settings.

Send email	Task failed	Ŧ
	Task succeeded	
	Task failed	
	Task successed & failed	

(3) Email Settings

Go to **[Preferences]** \rightarrow **[Notifications]** and configure the email settings. After configuring the email settings, click the **[Test E-Mail Notification]** button to ensure that the settings configured for email notifications are accurate. Please use this option to check if the email is received by the specified recipient and click the **[Apply]** button.

🗊 General	E-Mail:						
Proxy	From:						
Notification	To: • • •	🗖 📭 @actiphy.com					
Deduplication	Subject: Activelm	nage Protector					
Alert	Use this SMTP	server:					
Console	A	Rable SSL/TLS		SMTP Port: 25			
	Account	Name:	Password:	*******			
HyperBack				Test E-Mail Notification			
Hypervisor	Send tasks summ	ary notification					
Online Portal	Daily 21:00	*					
	Daily 21:00	 ■ 21:00 ■ 					
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 					
	 Daily 21:00 Weekly SUN Monthly 1 	 ■ 21:00 ■ 	ise expires.				
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 	ise expires.				
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 	ise expires.				
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 	ise expires.				
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 	se expires.				
	 Daily 21:00 Weekly SUN Monthly 1 	 21:00 m ✓ 21:00 m 	sse expires.				

10. A summary of the configured schedule settings are displayed. Review the backup configuration and options. Click **[Save]**. The **[Dashboard]** window is displayed.

Activelmage Protector				– 🗆 X
Operation View Preferences Uti	lities <u>H</u> elp			
🖬 demo svr04 🔹 👻				
📮 Dashboard	File Backup			
💒 Backup	1 Source	2 Destination	3 Schedule	4 Summary
A Volume Backup				
File Backup	Source:			î
and the second se	Backup Type:	File Backup		
HyperBack	Source	D:\share\data01;D:\share\data02		
🕮 Standby 🔹 🔰	A Destination:			
	Destination folder:	\\192.168.100.55\disk1		
📑 Recovery >	Comments:			
In-Cloud Recov	G Options:			
	Password:	None		
In-Cloud Standby	Schedule:			
	Regularly schedule backup tas	*		
Manag>	Schedule type:	Schedule Backup		
	Effective From:	7/13/2022 2:52 PM		
🕼 Local Host 🛛 🕈 🖻	Base (Full):	Weekly: Sun., 01:00		
Host Name: demo_svr04	Incremental:	Weekly: MonFri.,Sat., 01:00		
Domain: WORKGROUP	Options: Retention Policy:	Enable / 3 sets		
IP Address: 192.168.100.54	Retention Policy - Delete Increm			
Logon User: Administrator	Execution Priority - Full (Base):	Medium		
RescueBoot: Enabled	Execution Priority - Incremental			
Mounted: No	Send email	None		~
Task: None				
0.05 0.0			< Back	Save Cancel
0.0 5			~ Dare	Save Cancer

11. You can monitor the created schedules from the **[Dashboard]** \rightarrow **[Schedule]**. The scheduled backup task will run according to the schedule you specified.

ActiveImage Protector					>
Operation View Preferences Utilities Help					
🚺 demo_svr04 🔹					
Dashboard Dashboard					Dashboard
					Refresh
💒 Backup 🔉					
Standby >	DJN.				-
Recovery >					-
Name	Task	Valid From	Last Run Date/Time	Next Run Date/Time	
In-Cloud Recov Backup_20220	713_1437 File Backup	7/13/2022 2:52:00	N/A	7/14/2022 1:00:00 AM	
In-Cloud Standby					
Image Manag>					
🖗 Virtualization 🔉					
Utilities >					
Local Host 🕴 🗊					
Host Name: demo_svr04					
Domain: WORKGROUP P Address: 192.168.100.54					
ogon User: Administrator					
RescueBoot: Enabled					
Mounted: No					
fask: None					
0.0 % (0) *					

12. Right-click on **[Schedule Name]** to run an immediate full or incremental backup task or edit the schedule settings.

ActiveImage Protector			- 🗆 X
Operation View Preferences Utilities	Help		
demo_svr04 •			
📮 Dashboard 👘 Das	shboard		Dashboard A
Ala Backup) HyperAgent System Health Status	*	
Standby 7	Current Task		
	Task log Schedule		
	ame Task Valid From	Last Run Date/Time Next Run Date/Time	
In-Cloud Recov In-Cloud Standby Image Manag> Virtualization Utilities	ckup_20220713_14 1∲ Run incremental backup 2 Disable 2 Edit X Delete	N/A 7/14/2022 1:00:00 AM	
Local Host To Control of Control	Disk Information		•

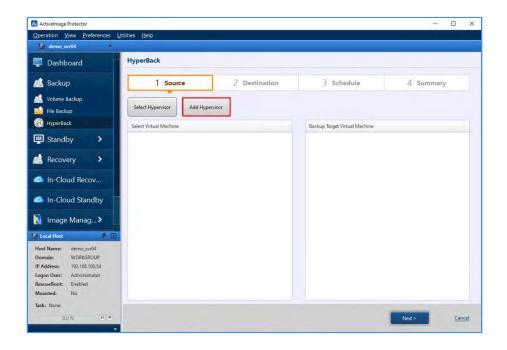
4-4. Agentless Backup (HyperBack)

HyperBack enables you to back up virtual machines on specific hypervisors (Microsoft Hyper-V or VMware vSphere ESXi) without installing an agent on your source hypervisor or virtual machine, which minimizes CPU and memory usage on hypervisor machines. To use HyperBack:

- 1. Start ActiveImage Protector by clicking on the Windows Start menu and selecting [Actiphy] → [ActiveImage Protector].
- 2. Once ActiveImage Protector is running, click on [Backup] \rightarrow [HyperBack].

Activelmage Protector		-	×
Operation View Preferences	Utilities Help		
🔛 demo_svr04 🔹			
📮 Dashboard	Backup		
👛 Backup			
Colume Backup File Backup MyperBack	Volume Backup Create local disk or volume backup task.		
🕎 Standby 🔸			
📥 Recovery 🔹	File Backup Create file or folder backup task.		
In-Cloud Recov			
In-Cloud Standby	HyperBack		
📓 Image Manag >	Create virtual machine agentless backup task.		
🔝 Local Host 🛛 🕴 🖸			
Host Name: demo_svr04 Domain: WORKROUP IP Address: 192.166.100.54 Logon User: Administrator RescueBoot: Enabled Mounted: No Task: None			
0.0 % (0) (*)			

3. Click [Add Hypervisor] to configure the virtual machine you want to backup.



4. Click the [Add Hypervisor] button.

🗊 General		Host Name	Туре	Version	IP Address	State
Proxy						
Notification						
X Deduplication						
🕒 Alert						
Console						
B HyperBack						
Hypervisor						
🕟 Online Portal						
		_				
	Rem	nove. Test Conr	nection			Add Hypervisor
			1			
				OK	Cancel	Apply

- 5. Select the hypervisor type and enter your credentials. We have selected "Microsoft Hyper-V" as the hypervisor type in this example.
 - Enter the IP address or hostname of your Hyper-V host. We have entered "192.168.100.60" in this example.
 - Enter the username for the hypervisor. For example, "Administrator."
 - Enter the password for your hypervisor.
 - You can optionally enter the domain. We are not including domain information in this example.
 - When you have finished configuring your hypervisor, click the **[OK]** button.

Image Prot	ector
Microsoft	Hyper-V 🗸
192.168.10	0.60
Administra	tor
Domain	
Please ente	r login credential that is valid for both Hyper Agent
	r login credential that is valid for both Hyper Agent ine and Microsoft Hyper-V machine.

6. Review the information for your hypervisor and click the **[Apply]** button. Click the **[OK]** button to complete the configuration and return to the **[HyperBack]** settings screen.

🗊 General		Host Name	Туре	Version	IP Address	State
 Proxy Notification Deduplication Alert Console HyperBack Hypervisor Online Portal 	ΠH	YPER-V01	Hyper-V	Microsoft	192.168.100.60	connected
	Ren	nove Test Co	onnection	ОК	Cancel	Add Hypervisor

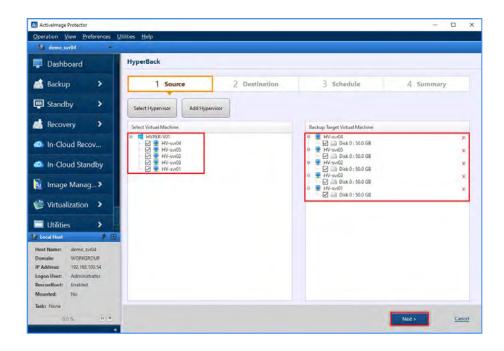
- 7. Now that you have configured the source hypervisor that you want to backup, you need to configure the destination by following these steps:
 - Click [Source].
 - Click [Select Hypervisor].

ActiveImage Protector				- 🗆 X
	Itilities Help			
🚺 demo_svr04 🛛 👻				
📮 Dashboard	HyperBack			
🚵 Backup 🛛 🗲	1 Source	2 Destination	3 Schedule	4 Summary
🖳 Standby 🔶	Select Hypervisor Add Hyper	visor		
🛃 Recovery 🔸	Select Virtual Machine		Backup Target Virtual Machine	
In-Cloud Recov				
In-Cloud Standby				
📓 Image Manag >				
👹 Virtualization 🔸				
🗖 Utilities 🔹 🚽				
🔛 Local Host 🛛 🤌 🔟				
Host Name: demo_svr04 Domain: WORKGROUP				
IP Address: 192.168.100.54				
Logon User: Administrator RescueBoot: Enabled				
Mounted: No				
Task: None				
0.05 Ü.C.				Next > Cancel

8. Select the source hypervisor you just configured. Click the **[OK]** button.

Microsoft Hyper-V 👻
192.168.100.60 -

 Enable the checkbox next to the virtual machine(s) where you want to save your backup in the [Backup Target Virtual Machine] list. Click the [Next] button. By default, you may execute five backup tasks in parallel when backing up multiple virtual machines.



10. Now, you should be on the [2 Destination] screen. From here, you can:

- Set a name for your backup task.
- Select a destination folder to store your backup image.
- Create an image file that contains multiple virtual machines.
- Add a comment to your backup task.

• Configure the isolation options for your backup.

Let's configure a destination for your backup task by following these steps:

• Enter the name of your backup task in the **[Task Name]** field. We've named our task "Backup_20220713_1511" in this example.

Click the [Select Folder] button to configure your destination folder.

Operation View Preferences	Utilities Help			
😰 demo svr04 🔹				
📮 Dashboard	HyperBack			
🔮 Backup	1 Source	2 Destination	3 Schedule	4 Summary
🔮 Volume Backup	Task Name			Options: < Advanced Options
File Backup	Backup_20220713_1511			
HyperBack	Destination folder: 🚱			Compression: Deduplication Compression
Standby			- Select folder	Level 2 (Optimized)
🕎 Standby 🔹 🕨	Create an image file contain	a contraction of the second		Randard Compression
Recovery >		ple VMs sequentially into one image file pe ecking up in conjunction with deduplication		Fest •
a necovery	Comments:			🤌 🔄 Password Protection 🔞
In-Cloud Recov				
				Confirm Prezwold
In-Cloud Standby	Destination Isolation Options:	0		Strength:
-				AE5 128 bit -
🚺 Image Manag >	0.1			
Local Host 🕴 🕅	Select Network Interface			
Host Name: demo_svr04				
Domain: WORKGROUP				
IP Address: 192.168.100.54				
Logon User: Administrator				
RescueBoot: Enabled Mounted: No				
Task: None				
				-
0.0 %			< Back	Next > Canto

- 11. Specify the destination folder and press the [Enter] key to set the destination folder. For example, we've entered "\\192.168.100.55\disk" as the destination folder.
 - Enter your username in the [User Name] field (e.g., "192.168.100.55\Administrator").
 - Enter your password in the [Password] field.
 - Click the [Connect] button.

A Select Folder				×
< \\192.168.100.55\disk\				
 Local Desktop Documents Local Disk (C:) Image: CD/DVD ROM (D:) Image: Trij_1-L_A (E:) Network Actiphy StorageServer Amazon S3 Wasabi Neutrix Cloud Storage SFTP 		22,168.100.55∖Administrator thame\username or domain\r → Date Modified		Connect Cancel
	<			
Folder: \\19	2.168.100.55\disk\		Select Folder	Cancel
Dire	ctory only	•	Show base image f	ile

12. Ensure the destination folder is correct and click the **[Select Folder]** button.

Select Folder						×
< \\192.168.100.55\disk\						
 □ Cocal □ Desktop □ Desktop □ Local Disk (C:) □ Local Disk (C:) □ New Volume (D:) □ AlPBE (F:) □ Network □ 192.168.100.55 	Name	Ŧ	Date Modified	Image File Type	Size	
A MS Azure Amazon S3						
Folder:	\\192.168.100.55\disk Directory only			Select Folder		ncel

13. We will discuss the [Destination Isolation Options] and [Options] portions of this screen later in the section "4-2. Volume Backup: Scheduled Backup." For now, skip those sections, ensure your destination folder is correct, and click the **[Next]** button.

Activelmage Protector		– 🗆 X
Operation View Preferences	Utilities Help	
🔛 demoj svr04 🔷 🖛		
📮 Dashboard	HyperBack	
💰 Backup	1 Source 2 Destination 3 Schedule	4 Summary
🚵 Volume Backup	Task Name Backup_20220713_1511	Options: < Advanced Options
HyperBack	Destination folder: @	Deduplication Compression
Standby >	\\192.168.100.55\disk Select folder	Level 2 (Optimized)
Recovery >	Create an image file containing multiple virtual machines. This option will backup multiple VMs sequentially into one image file per host. It is the recommended method for backing up in conjunction with deduplication. Comments:	Standard Compression Fast Password Protection
In-Cloud Recov		Personal
 In-Cloud Standby Image Manag> 	Destination kolation Options: 😧	Strength: AES 128 bit
Ne Local Host # 🖬	Select Network Interface •	
Host Name: demo_svr04 Domain: WORKGROUP IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Enabled Mounted: No		
Task: None 0.0% H T	< Back	Next > Cancel

- 14. You should now see the **[Schedule Settings]** window. This window is where you will configure the times and frequency of your backups. In this example:
 - We are configuring our base backup to run every Sunday at 1:00 a.m. in this window's [Base] section.
 - We are configuring our incremental backups to run weekly, Monday through Saturday, at 1:00 a.m. in this window's **[Incremental]** section.
 - You may also run your incremental backups multiple times daily, if you'd like, by selecting a **[Start Time]**, **[End Time]**, and the **[Interval]** to run the incremental backup tasks between those two times.

After configuring your schedule, click the **[OK]** button.

Base We						~	~
Sun Sun	ekly Mon	Tue	Wed	Thu	Fri	X 🔿	Fri Sat
Execute 1	Time: 01:	00	_				
							al: Minutes 🔻
Add Ne							

15. You can use the **[Enable Retention Policy]** and **[Send email]** settings to customize your retention policy and email notifications from the **[Schedule]** tab.

Once you have configured these options to your liking (see below for more details), click the **[Next]** button to continue.

Dashboard	HyperBack			
🔒 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup	Effective From:	9/14/2022 10:26 AM		
File Backup	Base (Full):	Weekly: Sun., 01:00		
HyperBack	Incremental:	Weekly: MonFri.,Sat., 01:00		
Standby		Edit Sched	lule 🗂	
Recovery	Post-backup Process BootCheck: Unconf Process Process Unconf		nconfigured 🖙 Con	solidation: <u>Unconfigured</u>
	Options:			
In-Cloud Standby	Number of image sets to re			ecution Priority 😨 ull (Base):
In-Cloud Standby	Number of image sets to re 3 + Delete older	etain: image files before a new base backup.		
In-Cloud Standby	Number of image sets to re	etain: image files before a new base backup.	F	ull (Base): Lowest Low Medium High
In-Cloud Standby ocal Host // C st Name: hyperagnet main: WORKGROUP Address: 192.168.100.58	Number of image sets to re 3 + Delete older	etain: image files before a new base backup.	F	ull (Base): Lowest Low Medium High
In-Cloud Standby ccal Host 7 C st Name: hyperagnet main: WORKGROUP	Number of image sets to re 3 + Delete older	etain: image files before a new base backup.	F	ull (Base): Lowest Low Medium High

(1) Enable Retention Policy

The **[Enable Retention Policy]** option specifies how many sets of backup files ActiveImage Protector will retain before deletion. Click on the **[Enabling Retention Policy]** checkbox to enable the retention policy. By default, ActiveImage Protector will save the three most recent backup sets before it starts deleting them. You can change this default by increasing or decreasing the number of image sets to retain using the **[Number of image sets to retain]** setting.

Note: One generation of ActiveImage Protector backup image files represents one base backup image file and all associated incremental backup files.

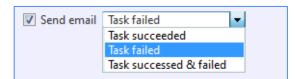
Enable Retention Policy	Delete both full and incrementals	- ?			
Number of image sets to retain:					
3 🌻 📃 Delete olde					

(2) Send email

You can enable the **[Send email]** option if you want the system to notify you of a scheduled task's completion status by email. You can select from one of three options:

- [Task succeeded]
- [Task failed]
- [Task succeeded or failed].

If you select **[Task succeeded]**, the system will only notify you if a backup task succeeds. If you select **[Task failed]**, the system will only notify you if a backup task fails. If you select **[Task succeeded or failed]**, the system will send you a notification whenever it completes backup tasks, regardless of their status. Before enabling the **[Send email]** option, you will need to go to **[Preferences]** \rightarrow **[Notifications]** and configure your email settings.



(3) Email Settings

Go to **[Preferences]** \rightarrow **[Notifications]** and configure the email settings. After configuring the email settings, click the **[Test E-Mail Notification]** button to ensure that the settings configured for email notifications are accurate. Please use this option to check if the email is received by the specified recipient and click the **[Apply]** button.

Subject: ActiveImage			
	er: ▼ Enable SSL/TLS ne:	Password:	SMTP Port: 25
Daily 21:00 Weekly SUN Monthly 1	 21:00 ··· 21:00 ··· 	se expires.	Test E-Mail Notification
	Send tasks summary Daily 21:00 Weekly SUN Monthly 1	Account Name:	Account Name: Password: Send tasks summary notification Daily 21:00 Weekly SUN 21:00 21:00

16. You should now be on the [4 Summary] screen. You should see a summary of your backup configurations and schedule settings.

Review the information on this screen and click the **[Done]** button if everything looks OK. ActiveImage Protector should return you to the **[Dashboard]** screen.

M demo_svr04 +				
Dashboard	lyperBack			
😫 Backup	1 Source	2 Destination	3 Schedule	4 Summary
Volume Backup File Backup	Source:	HV-svr04(Disk 0); HV-svr05(Disl	x 0); HV-svr02(Disk 0); HV-svr03)	Disk 0); HV-svr01(Disk 0)
Standby	Destination: Destination folder: Comments:	\\192.168.100.55\disk None		
Recovery >	G Options:			
In-Cloud Recov	Task Name: Compression:	Backup_20220713_1511 Standard Compression (Fast)		
In-Cloud Standby	Password:	Disabled		
Image Manag>	Regularly schedule backup Effective From:	task 7/13/2022 3:25 PM		
Local Host 🥊 🔳	Base (Full):	Weekly: Sun., 01:00		
Host Name: demo_svr04 Domain: WORKGROUP	Incremental: Options:	Weekly: MonFri.,Sat., 01:00		
IP Address: 192,168,100,54	Retention Policy:	Enable / 3 sets		
Logon User: Administrator		cremental / Full in Set: Delete both full and in	ncremental files	
RescueBoot: Enabled	Execution Priority - Full (Ba Execution Priority - Increme			
Mounted: No	Send email	None None		
Dark: None	active crimin	THE.		

17. You can see a list of all your configured backup tasks and their status in the [Schedule] section of the [Dashboard].

peration View Preferences	Utilities Help						
🚺 demo_svr04 🔹							
Dashboard	Dashboard						Dashboard
	A HyperAgent					*	
🛃 Backup 🔹 🔸	Hypervisor VM Na	me	Backup Status		Last Run	Next Backup	
	192.168.100.60 HV	-10705	-	0%	N/A	7/14/2022 1:1	
👜 Standby 🔰	192.168.100.60 HV	10104	G	0%	N/A	7/14/2022 14	
	192.168.100.60 HV	-svr03	C	0%	N/A	7/14/2022 1:	
Recovery	192.168.100.60 HV	we92	C	0%	N/A	7/14/2022 1:	
	192.168.100.60 HV	-swell	-	0%	N/A	7/14/2022 1:	
In-Cloud Recov							
In-cloud Necov							
a in claud danalar	<					,	
In-Cloud Standby	4 System Health Status					-	
Image Manag>	Current Task					*	
Manag>	 Task log 						
Virtualization >	B Schedule	_					
	Name	Task	Valid From	Last Run Date/Time	Next Run Date/Time		
Utilities >	Backup_20220713_1437	File Backup	7/13/2022 2:52	N/A	Disable		
	HYDER YOT HE WOULD	Agentless	7/13/2022 3:25:00	N/A	7/14/2022 1:00:00 AM		
🛛 Local Host 🛛 🕴 🔳	HYPER-VOI_HV-svr02_B	Agentless	7/13/2022 3:25:00	N/A	7/14/2022 1:00:00 AM		
Host Name: demo_svr04	HYPER-VO1_HV-svr03_B_	Agentless	7/13/2022 3-25:00	N/A	7/14/2022 1:00:00 AM		
Domain: WORKGROUP	HYPER-V01_HV-svr04_B_	Agentless	7/13/2022 3:25:00	N/A	7/14/2022 1:00:00 AM		
IP Address: 192.168.100.54		Agentless	7/13/2022 3:25:00		7/14/2022 1:00:00 AM		
Logon User: Administrator		- Annual		- and			
RescueBoot: Enabled							
Mounted: No							
Task: None							
LASKI NONE							

18. If you right-click on the name of your schedule, you can use the drop-down menu to:

- Immediately run a full backup task.
- · Immediately run an incremental backup task.
- Disable the schedule.
- Edit the schedule.
- Delete the schedule.

Activelmage Protector		- 🗆 🗙
Operation View Preferences	Utilities Help	
🔛 hyperagnet 🔹 🔹		
📮 Dashboard	Dashboard	Dashboard
🛋 Backup 🔹 🔰	😭 HyperAgent 🔺	Schedule
🖆 Backup 🔹 👌	Hypervisor VM Name Backup Status Last Run	Create New
🕎 Standby 🔉	#1 192,168,100,60 HV-svr03 1000,95 9/14/2022 1025:00 #1 192,168,100,60 HV-svr04 1000,95 9/14/2022 1025:00 #1 192,168,100,60 HV-svr04 1000,95 9/14/2022 1025:00 #1 192,168,100,60 HV-svr04 1000,95 9/14/2022 1025:00	X Delete all
Recovery	#1 192.166.100.60 HV-svr02 Image: Constraint of the second se	Run full backup
In-Cloud Recov	System Health Status	 Ø Disable
In-Cloud Standby	Current Task	📝 Edit
🚺 Image Manag >	E Schedule	× Delete
Virtualization > Local Host > Most Name: hyperagnet Domain: WORKGROUP IP Address: 192.168.100.38 Logon User: Administrator RescueBoot: Un-enabled Mounted: No Task: None	Name Task Valid From Last Run Date/Time Next Run Date/Time HYPER-V01_HV-RI Run full backup 9/14/2022 10:24.00 9/14/2022 10:24.00 9/15/2022 10:00:00 AM HYPER-V01_HV-RI Run full backup 022 10:26:00 9/14/2022 10:22.00 9/15/2022 10:00:00 AM HYPER-V01_HV-RI Run incremental backup 022 10:26:00 9/14/2022 10:25:00 9/15/2022 10:00:00 AM HYPER-V01_HV-svr Disable 022 10:26:00 9/14/2022 10:25:00 9/15/2022 10:00:00 AM HYPER-V01_HV-svr Disable 022 10:26:00 9/14/2022 10:25:00 9/15/2022 10:00:00 AM HYPER-V01_HV-svr Delete 021 10:26:00 9/14/2022 10:25:00 9/15/2022 10:00:00 AM HYPER-V01_HV-svr05_Backup Agentiless 9/14/2022 10:25:00 9/15/2022 10:00:00 AM 9/15/2022 10:00:00 AM	
0.0 % 🛈 🖲 «	Disk Information	>

19. Option settings for HyperBack

Go	to	[Preferences]	\rightarrow	[HyperBack]	and	configure	the	option	settings	for	HypeBack.
_		Protector									
-	100 and 100	E	diam'r.								

Operation	View	Preferences	Utilities	Help				
M hyper	agnet							

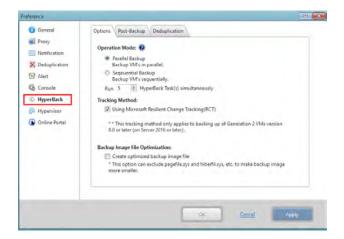
Operation Mode

Select one of the two operation mode options, i.e., [Parallel Backup] or [Sequential Backup].

When **[Parallel Backup]** is enabled, specify the concurrently executable number of HyperBack tasks. If the system resources of your HyperAgent computer or your network resources are insufficient, we recommend you select **[Sequential Backup]**.

Tracking Method

Enable the **[Using Microsoft Resilient Change Tracking (RCT)]** option for the change tracking method to take incremental backups. When this option is selected, the checkpoint does not remain after completing the processing. This tracking method can be applied only to the backups of Generation 2 VMs (Windows Server 2016 or later). If not, the system uses Actiphy's proprietary tracking method to take incremental backups.



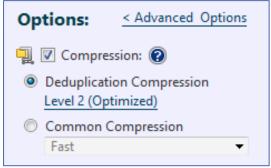
20. Configure Destination Isolation Options settings. Enabling the [Destination Isolation Options] causes the system to disconnect network access to the backup image's storage drives or sets the destination disk offline once the backup task is complete. The [Destination Isolation Options] feature protects the backup storage location and the backups stored there from potential malware or ransomware attacks.

Destination Isolation Options:	
O Un-assign the drive letter from Local Hard Disk after backup completes	
Take the destination Local Hard Disk offline after backup completes	
Eject the destination USB Hard Disk after backup completes	
Oisable destination Network Connection after backup completes	
Select Network Interface	
Select Network Interface	
Ethernet0	

21. Configure Option settings.

Compression

ActiveImage Protector provides two types of compression: **[Standard Compression]** and **[Deduplication Compression]**. The compression ratio differs depending on the type of compression you choose. The **[Standard Compression]** option will produce a backup image around 70% of the size of the backup source. The **[Deduplication Compression]** option will produce backup images around 50% of the size of the backup source. When selecting **[Deduplication Compression]**, **[Level 2 (Optimized]** and **[Change temp file folder]** are enabled.



Password Protection

Enabling this option protects the backup image file by assigning a unique password. This additional security prevents anyone from mounting, exploring, or restoring the image file without a password.

Enable Encryption

There are three levels of encryption to choose from: "RCS," "AES128 bit", and "AES256 bit." Encrypting your backups will protect any backup image files you save to a remote location from cyber attacks.



22. Advanced Backup Options. The Advanced Backup Options section contains [Split image into xx MB files], [Use network throttle xx (Max KB/Second)], [Use network write caching], [Make backup image file P2V ready] and [Scripting]. The following describes [Scripting].

🛄 hyperagnet	*)				
vanced Backup Options:					
ieneral					(8
Split image into	MB fil	es. 🔲 Use network t	hrottle: (Max KB/Second)		
☑ Ignore bad sectors.		Use network v	vrite caching.		
Create an MD5 file	for image	🔲 Backup timeo	ut: 12 E Hours		
elect virtual machine and spec	cify credentials to execu	te pre-backup and post-bac	kup scripts below(Recommonded for Linux l	P2V).	
Virtual Machine:	IP Address:	User Name:	Password:	Domain:	
select VM		Admin UserName	Password	Domain	
Make Linux Operati					
Script to execute before	e backup:		e out: Script to execute after backu	p:	Time out:
			mins.		30 mins.
Virtual Machine:	IP Address:	User Name:	Password:	Domain:	
select VM		Admin UserName	Password	Domain	
Make Linux Operati Script to execute before		Tim	ne out: Script to execute after backu		Time out:
Script to execute below	e backup.	30	mins.	p.	
			11013		30 mins.
Virtual Machine	IP Address:	User Name:	Password:	Domain:	
select VM		Admin UserName	Password	Domain	
🧾 Make Linux Operati	ng System P2V Ready.				
Corint to avacuta hafor	a hadruni	Tim	a nut Crint to everyte after harbu	17 1	Time out
					Add Configuration

• [Scripting]

You can write scripts to run before and after ActiveImage Protector creates snapshots or backups. For example, when backing up non-VSS-savvy databases, you need to stop the service before starting the backup task to maintain the integrity of the data. Therefore, you can specify a script or batch file to stop the database service before ActiveImage Protector takes a snapshot and then start it again once the backup is complete.

Virtual Machine:	IP Address:	User Name:	Password:	Domain:	
select VM 🔻		Admin UserName	Password	Domain	
Make Linux Operating System	tem P2V Ready.				
Scrint to everyte hefore hack	100	Time o	ut: Scrint to evecute after hackur		Time out:
					Add Configuratio

Post-backup Process. The Post-backup process is executed upon completion of a backup task or at a specified time. You can select an option for Post-backup Process, i.e., [BootCheck], [Image Verify], [Consolidation], or [Replication].

BootCheck

BootCheck quickly tests if a created backup of the system volumes can successfully boot on the selected hypervisor. First, click in the box to enable the **[Enable BootCheck]** option. Next, configure the Schedule settings, Sending Email options, etc.

Note: BootCheck does not support the backup of a Linux virtual machine; therefore, please do not check the checkbox for Linux virtual machine.

BootCheck ImageVerify Consolidation Replication ImageVerify Consolidation Select VM And BootCheck Data: ImageVerify ImageVerify ImageVerify ImageVerify ImageVerify Consolidation ImageVerify ImageVerify ImageVerify ImageVerify ImageVerify Consolidation ImageVerify ImageVerify ImageVerify ImageVerify ImageVerify ImageVerify <tr< th=""><th>6 (64 bit)</th><th>Specify Boot Disk Disk 0 • Disk 0 • Disk 0 •</th></tr<>	6 (64 bit)	Specify Boot Disk Disk 0 • Disk 0 • Disk 0 •

Image Verify

Specify the options and timing to start the ImageVerify process. Click in the box to enable the **[Enable Verify Image]**. Configure the schedule settings.

ivelmage Protector					- 0
	s <u>U</u> tilities <u>H</u> elp				
hyperagnet	*				
BootCheck	ImageVerify	Consolidation	Replication		
Enable Verify image					
Quick verify					
Deep verify					
Working Agent:					
This Computer	-				
Schedule					
Immediate					
O After each 2	new image files being cre	ated			
🗇 at 00:00 🖶					
Coptions					
📃 Skip verify base in	mage				
Verify latest new i	image file only				
Sending Email Ta	ask failed		-		

Consolidation

You can schedule to consolidate the incremental backups into a single backup image set, reducing storage demands. Click in the box to enable the **[Enable Consolidation]** option. Configure the settings for **[Schedule]**, **[Sending Email]**, **[Performance]**, etc.

ivelmage Protector ation <u>V</u> iew <u>P</u> referen	ees Utilities Hele					- 0	×
 hyperagnet							
BootCheck	ImageVerify	Consolidation	Replic	ation			
 Keep original Until next 	30 🔄 incremental file(s).	rental innage files.	•	at at at bending Email Task failed Performance Execution Priority	files being created	-	
				Apply	Done>	Cance	1

Offsite Replication

The Replication feature enables you to replicate backup image files to an offsite storage share, including cloud storage. ActiveImage Protector Replication feature supports local storage, shared folder, WebDAV / FTP, Amazon S3, Azure Storage, OneDrive, Dropbox, Google Drive, Wasabi and Neutrix Cloud.

demo_svr01	7			
BootCheck	ImageVerify	Consolidation	Replication	
Working Ag			Schedule	
This Compu			Immediate	
Target			After each in may image files being created	
Protocol:	LOCAL(DAS)	×	C at Care 2	
Target:	Network Shared Folder SFTP		Task lailed	
Polion	FTP WebDAV-https		Performance	
Max Retry:	WebDAV-http		Execution Priority I/O performance	
max mary.	Amazon S3 Azure		Lowest Low Medium High Light	High
	Onedrive DropBox		Use network throttling	~
	GoogleDrive Wasabi		E of annotation	
	Neutrix Cloud Storage			
Add Target	Ŷ			

5. Boot Environment Builder

Build Windows-PE based Boot Environment

The ActiveImage Protector media includes a Linux-based boot environment. We recommend you use this boot environment. However, if the Linux-based boot loader doesn't recognize your disks, network devices, or other hardware, you can create a Windows-based (Windows RE or Windows PE) boot environment.

This section shows you how to build Windows RE-based (Windows Recovery Environment), should that be necessary.

Before building a Windows RE-based boot environment, please install the "Actiphy Boot Environment Builder" on a machine running Windows 10, Windows 11, Windows Server 2016, or later by following these steps:

- 1. Install Actiphy Boot Environment Builder.
 - Run BEBuilder.exe in Setup folder in the product media.
 - Start the installer.
 - Click [Install] to start the installation process.

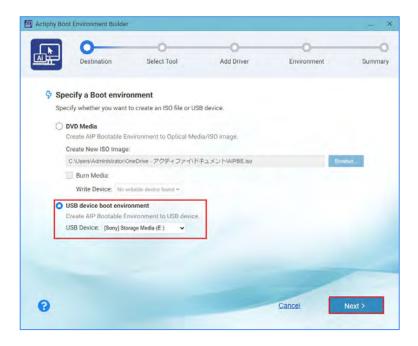
Once you have completed the installation process, you should see the **Actiphy Boot Environment Builder** on your Desktop.

Actiphy		
Boot Environment Builder		
Version 1.0.4.636		
Boot Environment Builder will be	e installed at following location	
C:\Program Files\Actiphy\Boot	Environment Builder	
Setup requires up to 3.7GB disk		
Choose the type of installation		
Default Install		
Install Boot Environment Bu	ilder	
Launch without installation		
By clicking the *Install* button, I <u>License Terms</u> and <u>Privacy Stater</u>		
Cancel	-	🖓 Install

- 2. Once you have the Actiphy Boot Environment Builder installed on your machine, you can follow these steps to create a Windows RE/PE boot environment:
 - Click on the [Actiphy Boot Environment Builder] icon on your Desktop.
 - Once the Actiphy Boot Environment Builder starts up, select the **[Build boot environment with product key]** option and enter your Windows product key.
 - Next, select the [Windows RE/PE] option beneath [Select boot environment type].
 - Click the **[Next]** button.

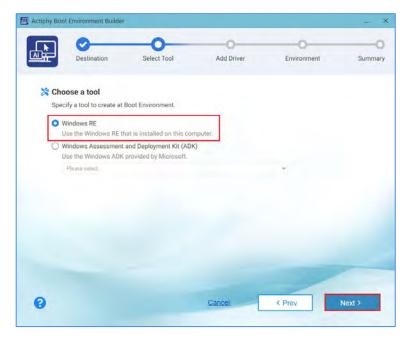
	(i) F	Ictiph
	Actiphy Boot Environment Builder	
	Actiphy Boot Environment Builder creates standalone bootable media containing ActiveImage Protector software and utilities for bare metal backup and recovery. * Valid ActiveImage Protector product key is required to enable backup feature.	
	O Build boot environment without product key	
	Build boot environment with product key	
	and the state of t	
	Select boot environment type	
	O Windows PE/RE based Boot Environment	
	O Linux based Boot Environment	
0		Next >

3. On the **[Destination]** screen, you can choose to create a bootable DVD or a bootable USB image. Select the image type you want to make and click the **[Next]** button.



4. You should now be on the [Select Tool] screen. Here, you can specify the tool for building your boot environment.

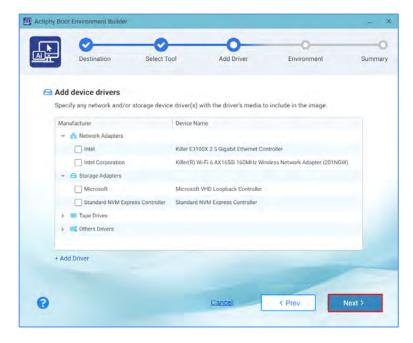
Please select [Windows RE] and click the [Next] button for this example.



5. Next, on the **[Add Driver]** screen, select the device driver(s) you want to include in your boot environment. The Actiphy Boot Environment Builder will automatically detect the network and storage devices for the current system and include them in the device list.

Click on the checkbox next to the device drivers you want to include in the boot environment. If any driver is missing from the device list, you can manually add it by clicking on the **[+ Add Driver]** link and providing the INF file for your device.

Once you have selected all the necessary drivers for your computer, click the [Next] button to continue.



- 6. Next, you need to configure the following on the [Environment] screen:
 - The language you want to use in your bootloader.
 - The type of keyboard you are using.
 - The keyboard layout.
 - The time zone your bootloader should use.
 - The display resolution for your bootloader.

Please configure the settings for [Language], [Keyboard type], [Keyboard layout], [Time Zone], and [Display Resolution] for your bootloader and click the [Next] button.

	t Environment Builder				-
	0	-0-	-0-	_0_	
	Destination	Select Tool	Add Driver	Environment	Summa
🕲 Spe	cify environment				
Spec	ify language, keyboar	d type, timezone and rese	olution for then Boot Envir	onment.	
@ L	anguage				
	English		~		
C K	eyboard type				
1	106 Key Japanese		v		
I K	eyboard layout				
L	United States		~		
OT	ime zone				
0	UTC+09:00) Seoul		~		
D	isplay resolution				
1	1024*768 : XGA (Recomm	ended)	~		

7. Finally, review your settings on the [Summary] screen and ensure you have configured your bootloader the way you want it to be.

If you need to make any changes, you can click on the [< Prev] button to go back to previous pages and make any necessary changes to the configuration. You can also click on one of the blue nodes at the top of the screen to jump to a specific page.

Once you have verified your configuration, click the **[Done]** button. You will see a confirmation message. If you are ready to build your bootloader, click the **[OK]** button to build your boot environment.

ctiphy Bool	Environment Builder	-			~
	0	-0	-0-	<u> </u>	0
	Destination	Select Tool	Add Driver	Environment	Summar
🔳 Sum	mary				
		O file when you click a [D	one] button.		
Too		RE			
	tination: E				
	ezone: (UTC+09 guage: English	:00) Seoul			
		Japanese			
Keyl	board Layout: United St				
		8 : XGA (Recommended)			
Esti	mated size: 718.84 M	18			
Total	Progress:				
					-
Step	Progress:				
0			Cancel	d Daw	Done
			Gancel	< Prev	Done

8. The Actiphy Boot Environment Builder will start building your boot environment. Progress bars allow you to monitor the total progress and the progress of each step as the system builds your boot environment.

Actiphy Boot	Environment Buil	der			- 1
	0	0	0		
₫÷	Destination	Select Tool	Add Driver	Environment	Summan
	aula				
Sum		r ISO file when you click a [Do	anel hutton		
10 01	are ood denice o	100 me when you click a too	shel battone		
Tim Lan Keyl Keyl Disp	ination: E ezone: (UTC guage: Engli soard Type: 106) soard Layout: Unite lay resolution: 1024	key Japanese			
Total	Progress:				
					-
Step	Progress:				
Conve	on the Activelmane I	Protector modules to Windows Pt			

9. Once the Actiphy Boot Environment Builder has completed the creation process, you will see the message "Successfully created the [USB or DVD] device." Click the **[Close]** button to complete the process.

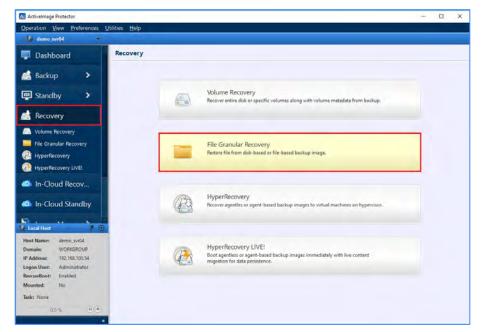
Actiphy Boot	Environment Builder				- ×
	0	-0	-0-	-0-	-0
	Destination	Select Tool	Add Driver	Environment	Summary
🔳 Sum	mary				
		D file when you click a [Di	one] button.		
Time Lang Keyb Keyb Displ	ination: E izone: (UTC+09: juage: English ioard Type: 106 Key J ioard Layout: United St	00) Seoul lapanese stes ! : XGA (Recommended)			
Contract of Contract	Progress: ssfully created the USB (lavina			-
	Progress:	Jence			
					-
0			Cancal	< Prev	Close
0			Contract	(Prev	Close

6. Restore

6-1. File / Folder Recovery

Please use the following steps to restore a specific file or folder from a disk backup image:

- 1. Start ActiveImage Protector by clicking on the Windows Start menu and navigating to [Actiphy] \rightarrow [ActiveImage Protector].
- 2. Select the [Recovery] menu. Click on the [File Granular Recovery] button.



- 3. Next, on the [File Granular Recovery] screen: Click on the [▼] icon under [Backup Destination].
 - Select the folder containing the backup image file from which you want to restore a file or folder.
 - You can also specify the path to the backup image. In this example, we're using "\\192.168.100.55\disk" as the folder containing our backup image.
 - Press the [Enter] key to set your selection if you enter the path manually.

Activelmage Protector		- 🗆 X
Qperation View Preferences Uti	ilities <u>H</u> elp	
🚺 demo_svr04 🛛 🔻		
📮 Dashboard	File Granular Recovery	
🛋 Backup 🔸	1 Select Recovery Point	2 File Granular Recovery
Standby >	Backup Destination Source Computer	s • 🕔 Recovery Points •
Recovery	Cocal Desktop	
File Granular Recovery	B Documents Cal Disk (C:)	
HyperRecovery HyperRecovery LIVE:	- □□ ポリューム (D:) □□ □ AIPBE (E:) - ○ ○ Network	
In-Cloud Recov		
In-Cloud Standby		
Local Host P		
Host Name: demo_svr04 Domain: WORKGROUP	Backup Information	
IP Address: 192.168.100.54 Logon User: Administrator		
Logon User: Administrator RescueBoot: Un-enabled Mounted: No		
Task: None		
0.0% 0 0		Next > Cancel

Restore

- 4. ActiveImage Protector will populate the [Source Computers] list with all the images in the directory you specified.
 - Select the source computer you want to restore a file or folder from in the list. ActiveImage Protector will display information about your selected backup image in the [Backup Information] section of the screen.

Deration View Preferences	<u>Utilities Help</u>			
Dashboard	File Granular Recovery			
🚔 Backup 🔹 🗲	1 Select Recovery Po	int	2 File Granular Recovery	
🛒 Standby 🔹 🕨	Backup Destination	Source Computers •	Recovery Points •	
Recovery Volume Recovery File Granular Recovery HyperRecovery HyperRecovery LIVE In-Cloud Recov In-Cloud Standby Local Heat		ig demo_svi0 ig demo_svi0 ig demo_svi0 ig demo_svi04		
Host Name: demo.yvr04 Domain: WORKOROUP P Address: J2:166:100.54 Logoe Une: Administrator RescueBoot: Enabled Mounted: No Bask: None	Backup Information Image File: D682434-4974-4838-4154-39488 System: Kinosoft Windows Server 2016 Sana System: Kinosoft Plassword: No Comments Compression: Fort: Password: No Comments	fard Edition (build 14393), 64-bit(6		Cancel

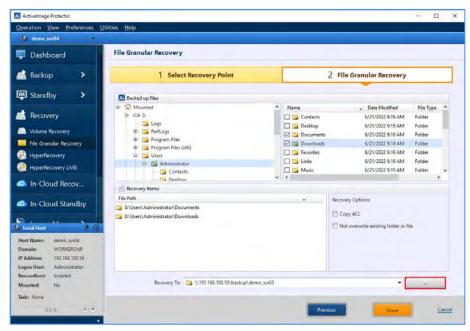
- 5. Now, click the checkbox next to each file or folder you want to restore in the [Backed up files] list. ActiveImage Protector will list each item you've selected in the [Recovery Items] section of the page. Once you have selected all the files and folders you want to restore from the [Backup up files] list, you may choose the following recovery options:
 - Copy the Access Control List data for each file and folder by clicking on the checkbox next to **[Copy ACL]**.
 - Prevent ActiveImage Protector from overwriting existing files during recovery by clicking on the checkbox next to [Not overwrite existing folder or file].

[Copy ACL] will copy the Access Control List data from the backup image to the recovered file or folder. If **[Not overwrite existing folder of file]** is selected, ActiveImage Protector will safely recover your selected files without overwriting existing files and folders. If you don't choose this option, ActiveImage Protector will overwrite any files or folders on your computer that have the same name as the files and folders you are recovering from your backup image.

Ai ActiveImage Protector Operation View Preferences Ut	ilities <u>H</u> elp	- 0	
M demo_svr04 =			
🖵 Dashboard	File Granular Recovery		
🛋 Backup 🔹 🗲	1 Select Recovery Point	2 File Granular Recovery	
🕎 Standby 🔸	Backed up files		
Recovery	B- 1 Mounted	^ Name _ Date Modified File Type _	î
Volume Recovery	til GefLogs iii GProgram Files iii: Program Files (x86)	Documents O(21/2022 9:19 AM Folder Documents O(21/2022 9:19 AM Folder Documents O(21/2022 9:19 AM Folder	Ĩ
HyperRecovery HyperRecovery LIVE!	Togram Frida (US9) Togram Frida (US9	Image: Second	
In-Cloud Recov	- Pik Deskton	v < >	8
In-Cloud Standby	Clear Recovery Items: File Path Clear O.WSress\Administrator\Documents CluSress\Administrator\Documents CluSress\Administrator\Downloads	Recovery Options: Copy Act Not overwrite existing folder or file	
Host Name: demo_svi04 Domain: WORKGROUP IP Address: 192.168.100.54 Logon User: Administrator			
RescueBoot: Enabled Mounted: No	Recovery To: 🔤 \\192.168.100.55\backup\demo	.pvr03 •	
Task: None		Previous Done C	ance

Restore

6. Click the [...] button to specify a destination folder to save your restored items. When finished, click the [Save] button.



🔝 RFE For Folder	×
Please select place where you want to recovery the file(s) then click select button.	đ
 Local Desktop Documents Local Disk (C:) New Volume (D:) share data01 data02 work Recovery AIPBE (F:) Network 	
Folder: D:\share\work\Recovery	
Make New Folder Save Cano	e

7. Click the **[Done]** button to start the recovery process.

A ActiveImage Protector Operation View Preferences	Itilities Help			- 0
🚺 demo svr04 🔹 👻				
📮 Dashboard	File Granular Recovery			
🛃 Backup 🔹 🗲	1 Select Recovery Point		2 File Granular Recover	y
🖳 Standby 💙	Backed up files			
Recovery	🖹 💮 Mounted E 🚍 0: — 📴 Logs	▲ Name Contact Contact Contact Contact		1 4 4 4 4
Volume Recovery File Granular Recovery	8- 📬 PerfLogs 8- 🚰 Program Files 9- 🚰 Program Files (x86)	Docum	Kents 6/21/2022 9:19 AM cads 6/21/2022 9:19 AM	Folder Folder
HyperRecovery HyperRecovery LIVE!	Users diministrator Contacts	Favorite Favorite Links Music C	es 6/21/2022 9:19 AM 6/21/2022 9:19 AM 6/21/2022 9:19 AM	Folder Folder v
In-Cloud Recov	Recovery items:	v (3
In-Cloud Standby	File Path	×	Recovery Options:	r file
Host Name: demo_svr04 Domain: WORKGROUP IP Address: 192.168.100.54 Logon User: Administrator				
RescueBoot: Enabled Mounted: No	Recovery To: D:\share\work\Recovery		•	
Task: None 0.0 % 0.0 *			Previous	Cance

8. ActiveImage Protector will display the restoration progress in the [Current Task] section.

Activelmage Protector		- 🗆 X
Operation View Preferences	Utilities Help	
🚺 demo_svr04 🔹		
📮 Dashboard	Dashboard	Dashboard A
🚵 Backup 🔹 🗲	Bypten HyperAgent System Health Status	
💷 Standby 🔰	Current Task	9
Recovery	Status Task Start Time Progress (%) PRunning FILE_RESTORE_Quick 7/13/2022 617:00 PM 558 1 % IV	
In-Cloud Recov		
In-Cloud Standby		
Image Manag≯	C Task log	
ڬ Virtualization 👂	III Schedule	
Utilities >	En Local Dick (C) NTES 294.68 216.68 Dick 0	•
Host Name: demo_svr04 Domain: WORKGROUP IP Address: 192.168.100.54		
Logon User: Administrator RescueBoot: Enabled Mounted: No	Disk0 Basic (OPT) 900 08 # Used : 219 GB Soo MB NTFS Local Disk (C) 200 AG NTFS Solution (C) 200 AG NTFS Solution (C) 200 AG NTFS	
Task: FILE_RESTORE_Quick	A DECK DOLLAR	
	Unallocated Primary	

Restore

9. Once the progress bar reaches 100%, the recovery task is complete.

peration View Preferences L	tilities Help	
🚺 demo svr04 🔹	Success: [FILE RESTORE Quick]. Process Time [8 sec].	
Dashboard	Dashboard	Dashboard
Backup	🕾 HyperAgent	Selected Task
	1 System Health Status	Pause Task
Standby >	Current Taski	Cancel Task
Recovery >	Status Task Start Time Progress (%) Done FILE_RESTORE_Quick 7/13/2022 62:00 PM 1000 %	
In-Cloud Standby	C Takk log	
Image Manag >	III Schedule	
Image Manag>	Schedule Bisk Information	
Image Manag >	Bischedule • IB Disk Information • Volume Name File System Volume Size Used Space Associated • was local Disk (Ci) NTFS 294 GB 21.6 GB Disk 0 • was local Disk (Ci) NTFS 00 GB Disk 0 • •	
Image Manag> Virtualization > Utilities > Iscal Host © ost Name: demo_swid monie: WORKDROUP	Im Schedule Im Schedule Im Disk Information Volume Name File System Volume Size Used Space	
Image Manag> Virtualization > Utilities > Isocilities = Isocilities = = = = = = = = = = = = = = = = = = =	Schedule Disk Information Volume Name File System Volume Size Used Space Associated Subschedule Bisk 0 B	

6-2. System Recovery : Standard Linux-based boot environment

Use the following steps to recover a system using ActiveImage Protector's product media.

Note: ActiveImage Protector will purge all the data on the local disk when recovering an entire system. Please ensure you have backed up any necessary files before performing a full system restore.

- 1. Insert the ActiveImage Protector media into your computer.
 - Reboot the computer to boot into ActiveImage Protector.
 - Select [English] (or whichever language you prefer).
 - Click the [OK] button.

Applications	Places	ActiveImage Protector		en	Jul 14 03:26 🖹 🛔 Ů
				A	CLIVEIMAGE PROTECTOR
			ActiveImage Protector		
			English 🔹		
			ОК		
					M Actiphy
🗗 🔷 Acti	velmage Pro	otector			

2. Go to [Utilities] → [Network Setting] to configure your network settings. You will need to configure your network to access shared network folders to save your backup images.

	age Protector	en Jul 14 03:29 🖹 🛔 Ů
Operation View Utilities Help		
Dashboard	Utilities	
💰 Backup 🛛 🗲		
📩 Recovery 🔹 🗲	Network Setting	Mount Network Folder
🛐 Image Manag >	Mount Local Folder	> Open Terminal
🔲 Utilities		
🔩 Network Settings		-
Nount (Network)	File Explorer	Display Setting
👖 Mount (Local) 🦰		
🔤 Open Terminal		
🟹 File Explorer 🗾	Launch AIP CLI	
🔛 Local Host 🛛 🕴 🗹		
Host Name: AIPBE		
IP Address: 192.168.100.111		
Logon User: root RescueBoot: Un-enabled		
Mounted: No		
Task: None		
0.0 % U .		
ActiveImage Protector		

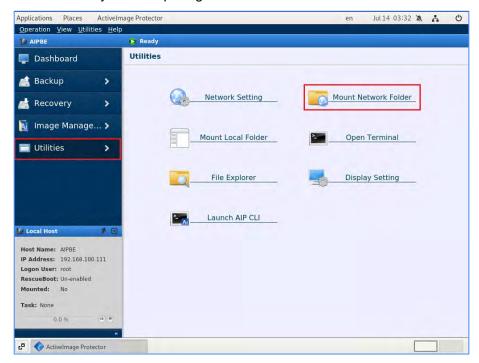
- 3. Select the **[Use the following IP address]** radio button and enter your network information. We are going to use the following network information in our example:
 - [IP Address]: 192.168.100.54
 - [Subnet Mask]: 255.255.255.0
 - · [Default Gateway]: 192.168.100.1

Please replace these IP addresses with the appropriate information for your network. Click on the **[Use the following DNS server settings]** radio button and enter your **[DNS server]** information (e.g., 192.168.100.1).

- Click the **[Apply]** button.
- Click the [OK] button to save your network settings.

Operation View Utilities Help		
AIPBE	Ready	
📮 Dashboard	Network Setting	
🛋 Backup 💈	Current NIC: ens192 -	View Current Settings
Recovery	 Automatically obtain IP Address (using DHCP) Use the following IP address: 	
📩 Recovery 👂	IP Address: 192.168.100.54	
🛐 Image Manag >	Subnet Mask: 255.255.255.0	
📑 Utilities	Default Gateway: 192.168.100.1	
Network Settings	C Automatically the an DNs server settings fusing DHCW	
Mount (Network)	Output Use the following DNS server settings:	
Mount (Local)	DNS server: 192.168.100.1	
Open Terminal		
📑 File Explorer		
🖬 Local Host 🛛 🕈 🗹		
Host Name: AIPBE		
IP Address: 192.168.100.111 Logon User: root		
RescueBoot: Un-enabled		
Mounted: No		
Mounted: No Task: None		
		Appiy Clear

Click on [Utilities] → [Mount Network Folder] to mount the shared network folder you want to use as a destination for your backup images.



Restore

5. Browse the shared folder. Double-click on the remote computer containing the destination shared folder. Enter your **[User Name]** and **[Password]** information to authenticate to the remote computer.

Applications Places Act	ivelmage Protector	en Jul	21 23:49 🕱	H ()
Operation View Utilities	<u>H</u> elp			
🔜 АІРВЕ	🕑 Ready			
📮 Dashboard	Mount Network Shared Folder			
💒 Backup 🛛 🗲	Network Computers and Shared Folders			_
📩 Recovery 🔉				
📓 Image Man 🗲	 Extension of solar with the second sec			
📑 Utilities				
Network Settings				
Mount (Network)				
Mount (Local)				
Open Terminal				
File Explorer				
Local Host 🕴 👔				
Host Name: AIPBE				
Logon User: root	Refresh all network computers	Specify IP Address to add	d network comput	er
RescueBoot: Un-enabled	Double-click on a computer to browse shared folders (usern	ame/password required for auther	ntication).	
Mounted: No	Selected UNC path:			
Task: None	Selected UNC path.			
0.0 % (ii) 🖷		Mount	Mounted Vol	ume List
P ActiveImage Protector	4			

6. Mount the destination shared folder. In this example, we use the remote computer at "192.168.100.55" and the shared folder called "disk" as our backup destination. Click the **[Mount]** button.

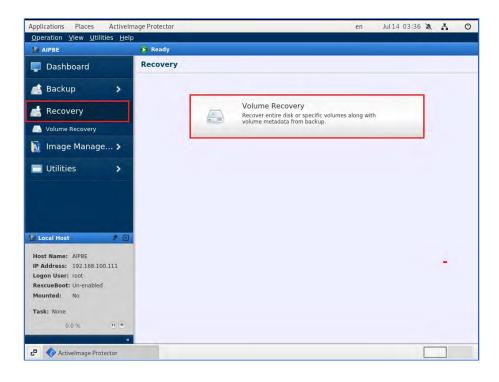
	nage Protector	en	Jul 14 03:35 🕱	A	Ф
Operation View Utilities Help	p Ready				
📮 Dashboard	Mount Network Shared Folder				
💒 Backup 🔉	Network Computers and Shared Folders				
📩 Recovery 🔉	Default share Default share				
🚺 Image Manag >	disk disk1				
🔲 Utilities	HYPER-V01				
Network Settings	SHARING				
🔀 Mount (Network)	SHARING SHARING				
Mount (Local)					
Open Terminal					
File Explorer					
Local Host 🕴 🚺					
Host Name: AIPBE IP Address: 192.168.100.111					
Logon User: root	Refresh all network computers	pecify IP Addres	s to add network compu	iter	
RescueBoot: Un-enabled	Double-click on a computer to browse shared folders (username/pas	sword required f	or authentication).		
Mounted: No	Selected UNC path: //192.168.100.55/disk				
Task: None	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
0.0 % 🛈 🔍		Mount	Mounted Vo	lume Lis	st
🗗 🔷 Activelmage Protector					

Restore

7. Once you have mounted the shared network folder, you'll see the mount point in the [Mounted network shared folder] list.

Applications Places Activ	elmage Protector en	Jul 21	23:51	X	A	С
<u>Operation</u> <u>View</u> <u>Utilities</u> <u>H</u>	elp					
	Neady					
Dashboard	Mount Network Shared Folder					
💒 Backup 🔉	Mounted network shared folder ◎ @ //192.168.100.55/disk (Mount Point */mnt/NetVolume_192.168.100.55_disk*)				
📩 Recovery 🔉						
🚺 Image Man 🗲						
📑 Utilities						
Network Settings						
Mount (Network)						
Mount (Local)						
🔤 Open Terminal						
🟹 File Explorer						
🔝 Local Host 🛛 👂 🖸						
Host Name: AIPBE						
IP Address: 192.168.100.102						
Logon User: root						
RescueBoot: Un-enabled						
Mounted: No						
Task: None						
0.0 % 🛈 🖲			ſ	Com	outer Lis	-
*			l	comp	Jucel LI:	2
🗗 🔷 ActiveImage Protector						

 Click on [Recovery] → [Volume Recovery] to recover your entire disk or specific volumes, including volume metadata, from a backup image.



- 9. Select the mounted shared network folder.
 - Select the **[Host]** backup source.
 - Select the [Recovery Point].
 - Click the [Next] button.

AIPBE	Ready		
📮 Dashboard	Volume Recovery		
🔮 Backup 🛛 🔉	1 Select Recovery Point 2 F	Restore Settings	3 Summary
Recovery	Backup Destination	Source Computers	🕔 Revovery Points 👻
Volume Recovery	< D: • 🔊	demo_svr01	2022/06/23 11:00:02
Volume Recovery	☐ Ifb1read-36ea-4841-a9a3-dbd1b ☐ d68245aa-4974-43b>a154-3948 ☐ d68245aa-4974-43b>a154-3948 ☐ dd22bc24-c12-49410-916-04440 ☐ ddd120e8-d8d8-48a4-9802-d9cd ☐ MS Azure ▲ MS Azure ▲ Amazon S3 ☐ SFTP	e demo_svr02 e demo_svr03 e demo_svr04	¹ ¹
19 Address: 192.168.100.111 Logen User: root RescueBoot: Une-nabled Mounted: No Task: None 0.0 % U @	Backup Information Image File: D68245AA-4974-4438- A154-3948A490904, 64303057303030325 System: Microsoft Windows Server 2016 Stan (:)/(:)/C; Deduplication: No: Compression: F	dard Edition (build 14393), (54-bit(64); Source: Disk 0, Volum

10. Right-click on the left part of the disk map in the **[Source Objects]** section. Select "/dev/sda – Basic (GPT)" for your **[Target]**, or drag and drop "/dev/sda – Basic (GPT)" to the restore target disk.

	nage Protector	en	Jul 14 03:39 🖹 🛔 🖒
Operation View Utilities Help	🕨 Ready		
📮 Dashboard	Volume Recovery		
💒 Backup 🔉	1 Select Recovery Point 2 R	estore Settings	3 Summary
📩 Recovery	Source Objects:		
Volume Recovery	Disk 0		
📔 Image Manage >	- Used .	0 MB FAT32 Boot 49.4 GB NTFS	
📑 Utilities 🛛 🗲	/dev/sda - Basic (GPT)		
Local Host Host Name: AIPBE IP Address: 192.168.100.111 Logon User: root Rescueboc: Un-enabled Mounted: No Task: None	Target Settings: How to Configure		
0.0 % 🔟 🖷 «		< Back	Next > <u>Cancel</u>
🗗 🔷 ActiveImage Protector			

11. Ensure the **[Target Settings]** information under the [Restore Settings] screen is correct. Click the **[Next]** button.

Applications Places Active	mage Protector en Jul 14 03:45 🔌 🛔 🖞
Operation View Utilities He	
M AIPBE	Ready
📮 Dashboard	Volume Recovery
💒 Backup 🛛 🗲	1 Select Recovery Point 2 Restore Settings 3 Summary
📩 Recovery	Source Objects: @ How to Select
Nolume Recovery	Disk 0
🚺 Image Manage >	Basic (GPT) 50.0 GB 49.0 MB NTFS 99.0 MB FAT32 Boot 49.4 GB NTFS
📑 Utilities 🔹 🗲	
Local Host I The AIPBE IP Address: 192.168.100.111 Logon User: root RescueBoot: Un-enabled Mounted: No Task: None 0.0 % U C	Target Settings: How to Configure Ignore checksum error during re Post Restore (Reboot syster • Disk 0 Basic (GFT) How to Configure Image: Arrow of the system of t
P ActiveImage Protector	

12. Verify the information on the **[Summary]** screen is accurate. Click the **[Done]** button to begin the restore process.

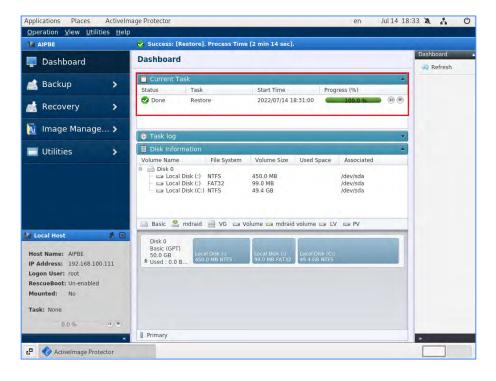
	nage Protector en Jul 14 03:46 🔌 🛔
<u>Operation View Utilities Help</u>	
AIPBE	Ready
📮 Dashboard	Volume Recovery
💒 Backup 🛛 🗲	1 Select Recovery Point 2 Restore Settings 3 Summary
kecovery	🛃 After Restoration:
Volume Recovery	Disko
🚺 Image Manage >	Basic (GPT) 50.0 GB * Used ; 22.3
📑 Utilities 🔹 🗲	
Local Host To	Details Source: /mnt/NetVolume_192.168.100.55_disk/d68245aa-4974-443b-a154-39488a4090d4/D68245AA-4974-443B-A1 Boot settings MBR: Restore MBR First Track: Restore First Track Post Restore Operation: No
Mounted: No	
Task: None	
0.0 % (1) (=)	< Back Done Cancel
🕘 🔷 ActiveImage Protector	

13. ActiveImage Protector will display a progress bar once you start the recovery process.

AIPBE	🜔 Ready					_	-
📮 Dashboard	Dashboard						Dashboard
🔮 Backup 🔹 👂	Current Task Status Task		Start Time	P	ogress (%)	*	
🛃 Recovery 🔰	Running Rest		2022/07/14 18		37.8 %		
Image Manage >	🕒 Task log						
Utilities >	Disk Information	File System	Volume Size	Used Space	Associated	*	
	Disk 0 Disk 0 Disk 1 Disk 1 Docal Disk (:) Docal Disk (:) Docal Disk (C:) Docal Disk (C:) Basic mdraid	FAT32) NTFS	450.0 MB 99.0 MB 49.4 GB	volume 📼	/dev/sda /dev/sda /dev/sda		
Local Host AIPBE PAddress: 192.168.100.111 Logon User: root RescueBoot: Un-enabled Mounted: No	Disk 0 Basic (GPT) 50.0 GB	al Disk (;) () MB NTES	Local Disk (;) 99.0 MB FAT32	Local Disk (49,4 GB NTI	ធ្យ 5		
Task: Restore Image							
	« Primary						»

14. Once the progress bar reaches "100%," your recovery task is complete. You may now:

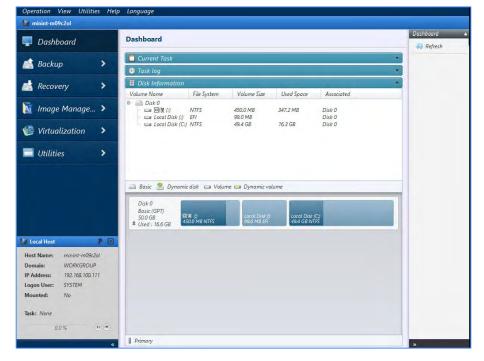
- Remove the boot media.
- Go to [Operation] \rightarrow [End] to shut down or reboot the machine.
- Restart the computer and verify the restore task is completed successfully.



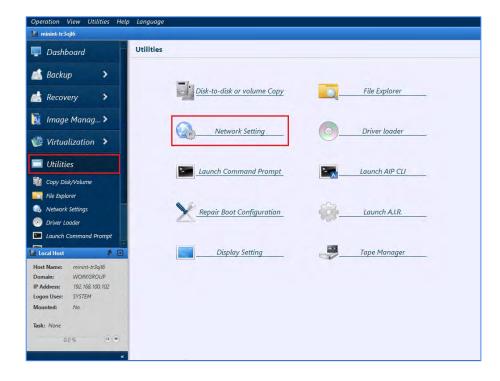
6-3. System Recovery : Windows RE-based boot environment

ActiveImage Protector BE builder can create recovery boot environment based on Windows-RE to be used in the case of system recover. The following is an explanation of performing a restore operation while booted into the recovery environment.

1. Insert the boot media into your machine and boot into the recovery environment. Please wait until recovery environment completely boots up.



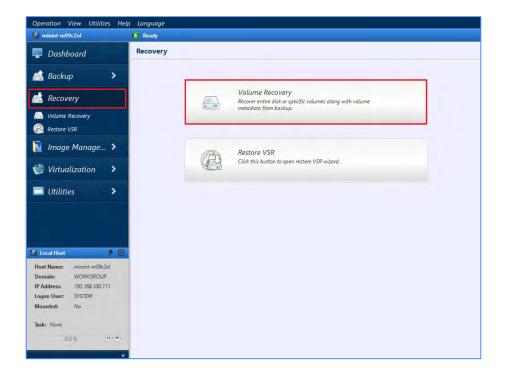
Configure network settings in order to access the network shared folder that contains backup image files. Click
 [Utilities] → [Network Setting].



3. The [Actiphy Network Config] dialog is displayed. This example shows that [Use the Following IP address] is selected. It has The IP "192.168.100. 51" address is specified as the [IP Address:], "255.255.255.0" for [Subnet mask], and "192.168.100.1" for [Default gateway]. [Use the following DNS server address] is entered as "192.168.100.1". After configuring the settings for your network environment, click [OK] to apply and exit the dialog.

eneral	work Config Network Driv	
eneral	Network Driv	/e
Network	Adapter	
Intel(R)	82574L Gigabit	t Network Connection 🔹 🖛
MAC: 0	00-0C-29-11-EC	C-9A
P Addre	\$5 ?	
© 0b	tain an IP addr	ress automatically
		Release Renew
🖲 Use	e the following I	IP address
IP Ad	dress:	192 . 168 . 100 . 51
Subn	et mask:	255 . 255 . 255 . 0
Defau	ult gateway:	192 . 168 . 100 . 1
DNS		
	coin D. Deerver	ciditan sulawanaliy
🖲 Use	the following l	DNS server address
		192.168.100.1
		Apply
		OK Cancel

4. Select [Recovery] \rightarrow [Volume Recovery].



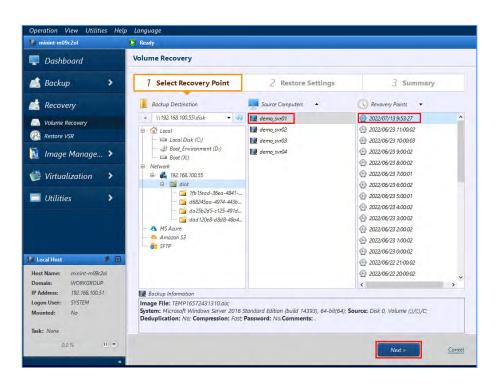
5. In this example "\\192.168.100.55\disk" is specified for [Backup Destination]. Press Enter key.

Operation View Utilities Hel	o Language
Dashboard	Volume Recovery
🛋 Backup 🔸	7 Select Recovery Point 2 Restore Settings 3 Summary
Recovery Volume Recovery Restore VSR Image Manage Virtualization Utilities	Backup Destination Source Computers Computers Construction Construction Construction Construction Source Computers Construction Constructin Construction Construction Construction Construc
Kocal Host Carlos Control Cont	New Backup Information
Logon User: SYSTEM Mounted: No	
Task: None 0.0 % (1) •	Next > Cancel

6. Enter the required credentials to access the storage location. In this example we have entered "192.168.100.55\Administrator" for the **[User Name]** and the password. Click **[Connect]**.

Operation View Utilities He	lp Language
🔛 minint-m09c2ol	> Ready
📮 Dashboard	Volume Recovery
🛋 Backup 🔹 🔉	1 Select Recovery Point 2 Restore Settings 3 Summary
📩 Recovery	📕 Backup Destination 📃 Source Computers 👻 🕔 Revovery Points 👻
Volume Recovery Restore VSR	< //192168.100.55/disk • 🦃
🚺 Image Manage 🕨	ActiveImage Protector
💕 Virtualization 🔹 🔸	192.168.100.55\Administrator i.e. hastname\username or domain\username
Utilities >	Please enter login credentials.
🛃 Lucal Host 🛛 🦸 🖸	
Host Name: minint-m09c2ol Domain: WORKGROUP	
IP Address: 192.168.100.51 Logon User: SYSTEM Mounted: No	Backup Information
Task: None	
0.0% D	Next > Concel

Restore



7. Select the [Source Computer] and [Recovery Point]. Click [Next].

8. Right-click on the left part of disk map (around "Basic (GPT)") in **[Source Objects].** From the context menu select "Disk 0 - Basic (GPT)" for **[Target]**.

Operation View Utilities Hel	p Language
🛄 minint-m09c2ol	Ready
📮 Dashboard	Volume Recovery
🖆 Backup 🛛 🗲	7 Select Recovery Point 2 Restore Settings 3 Summary
📩 Recovery	Source Objects: How to Select
Volume Recovery	Disk 0
Restore VSR	Basic (GPT) 50.0 GB
🚺 Image Manage >	* Used - 2
📽 Virtualization 🔉	
Utilities >	
🚹 Local Host 🔰 🖸	Target Settings: How to Configure Image: Ima
Host Name: minint-m09c2ol	
Domain: WORKGROUP IP Address: 192.168.100.51	
Logon User: SYSTEM	
Mounted: No	
Task: None	
0.0% (I) (I)	< Back Next > Cancel

9. Review the restore target information displayed in [Target Settings] window and click [Next].

	Ready		
Dashboard	Volume Recovery		
🔮 Backup 🛛 🗲	7 Select Recovery Point	2 Restore Settings	3 Summary
📩 Recovery	Source Objects: How to Select		
Volume Recovery	Disk 0 Basic (GPT) 50.0 GB 450.0 MB NTFS	99.0 MB FAT32 Boot 49.4 GB NTFS	
🧕 Image Manage 🕨	★ Used : 22.3 GB	990 MB M132 0001 494 60 (V)13	
🖄 Virtualization 🔹 🔉			
Utilities			
Utilities	Target Settings: How to Configure	📄 Ignore checksum error during restoring 🔄 F	ost Restore Operation Reboot system
	Target Settings: How to Configure.		tost Restore Operation Reboot system
Local Host 🔰 🖬	Disk 0 Basic (GPT) S0.0 GB		ost Restore Operation Reboot system
Local Host Cocal Host Iost Name: minint-m09-2al Domain: WORKGROUP P Address: 192.168.100.51	Disk 0 Basic (GPT) S0.0 GB		ost Restore Operation Reboot system
Local Host To a construction of the constructi	Disk 0 Basic (GPT) S0.0 GB		ost Restore Operation Reboot system
Local Host Content and the second se	Disk 0 Basic (GPT) S0.0 GB		ost Restore Operation Reboot system

10. A summary window is displayed. Click [Done].

Operation View Utilities Help	o Language
📮 Dashboard	Volume Recovery
💒 Backup 📏	7 Select Recovery Point 2 Restore Settings 3 Summary
📥 Recovery	After Restoration:
Solume Recovery	Disk 0 Bosic (GP7) Sou GBB
🚺 Image Manage >	* Used: 223 GB
💕 Virtualization 🔹 🕨	
Utilities	
Local Host I The State of Control	Details Source: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Mounted: No Task: None	Post Restore Operation: No
lask: None 0.0 % (1) (1)	< Back Dane Can

11. When the recovery task starts, the progress is displayed.

📕 minint-m09c2ol	Ready	
Dashboard	Dashboard	Dashboard
- Dashboara		Refresh
💼 Backup	Current Task Status Task Start Time Progress (%)	*
	Running Restore 2022/07/14 9:46:00 7.1%	
Recovery	>	
Image Manage	>	
a mage ranage	Task log	*
🎽 Virtualization 👘	Disk Information Volume Name File System Volume Size Used Space Associated	*
📑 Utilities 👘 👘	> Unallocated 50.0 GB Disk 0	
	Basic Dynamic disk Volume Dynamic volume Disk 0 Basic (CPT) Stor Gef Used : a OBytes	
lost Name: minint-m09c2ol	Disk 0 Basic (GP7) 500 GB Unalisated	
Host Name: minint-m09c2al Domain: WORKGROUP IP Address: 192.168.100.51	Disk 0 Basic (GP7) 500 GB Unalisated	
Host Name: minint-m09c2al Domain: WORKGROUP IP Address: 192.168.100.51 Logon User: SYSTEM	Disk 0 Basic (GP7) 500 GB Unalisated	
Host Name: minint-m09c2al Domain: WORKGROUP IP Address: 192.168.100.51 Logon User: SYSTEM	Disk 0 Basic (GP7) 500 GB Unalisated	
Host Name: minint-m09c2ol Domain: WORKGROUP IP Address: 192.168.100.51 Logon User: SYSTEM Mounted: No	Disk 0 Basic (GP7) 500 GB Unalisated	
Host Name: minint-m09c2al Domain: WORKGROUP IP Address: 192.168.100.51 Logon User: SYSTEM Mounted: No Task: Restore Image	Disk 0 Basic (GP7) 500 GB Unalisated	

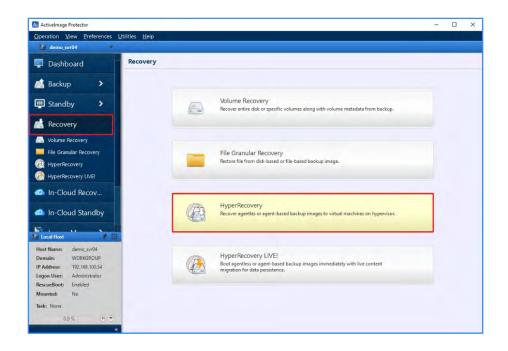
12. When the Progress reaches "100%", the recovery task has completed. Remove the boot media and click on **[Operation]** \rightarrow **[End]** to shut down or reboot the machine.

and the set of the set	Dashboard			Dashboard
📮 Dashboard	Dashboard			Refresh
🖆 Backup 🔰 🝾	Current Task		*	
вискир 🗸	Status Task	Start Time Progre		
🛓 Recovery 🔹 🔉	🧭 Done Restare	2022/07/14 9:46:00	100.0 %	
i Image Manage >				
	Task log Disk Information		· · · ·	
💕 Virtualization 🔹 👌	Volume Name File Syste	m Volume Size Used Space	Associated	
	🚔 Basic 🔮 Dynamic disk 📼	/olume 🚥 Dynamic volume		
Local Host Money Provide Automatic Provided Automat	Disk 0	Local Disk N	g	

6-4. Create a new virtual machine from backup image file (HyperRecovery)

Using HyperRecovery you can restore a backup image file as a virtual machine or virtual disk. The example below shows the steps to restore to a virtual machine using HyperRecovery

- 1. Start ActiveImage Protector. Go to Windows Start menu [ActiveImage Protector].
- 2. Select [Recovery] click [HyperRecovery].



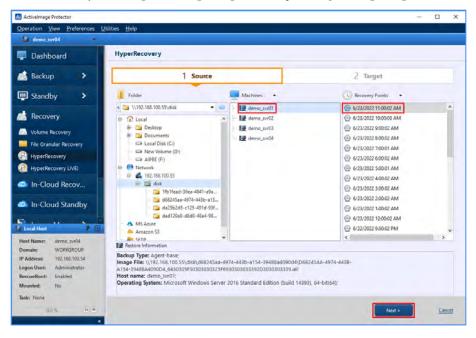
3. Select a folder contain backed image files. The following example show that the network shared folder "\\192.168.100.55\disk" is specified for the destination folder. Press Enter key.

Activelmage Protector			- D X
Operation View Preferences	<u>U</u> tilities <u>H</u> elp		
🚺 demo_svr04 🔹			
Dashboard	HyperRecovery		
📑 Backup 🔹 🗲	1 Source	e	2 Target
Standby >	Folder	Machines 🔹	🕔 Recovery Points 👻
Recovery	D 🕜 Local	• 50	
Volume Recovery	 B □ □ Desktop Documents 		
File Granular Recovery	Local Disk (C:)		
HyperRecovery LIVE!	Mirbe (Fi) Mirbe (Fi) Mirbe (Fi)		
In-Cloud Recov	Amazon S3		
In-Cloud Standby			
Local Host 7			
Host Name: demo_svr04 Domain: WORKGROUP	Restore Information		
IP Address: 192.168.100.54			
Logon User: Administrator			
RescueBoot: Enabled Mounted: No			
Task: None			
0.0 % (* (*)			Next > Cancel
0.0 %			Next > Cancer

4. Enter the required credentials to access the storage location. In this example we have entered "192.168.100.55\Administrator" for the **[User Name]** and the password. Click **[Connect]**.

Ai	Activelmage Protector		×
	192.168.100.55\Administrator		
	i.e. hostname\username or dom	nain\username	
	•••••		
	Please enter login credentials.	Connect	<u>Cancel</u>

5. Select backup source [Machine] and [Recovery Point]. Click [Next].



Restore

6. Too add a hypervisor host, click [Connect to hypervisor].

I DO AS AND A	HyperRecovery		
Dashboard	nyperkecovery		
🛔 Backup 🔹 🗲	1 Source	2	Target
Standby	Connect to	hypervisor Virtual Machine Configuration: VM Name:	VMDK Name:
Recovery		New Virtual Machine	New Virtual Machine
Volume Recovery		Virtual Hardware Version:	
File Granular Recovery			
		Operating System: Windows	0 Linux
HyperRecovery		Datastore:	
HyperRecovery LIVE		Datastore.	
In-Cloud Recov		CPU: RAM:	
		1 2 Masc1 2 5 GB	Masc1
In-Cloud Standby		Disk	Type Datastore
Local Host 🕴 🖡		Hard Disk 0 (50.0 GB)	Thin •
ost Name: demo_svr04			
omain: WORKGROUP			
Address: 192.168.100.54 gon User: Administrator	Contraction in the second second second	Network	IP:
scueBoot: Enabled	Select Mothod of Restoring demo_svr01 Restore as new virtual machine	VM Network 👻	DHCP · X
ounted: No	Only restore disk	Auto connect when power on	

7. Supported hypervisors are Microsoft Hyper-V or VMware vSphere vCenter. In the following example we have selected [Microsoft Hyper-V] running on the local computer. Click [OK]

Microsoft Hyper-V	
192.168.100.60	
Administrator	
	lential that is valid for both Hyper Agent
Please enter login cred	lential that is valid for both Hyper Agent crosoft Hyper-V machine.

8. Configure the setting for the virtual machine. The following example shows settings configured for the new virtual machine. "hv-svr01" is specified for **[VM name]**, "D:" drive for **[Volume:]** of datastore, "Virtual" for **[Folder]**, "2" for **[CPU:]**, "2GB" for **[RAM]** and "Dynamic" for **[Provisioning]**. After configuring the settings, click **[Done]** to create the virtual machine.

Operation View Preferences 1	Utilities Help		
Dashboard	HyperRecovery		
🚵 Backup 🔹 🗲	1 Source	2	Target
Standby Standby Recovery	Connect to hypervisor Hyper-V Hyper-V Hyper-V Hyper-V Hyper-V01 Hy	Virtual Machine Configuration VM Name: HV-svr01 Select Volume: D: (Free space: 604.9.68)	VHD/VHDK Name: HV-svr01
File Granular Recovery HyperRecovery HyperRecovery HyperRecovery LIVE In-Cloud Recov	 OS: Microsoft Windows Server 2016 Standard Processon 8 Memory: 13.9 G8 	CPU RAM 2 (CML R)	
 In-Cloud Recov In-Cloud Standby 		Disks	Provisioning Dynamic •
Local Host			
IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Erabled Mounted: No	Select Method of Restoring demo_sw01	Network: Virtual Switch 01	IP: • DHCP •
Task: None		Previous	Done Cancel

9. The task for creating the virtual machine and the progress are displayed.

Activelmage Protector		- 🗆 X
Operation View Preferences	Utilities Help	
Million demo svr04 · · · · · · · · · · · · · · · · · · ·	Dashboard	Dashboard .
Backup	HyperAgent System Health Status	Selected Task
🕎 Standby 🔹 🕨	Current Task Satus Task Start Time Progress (%)	Do Cancel Task
A Recovery	Running P2V_Quick 7/14/2022 10:18:00 AM 1.7%	
In-Cloud Recov		
In-Cloud Standby		
📓 Image Manag >	C Tark log	
👹 Virtualization 🔸	Schedule Disk Information	
Local Host Kest Name: demo_svr64 Domain: WORXSROUP P Address: 192.163.100.54	Volume Name File System Volume Size Used Space Associated California Disk 0 NTFS 450.0 MB 347.2 MB Disk 0 O O O O O O O O O O O O O O O O O O	
Logon User: Administrator RescueBoot: Enabled Mounted: No Task: P2V_Quick	Dick 0 Banc (GPT) 90.0.08 # Updal 21.9.58 Dick 1 Dick 1 Dick 1 Phil # 11 Phil # 11	
(1.7% 0 •	I Unallocated D Drimany	

Restore

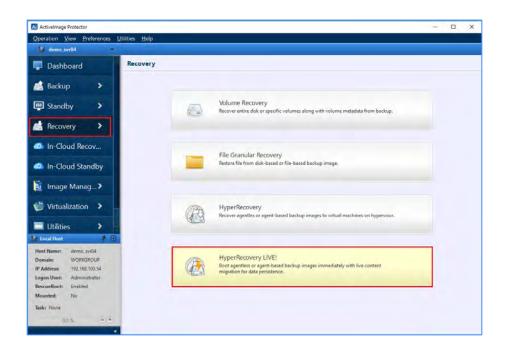
10. When the progress reaches 100%, the process is complete.

Activelmage Protector		- 🗆 X
Operation View Preferences	Utilities Help	
🖬 demo_svr04 🔹		
📮 Dashboard	Dashboard	Dashboard .
🚵 Backup 🔹 🗲	 Øi HyperAgent Sistem Health Status 	Selected Task
💷 Standby 🔸	Current Task Satus Task Start Time Progress (%)	Cancel Task
Recovery		
 In-Cloud Recov In-Cloud Standby Image Manag> 	Back log	
👹 Virtualization 👂	sake ing Schedule	
Virtualization ·	Disk Information	
Utilities > Local Host Local Host Host Name: demo_sw64 Domain: WORKBOUP IP Address: 192.168.100.54 Logon User: Administrator Rescuelloot: Evabled Mounted: No	Velume Name File System Velume Size Used Space Associated Disk 0 Disk 0 NTPS 450.0 MB 347.2 MB Disk 0 Disk 0 call Disk (c) NTPS 290.0 MB 21.5 GB Disk 0 Disk 0 call Disk (c) NTPS 240.4 GB 21.6 GB Disk 0 Disk 0 call Disk (c) NTPS 290.4 GB 21.6 GB Disk 0 Disk 0 call Disk (c) Size (cPT) Size (CPT) Size (Disk E) Velume Call Disk (c) Basic (CPT) Size (Disk E) Size (Disk E) Velume Call Disk (c) Velume Call Disk (c) Build 0 call Disk 0 call Disk 0 call Disk 0 call Disk 2 Size (CPT) Velume Call Disk (c) Velume Call Disk (c)	~ ~
Task: None 0.0 % 0 =	Disk 1 Basic (GPT) IV-reallocated II Primary	ų.

6-5. Zero Time Recovery (HyperRecovery LIVE!)

HyperRecovery LIVE! boots a virtual machine from a backup image file on a hypervisor and does a live migration of the the system to a virtual machine in the background. The following explains the operating procedures of how to use HyperRecovery LIVE! to do a live migration to a virtual machine.

1. Go to [Recovery] \rightarrow [HyperRecovery LIVE!].



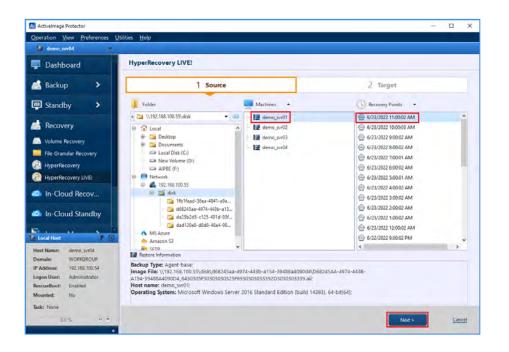
2. Select a storage location contain backup images. This example shows that "<u>\\192.168.100.55\disk</u>" is entered for a shared folder continuing backup images.. Press Enter key.

Activelmage Protector		– 🗆 X
Operation View Preferences	<u>U</u> tilities <u>H</u> elp	
Dashboard	HyperRecovery LIVE!	
🛋 Backup 🔹 🗲	1 Source	2 Target
🕎 Standby 🔉	📕 Folder 📃 Machines 🔸	🕔 Recovery Points 🔹
Control Recovery Control Rec	< //192.188.100.55/disk	
Host Name: demo_svr04 Domain: WORKGROUP IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Enabled Mounted: No	Restore Information	
Task: None 0,0 % n (=)		Next > Cencel

3. Enter the required credentials to access the storage location. In this example we have entered "192.168.100.55\Administrator" for the **[User Name]** and the password. Click **[Connect]**.

A 🔝	ctivelmage Protector		×
1	92.168.100.55\Administrator		_
i.e	e. hostname\username or doma	in\username	
			_
Ŀ	•••••		

4. Select the source computer from [Machine] and the [Recovery Point]. Click [Next].



Restore

5. Too add a hypervisor host, click [Connect to hypervisor].

Activelmage Protector Operation View Preferences	Utilities Help			- 0	
🖬 demo_svr04 🔹 💌					
Dashboard	HyperRecovery LIVE!				
🛃 Backup 💦 🔸	1 Source	2	Target		
🕎 Standby 🔹 🕨	Connect to	o hypervisor Virtual Machine Configuration: VM Name:			
Recovery		New Virtual Machine			
Volume Recovery		Virtual Hardware Version:			
File Granular Recovery				,	
		Operating System: Windows	C Linux		
HyperRecovery HyperRecovery LIVE:		Detectory	Datastore		
		Datastore:	Lataszore:		
In-Cloud Recov		CPU: RAM:			
		1 1 Masc1 2 1 G	Mac1		
In-Cloud Standby		Disk	Туре	Datastore	
Local Host 🕴 🕴		Hard Disk 0 (50.0 GB)	Thick •		
Host Name: demo_svr04					
P Address: 192.168.100.54					
ogon User: Administrator		Network	IP:		
lescueBoot: Enabled		VM Network •	DHCP	• ×	
founted: No		Auto connect when power on			
ask: None					
0.05 Û.B.		Previous	Done	Cance	

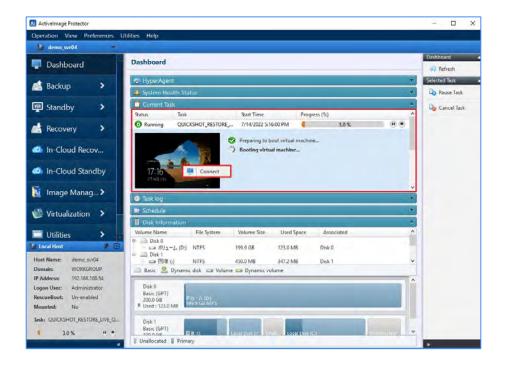
6. Select the type of the hypervisor. The supported hypervisors are Microsoft Hyper-V or VMware vSphere vCenter. In the following example we have selected **[Microsoft Hyper-V]** running on the local computer.

Microsoft Hyper-V This machine User Name Password Domain	Image Protector		-
User Name Password	Microsoft Hyper-V		
Password	This machine		•
	User Name		
Domain	Password		
	Domain		
		ОК	Cance
ОК			

Configure the setting for the virtual machine. The following example shows settings configured for the new virtual machine. "hr-live-vm" is specified for [VM name], "D:" drive for [Volume:] of datastore, "Virtual" for [Folder], "2" for [CPU:], "4GB" for [RAM] and "Dynamic" for [Provisioning]. After configuring the settings, click [Done] to create the virtual machine.

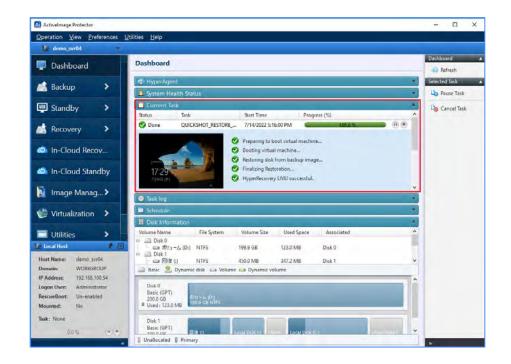
Activelmage Protector Operation View Preferences	Inffature Made		- 0	
demo_svr04 *	Snumes Tileh			
📮 Dashboard	HyperRecovery LIVE!			
💒 Backup 🔸	1 Source	2	Target	
Standby Standby	Connect to hypervisor Hyper-V B- DBMO_SVR04 Connect To Hypervisor	Virtual Machine Configuration: VM Name: hr-live-vm Select Volume: D: (Free space: 199.8 G8) Select Folder: D:Vortual CPU: 2 (Ranc 4) Ambit Disks W Hard Disk 0 (50.0 G8)	Max: 15.0 GB Provisioning Dynamic	
Host Nore Host Name: demo.sv04 Domaine: WORKKRCUP IP Address: 192.168.100.54 Lagon User: Administrator RescueBoot: Un-enabled Mounted: No Task: Nore 0.0 % (*) *		Network: New Virtual Switch	ip, ▼ DHCP Dese	Cancel

8. When the task starts, the virtual machine will boot. Right-click on the thumbnail and select **[Connect]**. You can operate the virtual machine by using remote console. In background, the backup is restored to the virtual machine.



Restore

9. The virtual machine can be used while the machine is migrated in the background. This allows for uninterrupted operations on the vm.



10. You can monitor the virtual machine using the Hyper-v Manager consol. In the dialogue below we can the virtual machine "hr-live-vm" was created and is running.

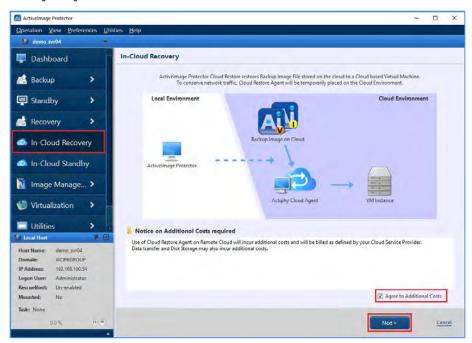
Hyper-V Manager	Virtual Machines				Actions	
DEMO_SVR04	Name State	CPU Usage	Assigned Memory	Uptime	DEMO_SVR04	
	he-live-vm Runnin		4096 MB	00 14 57	New C Import Virtual Machine	
	4				Hyper-V Settings Virtual Switch Manager Virtual SAN Manager Koth Disk Inspect Disk	
	Checkpoints			6		
	The selected v	virtual machine has no c	heckpoints		Remove Server	
					View Help	- 2
					hr live-vm	
					Connect	
	hr-live-vm			_	Fr Settings	
	Created:	7/14/2022 52819 PM		Anteretere	Shut Down	
	Configuration Version		Heartbeat: OK Hea	(hy)	Save	
	Generation: Notes:	2 None			Pause	
					Checkpoint	
	Summary Memory Networking Replic	ation			Move	
				2	No. of the second secon	

6-6. Cloud Recovery (In-Cloud Recovery)

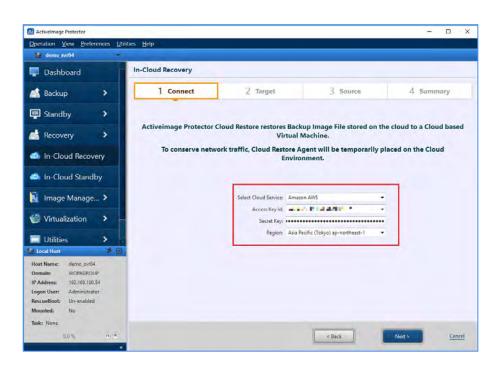
In-Cloud Recovery restores the entire system to virtual machine on Amazon Web Service (AWS) or Microsoft Azure cloud environment. The recovery operation is executed by running "Actiphy Cloud agent (boot environment)" deployed on the respective cloud regions, therefore, no complicated operation of cloud management console or command line is required.

The following are the operating procedures how to restore the system from a backup file to "AWS EC2".

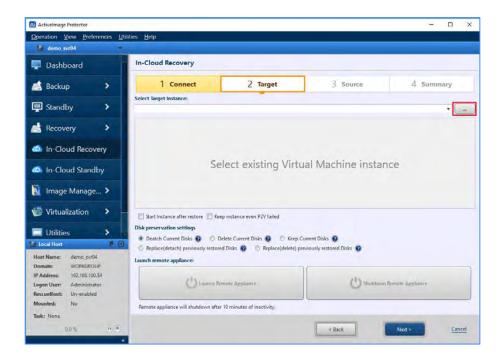
 Click [In-Cloud Recovery] in the left menu. Additional costs for the use of the cloud services during the execution of this process and operation of the restored virtual machine may be incurred by cloud service provider. To proceed with further operation, please check the checkbox for [Agree to Additional Cost] and click [Next].



 Select the cloud service you want to use and enter the credential information. This example shows that [Amazon AWS] is selected for the cloud service, the required [Access Key ID] and [Secret Key] are entered for AWS. Select [Region] and click [Next].



3. Click [...] and select the instance for a restore target.



4. Select an instance and click **[Select Instance]**. This example shows that "testEC2" is selected.

	t instance:			
Name	Instance ID	Public IPs	Private IPs	
test_sakurai2	i-013de3b8b9e5250f8	18.177.219.145	172.31.3.187	
testEC2	i-0d6070896033d4d98	18.182.247.253	172.31.42.226	

5. The information of the selected instance for the restore target is displayed.

Operation View Preferences	Utilities Help	
demo_svr04		
📮 Dashboard	In-Cloud Recovery	
🛃 Backup 🔹 🕨	1 Connect 2 Target 3 Sou	urce 4 Summary
🕎 Standby 🔉 🗲	Select larget Instance: +-Dd607008603344d98(testEC2)	• [=
📩 Recovery 🔹 🔸	Instance ID: i-0d6070896033d4898 Public IP Address: Instance State: Running Private IP Address: Instance Type: 12.micro VPC ID:	172.31.42.226 vpc-09d12dc89a8ef54c4
In Cloud Recovery	Platform: windows Subnet ID:	subnet-085b4e563093l3bac
In-Cloud Standby	Volume ID Device name Volume sac(Gill) Attachmer vol-06e7d3d2eas1s61as vol-06e7d3d2eas1s61as 30 attached	nt status
🚺 Image Manage 🗲		
Virtualization >	🔲 Start Instance after restore 🔄 Keep instance even P2V failed	
Utilities >	Disk preservation settings Detec Current Disks Detec Current Disk	0
Host Name: demo_svr04 Domain: WORKGROUP	Launch remote appliance:	
IP Address: 192.168.100.54 Logon User: Administrator Rescue8oot: Un-enabled	Launce Remote Appliance	🖒 Shuttlown Remote: Appliance
Mounted: No	Remote appliance will shutdown after 10 minutes of inactivity.	
fask: None 0.0% ™	(#)	Next > Cancel

 Select an option for [Disk Preservation Settings] for the restored virtual disk. This example shows that [Detach Current Disks] is selected. Click [Launch Remote Appliance] and Actiphy Cloud Agent (boot environment) will launch.

Operation View Preferences Utili	ties <u>H</u> elp
🔝 demo svr04 🔷 🔻	
📮 Dashboard	In-Cloud Recovery
😫 Backup 🔹 🕨	1 Connect 2 Target 3 Source 4 Summary
🛒 Standby 🔹 🕨	Select larget instance: +-04607089603344498(testEC2)
Recovery	Instance ID: i-046070896033d4a98 Public IP Address: 172.31.42.226 Instance State: Running Private IP Address: 172.31.42.226 Instance Type: Czmscro VPC ID: vpc-09/126/89.89(4)4c4
In-Cloud Recovery	Platform: wondows Subnet ID: subnet 08504656309383bac Volume ID Device name Volume socifis Attachment status
In-Cloud Standby	vol-06e7d3d2eas1a61aa vol-06e7d3d2eas1a61aa 30 attached
Virtualization	Start Instance alter restore: 🔄 Keep instance even P2V failed
Utilities > .	Disk preservation settings Deatch Current Disks Deatch Current
Host Name: demo_svr04 Domain: WORKGROUP IP Address: 192.168.100.54	Launch remote appliance:
ogon User: Administrator RescueBoot: Un-enabled	U Launce Remote Appliance
Mounted: No	Remote appliance will shutdown after 10 minutes of inactivity.

Disk preservation settings:

- **Detach Current disks:** Detach the disk connected to the instance and connect the restored disk to the instance. The detached disk remains instead of being deleted.
- **Delete Current disks:** Detach and delete the disk connected to the instance and connect the restored disk to the instance.
- Keep Current disks: The disk connected to the instance is not detached, the restored disk is attached as another disk to the instance.
- **Replace (Detach) previously restored disks:** Detach the restored disk connected to the instance and connect the newly restored disk to the instance. The detached disk remains and is not deleted. Disks that have not been restored using this product are not detached from the instance.
- **Replace (Delete) previously restored disks:** Detach and delete the restored disk connected to the instance and connect the newly restored disk to the instance. Disks that have not been restored using this product are not detached from the instance.

Restore

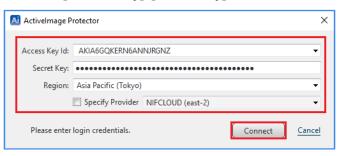
7. When the **[Launch Remote Appliance]** becomes disabled and the **[Shut-down Remote Appliance]** button becomes active, the Actiphy Cloud Agent (boot environment) starting process has completed. Click **[Next]**.

Activelmage Protector				- 🗆 ×
Operation View Preferences	Utilities Help			
demo_svr04				
📮 Dashboard	In-Cloud Recovery			
📑 Backup 🔹 >	1 Connect	2 Target	3 Source	4 Summary
🕎 Standby 🔉 🕨	Select Target Instance: +-0d6070896033d4d98(testEC2)			•
📩 Recovery 🛛 🔸	Instance ID: i-0d6070896033d4d98 Instance State: Running Instance Type: t2.micro		Public IP Address: 172.31.42.226 VPC ID: vpc-09d12dc3	
In-Cloud Recovery	Platform: windows. Volume ID Device nor	me Volume size(Gi	Subnet ID: subnet 08564 (8) Attachment status	e56309313bac
 In-Cloud Standby Image Manage > 	vol-06e7d3d2eaa1a61aa vol-06e7d3d	42eaa1a61aa 30	attached	
Virtualization >	Start Instance after restore Start Constant Co	ete Current Disks 👩 🙁 Keep		
Host Name: demo_svr04 Domain: WORKSROUP	Launch remote appliance:			
IP Address: 192.168.100.54 Logon User: Administrator RescueBoot: Un-enabled	🖒 Launce Rem	ote Appliance	Shutdown Remote A Started Appliance In	ppliance stance ID:i-01f94c88b6ffdd04e
Mounted: No	Remote appliance will shutdown after 1	0 minutes of inactivity.		
Task: None	•		< Back	Next > Cancel

8. Please specify a Backup Destination where backup files are located. This example shows that "Amazon S3" is selected.

ActiveImage Protector				- 🗆 X
Operation View Preferences U	tilities <u>H</u> elp			
🔛 demo svr04 🔹	the second se			
📮 Dashboard	In-Cloud Recovery			
📥 Backup 🔹 🕨	1 Connect	2 Target	3 Source	4 Summary
🕎 Standby 🔉	Connected to: Remote Appliance in An	nazon EC2,Asia Pacific (Tokyo) ap-nort		A6GQKERN6ANNIRGNZ Recovery Points 🔹
📥 Recovery 🔸	<	• 44		
In-Cloud Recovery	MS Azure Amazon S3			
In-Cloud Standby	u an			
🚺 Image Manage >				
📽 Virtualization 🔸 -				
🗖 Utilities 🔹 🕨				
🔝 Local Host 🛛 🗱 💽	Target Disk Settings			
Host Name: demo_svr04 Domain: WORKGROUP	Disk Disk	Mount Point Ca	pcacity Storage Clas	55
IP Address: 192,168.100.54 Logon User: Administrator				
RescueBoot: Un-enabled				
Mounted: No				
Task: None	And and a second			
0.0% 0.0			< Back	Ned > Cancel

9. Enter the [Access Key], [Secret Key] for AWS account and select [Region]. Click [Connect].



10. Select [Backup Destination] folder, [Source Computer] and [Recovery Point]. Click [Next]. You can also configure the settings for **[Target Disk Settings]**.

Activelmage Protector					- 🗆 X
Operation View Preferences	Utilities Help				
🔛 demo_svr04	*				
📮 Dashboard	In-Cloud Recovery				
📑 Backup 🔹 🗲	1 Connect	t 2 Targ	et	3 Source	4 Summary
🕎 Standby 🔉	Connected to: Remote App	liance in Amazon EC2, Asia Pacific	(Tokyo) ap-northeast-1 re Source Computers		ABGQKERN6ANNIRGNZ Recovery Points
Recovery >	< s3://aip-backup-s3/t	estEC2/backup/testEC2 🝷 🥠	💂 ec2amaz-2k5gfa1	@ (6/2/2022 1:11:03 PM
In-Cloud Recovery In-Cloud Standby Image Manage > Virtualization >	Network (In-Cloud M& Ature Amazon 53 D in p-backup-s2 d SFTP			0	5/6/2022 1:04:32 PM
Utilities >	100				
and the second s	Target Disk Settings				
Host Name: demo_svr04 Domain: WORKGROUP	Disk Disk	Mount Point	Capcacity	Storage Cla	\$\$
IP Address: 192.168.100.54	Disk 0	/dev/xvdg	30	GiB General Pu	urpose SSD(gp2) 🔹
Logon User: Administrator RescueBoot: Un-enabled Mounted: No					
Task: None					
0.0% 0)	*			< Back	Next > Cancel

11. Review the configured settings and click [Next]. The In-Cloud Recovery task is started.

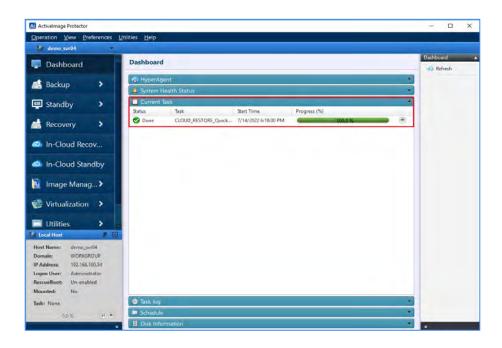
ActiveImage Protector				- 🗆 X
Operation View Preferences	<u>U</u> tilities <u>H</u> elp			
🔛 demo svr04	1			
📮 Dashboard	In-Cloud Recovery			
💒 Backup 🔹 🗲	1 Connect	2 Target	3 Source	4 Summary
🕎 Standby 🔉 🕨	Service: Access Key: Region:	Amazon AWS AKIA6GQKERN6ANNJRGNZ ap-northeast-1		
📥 Recovery 🔹 🗲	Source Image:	r2//sin.hachun.r2/hart5/2/hac	hun (tertEC2/e11/0b6r ee22 defe	-a166-b40e4c612c5a/E1140B6C-EE22-4D
In-Cloud Recovery	Source Image Size: Source Computer:	3.9 GB ec2amaz-2k5gfa1	AND DESCRIPTION OF AND	
In-Cloud Standby	Recovery Point: Selected Disks:	6/2/2022 4:11:00 AM Disk 0		
🚺 Image Manage >	Target Instance: VPC ID: Subnet:	i-0d6070896033d4d98 vpc-09d12dc89a8ef54c4 subnet-085b4e563093f3bac		
Virtualization >	Post P2V Options:	Deatch current disks		
Local Host 🕴	Estimated Data Transfer:	3.9 GB		
Host Name: demo_svr04 Domain: WORK6R0UP IP Address: 192,160.100.54 Logon User: Administrator RescueBoot: Un-enabled	Disk Restore Options:	Disk 0: 30 GB General Purpose SS	5D(gp2)	
Mounted: No	4			\$
Task: None 0.0 % 00/**	•		< Back	Done Cancel

Restore

ActiveImage Protector		- 0
2peration View Preferences 1	Itilities Help	
📕 demo svr04 🔹		A COLUMN THE OWNER
Dashboard	Dashboard	Dashboard Refresh
	HyperAgent	Selected Task
📑 Backup 🔹 🕨	System Health Status	Pause Task
		- Pause Task
🖉 Standby 🛛 🗲	Current Eask Status Task Start Time Progress (%)	Cancel Task
Recovery >	CLOUD_RESTORE_Quick 7/14/2022 6:18:00 PM 2.0 %	
Recovery		
In-Cloud Recovery		
In-cloud necovery		
A LO MAN AND A MANY MANY		
In-Cloud Standby		
	C Task log	_
	C Task log T	
Image Manage >	Scheqtule Scheqtule Ock Information Volume Name File System Volume Size Used Space Associated A	
 Image Manage > Virtualization > Utilities > 	Schedtule Schedtule Disk Information Volume Name File System Volume Size Used Space Associated A	
Image Manage > Virtualization > Utilities > Local Het	Schedule	
Image Manage > Virtualization > Utilities > Lecal Heat > ost Name: demo.sv74	Schedule Volume Name File System Volume Size Used Space Associated A Image: Schedule I	
Image Manage > Virtualization > Utilities > Local Host demo_svr4 bornain: WORKSROUP	Schedule	
Image Manage Virtualization Utilities Utilities Incol liost Geno_svi04 Domaine: demo_svi04 Domaine: VORSKPOLUP P Address: 192.166.100.54	■ Schedvie ● ■ Disk Information ● Volume Name File System Volume Size Used Space Associated ● ● □ Disk 0 □ □ □ □ □ □ □ ■ □ Disk 0 □ □ □ □ □ □ □ ■ □ Disk 1 □ □ □ □ □ □ ■ Basic	
Image Manage > Virtualization > Utilities > Local Host @ Kost Name: demo_svr04 Moreas demo_svr04 Paddress 122.168.100.54 ogon User: Administrate	Schedule Sched	
Image Manage > Virtualization > Utilities > Local Host & Most Name: demo_swn4 Jomain: WORK&ROUP P Address: 192.168.100.54 ogon User: Administrator RescueBoot: Un-enabled	Schedule Schedule Schedule Schedule Schedule Schedule Schedule Sch	
Image Manage Virtualization Virtualization Utilities Utilities Vorseshout Morealized Vorseshout PAddress 192.164.100.54 opon Use Administrate Kounted: No	Schedule Sched	
Image Manage > Virtualization > Utilities > Local Host & Most Name: demo_swi04 Domain: WORK&ROUP P Address: 192.168.100.54 ogon User: Administrator RescueBoot: Un-enabled	Schedule Sched	

12. The progress of the recovery process is displayed.

13. When the progress reaches 100%, process is compete.



14. In the AWS Management Console you can confirm the disk that was connected to the instance is detached and the restored disk is connected.

Vol	umes (1/3)								E	C	Action	S 💌 Create volume
Q	Search											< 1 > @
	Name	Volume ID	v	Туре	σ	Size	v	IOPS	v	7	s ⊽	Created
	testEC2_Disk_20220714181815	vol-07d1574804ad3	1333	gp2		30 GiB		100		-	-	2022/07/14 18:18 GMT+9
	testEC2	vol-06e7d3d2eaa1a6	122	gpZ		30 GiB		100		-	sn	2022/06/02 11:58 GMT+9
D	test_sakural2	vol-02f956f32e2792	d82	gp2		30 GIB		100		4	50	2022/05/28 17:15 GMT+9

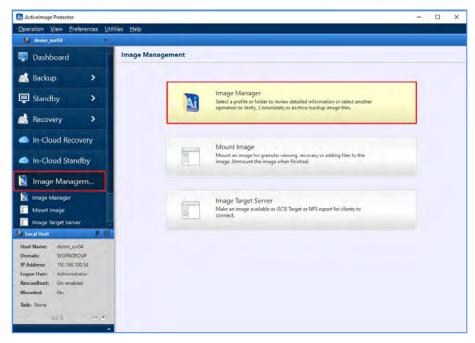
The created volume is connected as a root device of the instance.

mate	nces (1/2) info				C	Connect	. In	stance state 🔻	Actions 🔻	Laund	h Instances
Q :	และนำ										< 1 >
-	Name 🔻	Instan	ce ID	Instance stat		Instance type	σ	Status check	Alarm sta	tus i	Availability Zone
2	testEC2	i-0d60	70896033d4d98	@ Running	0,0	t2.micro		2/2 checks passed.	No alarms	+ 3	ap-northeast-1a
2	test_sakurai2	i-013d	e3b8b9e5250f8	⊖ Stopped	ଭ୍ୟ	t.Z.micro		-	No alarms	+ .	ap-northeast-1c
						8					2.4
Insta	nce: i-0d60708	96033d	4d98 (testEC2)								© >
	nce: i-0d60708		4d98 (testEC2)								0>
Roc			4d98 (testEC2)	Root device ty EBS	npe.			EBS optimize disabled	ation		0>
Roc	Root device details t device name		4d98 (testEC2)		npe				nion		•
Roc	Root device details t device name /dev/sda1		4d98 (testEC2)		pe				nion		•
* Roc	Root device details t device name /dev/sda1 Nock devices		4d98 (testEC2) Device name			Attachment sta	tus		ition	Encrypto	

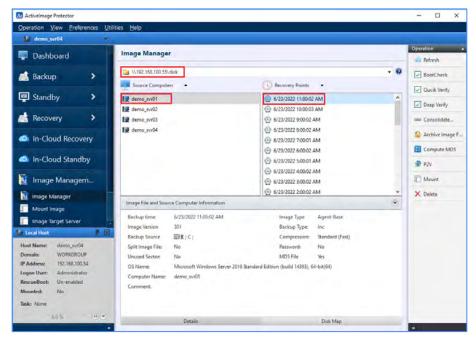
7. Image Management – Image Manager

These tools are provided to enable you to manage various operations relating to image files.

- 7-1. Image Manager
- 1. Go to [Image Management] in the left pane and [Image Manager].



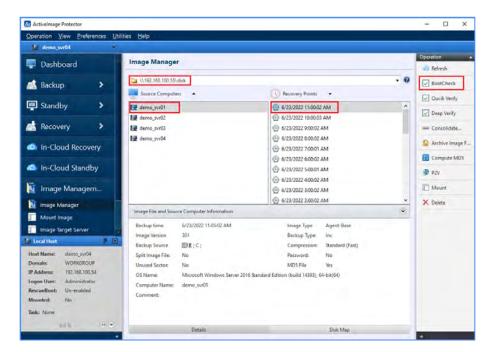
2. Please select a folder where backups are saved. Select [Source Computer] and [Recovery Point] for the backup to run an image management operation..



7-2. Check for bootability of backups (BootCheck)

BootCheck tests if the specified backup can successfully boot as virtual machines on a hypervisor.

1. Select [Source Computer] and [Recovery Point] and click [BootCheck] in the right pane.



2. In this example, "this computer" (local Hyper-V) is selected as the **[Working Agent:]** (hypervisor for running BootCheck). Click **[Start BootCheck]**.

BootCheck	X
BootCheck Computer:	
demo_svr01	•
🖳 Working Agent:	
This Computer	11
 Settings Try previous images if BootCheck failed. Time-out: 600 Seconds 	
Start BootCheck	

3. BootCheck is executed for the specified backup.

BootCheck Computer:	
demo_svr01	
Working Agent:	
This Computer	÷
Settings	
Try previous images if BootCheck failed.	
Time-out: 600 🔄 Seconds	
and the second sec	
BootCheck run	ning

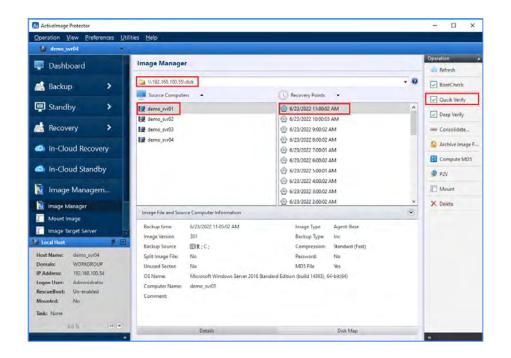
4. Upon completion of BootCheck process, the following window is displayed. BootCheck can be executed at anytime, for example, right before running a backup task.

ootCheck	
BootCheck Computer:	
demo_svr01	
Working Agent:	
This Computer	-
 Settings Try previous images if BootCheck failed. 	
Time-out: 600 🔮 Seconds	
Close	

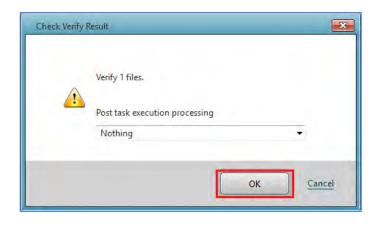
7-3. Quick Verify

Quick Verify ensures that the backup file has no been corrupted since the backup was created.

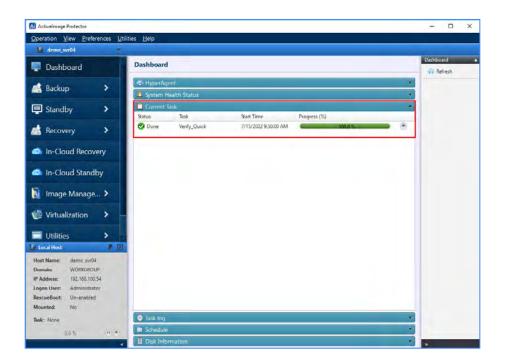
1. Select [Source Computer] and [Recovery Point] and click [Quick Verify] in the right pane.



2. Click **[OK]** and Quick Verify task starts running.



3. After the Verify completes the following window is displayed.



7-4. Consolidation

Reduce the number of files and save space using consolidation to consolidate your incremental backups.

1. Select [Source Computer] and [Recovery Point], hold down the SHIFT/CTRL key and click on the start and end point of the incremental backups you want to consolidate and then click [Consolidate...]. This example shows that recovery point "06/21/2022 12:00" is selected as the beginning and "06/22/2022 8:00" for the ending of incremental backups to consolidate.

	Itilities Help			
📓 demo_svr04 🔹 🗧				
📮 Dashboard	Image Manager			Operation Refresh
Backup >	a \\192.168.100.55\disk		• 0	BootCheck
	Source Computers	Necovery Points		Qucik Verify
Standby >	emo_svr01	6/22/2022 10:00:03 AM 6/22/2022 9:00:02 AM	^	Deep Verify
Recovery >	demo_svr02	6/22/2022 9:00:02 AM		- Consolidate
In-Cloud Recovery	😰 demo_svr04	6/22/2022 1:00:01 AM 6/22/2022 12:00:02 AM		😂 Archive Image F.
		G 6/21/2022 9:00:02 PM G G/21/2022 9:00:02 PM G		Compute MD5
In-Cloud Standby		(c) 6/21/2022 8:00:02 PM (c) 6/21/2022 7:00:02 PM		🗩 P2V.
🚺 Image Managem		6/21/2022 10:00:02 PM		Mount
📓 Image Manager			V	× Delete
Mount Image	Image File and Source Computer Information		۲	
Image Target Server	Backup time 6/21/2022 12:00:57 AM	Image Type Agent-Base		
Local Host	Image Version 301	Backup Type: Inc		
Host Name: demo_svr04	Backup Source ENT ; C ;	Compression: Standard (Fast)		
Domain: WORKSROUP	Split Image File: No	Password: No		
IP Address: 192.168.100.54	Unused Sector: No	MD5 File No		
Logon User: Administrator		Standard Edition (build 14393), 64-bit(64)		
RescueBoot: Un-enabled	Computer Name: demo_svr01 Comment:			
Mounted: No	Commenc			
Task: None				
0.0 S	Details	Disk Map		

2. Configure the Option settings. To preserve the original files, tick the checkbox for [Keep original image files].

Consolidation			
_Summary		. e.i.e.	
Consolidate 7 files	Total size:	920.0 MB	
Option			
📃 Keep original image files			
Compute MD5			
Execution Priority			- Fast
Post task execution processing			
Nothing			
	Done		<u>Cancel</u>

3. After the consolidation process completes, the following window is displayed.

Activelmage Protector							- 🗆 x
Operation View Prefe	rences Utilitie	es <u>H</u> elp					
📓 demo_svr04		💙 Success: [Co	onsolidate_Quick]. Process 1	lime [14 sec].			
📮 Dashboard	1	Dashboard					Dashboard Refresh
🛃 Backup	>	HyperAge				*	Selected Task
Standby	>	A System H	lask				De Pause Task
Recovery	>	Status	Task Consolidate_Quick	Start Time 7/15/2022 9:58:00 AM	Progress (%)		
In-Cloud Recov	rery						
In-Cloud Stand	by						
🚺 Image Manage							
Virtualization	>						
Utilities	5.						
Local Host Host Name: demo_svr0	* 🗉						
Domain: WORKSRO	UP						
P Address: 192.168.100 ogon User: Administrat							
RescueBoot: Un-enabled							
Mounted: No							
Task: None		Task log					
0.0 %	0.0	Schedule					
		E Disk Infor	mation			۰.	

7-5. Archive Backups

Reduce file clutter by combining same-generation base and incremental backups and save an archived backup to a specified location.

1. Select **[Source Computer]**, select the latest **[Recovery Point]** and click **[Archive Image]** in the right pane. The base backup and the associated incremental backups will be combined into one archived backup file.

Activelmage Protector				- 🗆 X
Operation View Preferences Ut	ilities Help			
🚺 demo_svr04 🔹 🔹				
Dashboard	Image Manager			Operation Refresh
🛋 Backup 🔹 🕨	Source Computers	Recovery Points +	. 0	BootCheck Qucik Verify
Image Managerr	i gemo_svrð1 12 demo_svrð2 12 demo_svrð3 12 demo_svrð4	6/23/2022 11:00:02 AM 6/23/2022 10:00:01 AM 6/23/2022 10:00:01 AM 6/23/2022 10:00:02 AM 6/23/2022 10:00:01 AM 6/23/2022 10:00:02 AM 6/23/2022 20:00:02 AM 6/23/2022 20:00:02 AM 6/23/2022 20:00:02 AM 6/23/2022 20:00:02 AM	×	Course Venify Consolidate Consolidate Consolidate Compute MD5 Compute MD5 P2V Mount X Delete
Mount Image Image Target Server Image Target Server Incal Hent Incal Hent	Image File and Source Computer Information Backup time: 6/23/202111.05:02 AM Image Version 301 Backup Source IDIII; C : Split Image File: No Unused Sector: No OS Name: Microsoft Windows Serve 2016 Computer Name: demo_stv01 Comment:	Image Type Agent-Base Backup Type Inc Compression: Xandard (Past) Passwordt No MDS File Yes Xandard Edition (build 14393), 64-bit(64)	(*)	
0.0 %	Details	Disk Map		

 A popup dialog showing the number of selected backups and the total output size of the archive will be displayed. Please specify a destination that has enough space to save the archive file. Click [Done] to start the archival process.

Archive	
Destination	
Folder : C:\work	
Summary	
Archive 28 files Total size: 13.1 GB	
Option	
Compute MD5	
Priority	
Light 💭	Fast
Post task execution processing	
Nothing	•
Done	Cancel

3. After archived backup has completed, the following window is displayed.

ActiveImage Protector							- 0 ×
Operation View Pret	ferences Utilities	s <u>H</u> elp					
📓 demo_svr04	* *	🔗 Success: [Ar	rchive_Quick]. Process Tin	ne [2 min 59 sec].			-
📮 Dashboard		Dashboard					Dashboard Refresh
Backup	>	😨 HyperAge	not			*	Selected Task
- ouckup		🌲 System H	ealth Status				Do Pause Task
Standby	>	📋 Current T			A		Cancel Task
Recovery	>	Status	Task Archive_Quick	Start Time 7/15/2022 10:03:00 AM	Progress (%) 100.0 %		
In-Cloud Reco	very						
In-Cloud Stand	dby						
Image Manag	e >						
Virtualization	> -						
Utilities	5						
Local Host	1						
Aomain: WORKSRO	DUP						
Nomain: WORKSRO P Address: 192.168.10	DUP 20.54						
Domain: WORKSR0 P Address: 192.168.10 ogon User: Administr	DUP X0.54 vetor						
Domain: WORKGRO P Address: 192.168.10 ogon User: Administr RescueBoot: Un-enable	DUP X0.54 vetor						
Domain: WORKGR P Address: 192.168.10 ogon User: Administr KescueBoot: Un-enable Mounted: No	DUP X0.54 vetor	Task log					
Domain: WORKGRO IP Address: 192-168.10 Logon User: Administr RescueBoot: Un-enable	DUP X0.54 vetor	Task log Schedule				*	

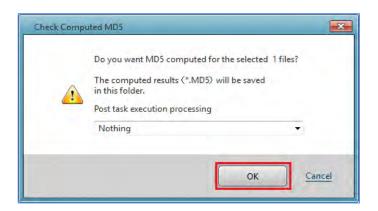
7-6. MD5 Checksum

Create a MD5 checksum for the selected backup. This can be used as a security measure to check if internal tampering of the backup has occurred.

1. Select [Source Computer] and [Recovery Point] and click [Compute MD5...] in the right pane. To select multiple files, hold down the SHIFT/CTRL key and click on the starting and ending backup points.

Activelmage Protector			- 0 >
Operation View Preferences Utilitie	s. Help		
demo_svr04	Image Manager		Operation
Pashboard	nnage manager		Refresh
A Backup	\\192.168.100.55\disk	•	8 SootCheck
	Source Computers	Recovery Points	Qucik Verify
🖷 Standby 🔹 🕨	emo_svr01	6/23/2022 10:00:03 AM (i) 6/23/2022 9:00:02 AM	Deep Verify
Recovery >	demo_svr03	0 6/23/2022 8:00:02 AM	we Consolidate
In-Cloud Recovery	🕎 demo_svr04	6/23/2022 7:00:01 AM	Archive Image
		G 6/23/2022 5:00:01 AM	Compute MD
In-Cloud Standby		G 6/23/2022 400:02 AM	P2V
📓 Image Managem		6/23/2022 300:02 AM 6/23/2022 2:00:02 AM	Mount
M Image Manager		G 6/23/2022 1:00:02 AM	× X Delete
Mount Image	Image File and Source Computer Informa	abon	9
Image Target Server	Backup time 6/23/2022 10:01:23	and an	
Local Host	Image Version 301	Backup Type: Inc	
Host Name: demo svr04	Backup Source	Compression: Standard (Fast)	
Domain: WORKSROUP	Split Image File: No Unused Sector: No	Password: No MD5 File No	
IP Address: 192.168.100.54	augustes setures	NU25 File No s Server 2016 Standard Edition (build 14393), 64-bit(64)	
Logon User: Administrator	Computer Name: demo_svr01	2 Server 2010 Standard Edition (dolid 14333), 04-Dit(04)	
RescueBoot: Un-enabled	Computer Name: demo_svru1		
Mounted: No Task: None	Commenc		
ao's e	Details	Disk Map	

2. Click [OK].



3. After MD5 Checksum process starts, the progress of the process is displayed in the [Dashboard].

Activelmage Protector							- 0 ×
Operation View Pr	references Ut	ilities Help					
🔛 demo_svr04	7	Success: [C	alcMd5_Quick]. Process Ti	me [2 sec].			_
Dashboard		Dashboard					Dashboard
		D HyperAg				*	Refresh Selected Task
📑 Backup	>		ent lealth Status			-	Pause Task
Standby	>	Current 1					Cancel Task
Standby		Status	Task	Start Time	Progress (%)		Cancel lask
Recovery	>	🕑 Done	CalcMd5_Quick	7/15/2022 10:09:00 AM	100,0 4		
In-Cloud Rec	overv						
In-Cloud Sta	ndby						
🚺 Image Mana	ge >						
👹 Virtualization							
Utilities	5						
Local Host	10						
Host Name: demo_s							
Domain: WORKS IP Address: 192.168							
Logon User: Admini							
RescueBoot: Un-ena	bled						
Mounted: No							
Task: None		😑 Task log					
0.0 %	ū. •	Schedule					
0.0 3		Dek Info	mation			*	

4. MD5 files will be saved in the same location as the image file. You can check the MD5 files from Windows explorer.

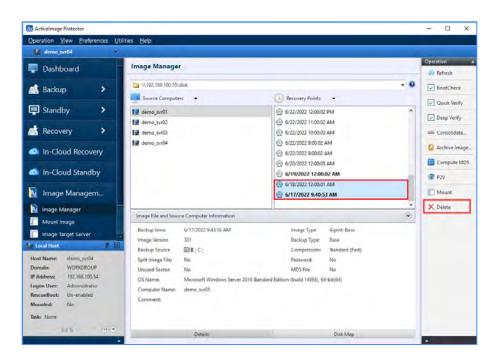
	nare Virw disk > d65245as-4974-443b-s154-35488s409004 ❤ ℃ 🖉 Search d68245as-4974-443b-s154-	394888405084		
	Neme	Date mindified	Iyp e	500
 Quick access 	D68245AA-4974-4438-A154-39488A4090D4_6430305F303030325F6930308033382D3030303338.aii	7/15/2022 10:10 AM	MD5 File	
OneDrive - 7774	2P1 A D68245AA-4974-443B-A154-39488A4090D4_6430305F30303030325F6930303031342D3030303032	7/15/2022 9:58 AM	All File	4
This PC	D68245AA-4974-4438-A154-39488A4090D4 6430305F303030325F6930303033382D303033388.aii - Notepad	- D X	All File	
3D Objects	File Edit Format View Help		All File	2
	8D32CBD948B0D95D7DF4A640C260C552		All File	
Desktop	003200094000095070F4A04002000552		All File	
Documents			All File	
Downloads			All File	
Music			All File	
E Pictures			All File	
Videos			All File	
Windows (C:)		-	All File	
ポリューム (D:)	Ln 1, Col 1 100% Windows (CRLF)	UTF-8	All File. All File	
AIPBE (E)	0 068245AA -4974 -4438 - A154 - 39488A4090004 _6430305F30303030325F6930303032372D 3030303237	6/22/2022 9-01 PM	All File	
ボリューム (F:)	D68245AA-4974-443B-A154-39468A4090D4 6430305F30303030325F6930303032362D3030303236	6/22/2022 8:01 PM	AllFile	
-	068245AA-4974-443B-A154-39488A4090D4_6430305F3030303235F6930303032352D3030303235	6/22/2022 7:01 PM	All File	
AIPBE (E:)	068245AA-4974-4438-A154-39488A4090D4_6430305F30303030325F6930303032342D3030303234	6/22/2022 6:01 PM	All File	
- //Ja-A (F:)	D60245AA-4974-443B-A154-39408A4090D4_6430305F30303030325F6930303032332D3030303233	6/22/2022 5:01 PM	All File	
	D68245AA-4974-4438-A154-39488A4090D4_6430305F30303030325F6930303032322D3030303232	6/22/2022 4:01 PM	All Ele	
Network	D68245AA-4974-443B-A154-39488A4090D4_6430305F303030325F6930303032312D3030303231	6/22/2022 3:01 PM	All File	
	D68245AA-4974-443B-A154-39488A4090D4_6430305F30303030325F693030303032302D3030303230	6/22/2022 2:01 PM	All File	

7-7. Delete Backup Files

Specified backup files can be deleted.

Note: Please keep in mind that this deletion operation is permanent and cannot be undone.

1. Select [Source Computer] and [Recovery Point] of a backups to delete. Click [Delete] in the right pane. To select multiple files, hold down the SHIFT/CTRL key and click on the starting and ending backup points.



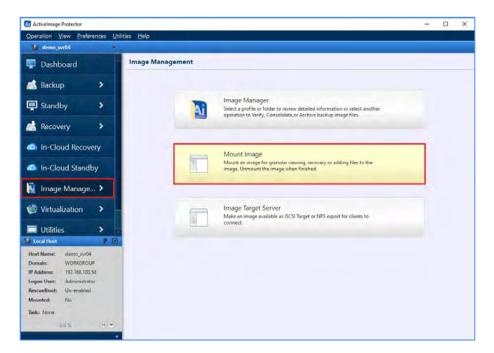
2. Click [OK] to deleted the selected backup files.



8. Image Manager: Mount Image

The Mount Image feature allows you to mount a backup on the OS file system and assign a drive letter. A mounted image can be browsed from Windows explorer and files and folders can be copied from ActiveImage Protector backups.

1. Select [Image Manager] in the left pane and [Mount Image].



2. Select **[Source Computer]** and **[Recovery Point]** of a backup. When the backup includes multiple disks, select a volume to mount. Specify the drive letter to assign to the volume and click **[Mount]**. The backup can be mounted as read-only by selecting the **[Mount as Read-only]** option.

ActiveImage Protector				- 🗆 ×
Operation View Preferences U	tilities <u>H</u> elp			
demo_svr04 *				
📮 Dashboard	Mount Image			
🖾 Backup 🔹 🗲	Backup Destination	Source Computers	Recovery Points	Select Volumes
😰 Standby 🔸	- 🖙 Local Disk (C:) 🔹	demo_svr02	2022/06/23 10:00:03 2022/06/23 9:00:02	
Accovery >	_S ¹ CD/DVD ROM (E) - ロ Local Disk (F:) - ロ ポリューム (G:)	🔙 demo_svr04	 2022/06/23 8:00:02 2022/06/23 7:00:01 	
In-Cloud Recov	- 😪 disk (\\192.168.100 Network - 4. 192.168.100.55		 2022/06/23 6:00:02 2022/06/23 5:00:01 	
In-Cloud Standby	a 🕍 disk		© 2022/06/23 4:00:02 v	
📓 Image Manage	Drive Letter: H •			Mount as Read-only.
image Manager	Mounted Volumes:			
Image Target Server				
🖬 Local Host 🕴 🖬				
Host Name: demo_svr04 Domain: WORKGROUP				
IP Address: 192.168.100.54				
Logon User: Administrator RescueBoot: Un-enabled				
Mounted: No				Chevrone and the Court
Task: None				
0.0% 0.0*			N	lownt Unmount

3. When mounted, you can browse the contents from Windows explorer as shown below, enabling you to open or copy a files.

🛋 / 🖂 📒 🕈 l	Drive Tools Local Disk (Hz)					-	o x
File Home Share	View Manage						- × (
$\leftarrow \uparrow = \rightarrow$ This PC	> Local Disk (H:)				~ O	Search Local Disk (Ht)	٩
	Name	Date modified	Type	Size			
A Quick access	Logs	9/12/2016 8:47 PM	File folder				
r 🛄 This PC	PerfLogs	6/18/2022 5:39 PM	Filefolder				
> Desktop	Program Files	6/6/2022 4:06 PM	File folder				
> 🔛 Documents	Program Files (x86)	7/16/2016 10:23 PM	File fulder				
> 👃 Downloads	1 tmp	5/27/2022 6:13 PM	File folder				
> h Music	Users	5/26/2022 4:12 PM	File folder				
> E Pictures	Windows	6/18/2022 5:41 PM	File folder				
> F Videos							
) 📥 Local Disk (C:)							
> ポリューム(D:)							
AIPBE (E:)							
🗧 🔜 Local Disk (H:)							
AIPBE (E:)							
→ ポリューム (D:)							
Network							
							-
7 items							UEB (E

4. When unmounting, select a mount point from the [Mounted Volumes] and click [Unmount].

🔝 Activelmage Protector				- 🗆 ×
Operation View Preferences U	tilities Help			
💆 demo_svr04 🔷 🗧	and the second second			
📮 Dashboard	Mount Image			
Backup >	Backup Destination	Source Computers 🔺	Recovery Points •	Select Volumes
- ouckup	< 🚞 \192.168.100.55\disk 👻 🌍	🔛 demo_svr01	() 6/23/2022 11:00:02 AM	Disk 0
🕎 Standby >	E 💽 Local 🔥	🔛 demo_svr02	6/23/2022 10:00:03 AM 6/23/2022 9:00:02 AM	() () () ()
📥 Recovery 🔹 🗲	Documents Local Disk (C:)	🛃 demo_svr04	6/23/2022 8:00:02 AM 6/23/2022 7:00:01 AM	· (c)
In-Cloud Recovery			6/23/2022 6:00:02 AM 6/23/2022 5:00:01 AM	
In-Cloud Standby	≅- 🛃 192.168.100.55 ≅- 🛅 disk		6/23/2022 4:00:02 AM	
📓 Image Managem	Drive Letter: F			Mount as Read-only.
image Manager	Mounted Volumes: 1			
Mount Image	H (\\192.168.100.55\disk\d	958245aa-4974-443b-a154-39488a409	0d4\D68245AA-4974-4438-A154-394884	44090D4_6430305F30303030325F69303i
Image Target Server				
🔝 Local Host 🕴 🖡				
Host Name: demo_svr04				
Domain: WORKSROUP				
IP Address: 192.168.100.54 Logon User: Administrator				
Logon User: Administrator RescueBoot: Un-enabled				
Mounted: Yes				Force unmount even if in use.
Task: None				
10% 0 C			14	Unmount

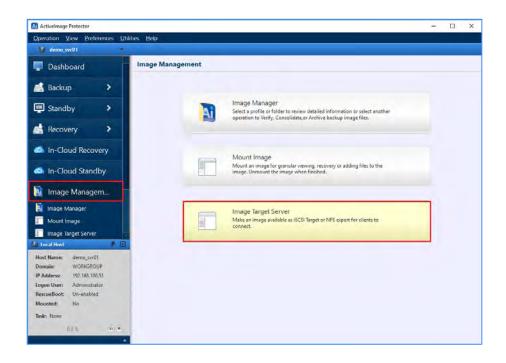
*The backup can also be mounted as writable. The changes made to the backup are saved in a differential backup (.aix) after the volume is unmounted.

9. Image Manager: Image Target Server

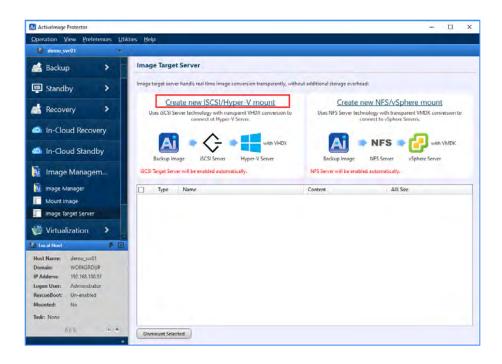
ActiveImage Protector backups can be configured as iSCSI or NFS target.

This example show how a backup can be configured as an iSCSI target. Connecting to this iSCSI target will enable you to mount the backup as a local disk on the iSCSI initiator OS.

1. Select [Image Management] in the left pane and [Image Target Server].



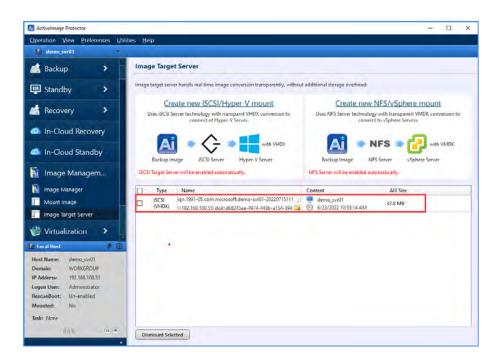
2. Depicted below is [Image Target Server] window. Select [Create new iSCSI/Hyper-V mount].



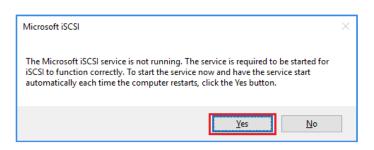
3. Select [Source Computers], [Recovery Points] and a disk. Click [Mount]. When multiple disks are included, select the disks you want to target under [Select Disks].

Desktop	demo_svr01 demo_svr02 demo_svr03 demo_svr04		Disk 0 50.0 GB(50.0 GB used)	
Alfbel (c) Network ■ ✓		 (a) 6/23/2022 5:00:01 AM (b) 6/23/2022 4:00:02 AM (c) 6/23/2022 3:00:02 AM (c) 6/23/2022 2:00:02 AM (c) 6/23/2022 1:00:02 AM (c) 6/23/2022 1:00:02 AM 	*	

4. The backup will be served as an iSCSI target that can be connected via remote iSCSI initiator.



- 5. On the machine you wish to mount the image, go to Windows Start menu [iSCSI Initiator].
- 6. When the [iSCSI Initiator] is launched for the first time, please select [Yes] in the following dialog.



7. The dialog displayed after iSCSI Initiator has started.

CSI Init					
	iator Proper	ties			
argets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
Ouick C	Connect				
		on to a target usin arget and then click	ig a basic connection, t Quick Connect.	ype the IP	address or
<u>T</u> arget	:			Qu	uick Connect
Discove	ered targets				
					<u>R</u> efresh
Name	:			Status	
	nect using a	dvanced options, se	elect a target and then		Co <u>n</u> nect
click Co To com	onnect.	nnect a target, sel	-		Connect Disconnect
click Co To com then d For tar	onnect. npletely disco lick Disconnec get propertie	nnect a target, sel	-		
click Co To com then cl For tar select For con	onnect. Inpletely disco lick Disconnect rget propertie the target ar nfiguration o	nnect a target, sel ct. es, including configu nd click Properties.	ect the target and		<u>D</u> isconnect
click Co To com then cl For tar select For con	onnect. Inpletely disco lick Disconnect rget propertie the target ar nfiguration o	nnect a target, sel ct. es, including configu nd click Properties. f devices associate	ect the target and uration of sessions,		Disconnect

8. Select [Discovery] tab and click [Discover Portal].

I Initiator Pro	nertier		
gets Discover	Y Favorite Targe	ts Volumes and Devices	RADIUS Configuration
arget portals -			
	l look for Targets or	following portals	R <u>e</u> fresh
Address	Port	Adapter	IP address
Hadi Coo	, or c	Hubber	i ddarebb
To add a targe	t portal, click Discov	ver Portal.	Discover Portal
-		the address above and	_
then click Remo			<u>R</u> emove
SNS servers			
SNS servers The system is r	egistered on the fo	llowing įSNS servers:	Refresh
	egistered on the fo	llowing įSNS servers:	Refresh
The system is r	egistered on the fo	llowing įSNS servers:	Refresh
The system is r	egistered on the fo	llowing įSNS servers:	Refresh
The system is r	egistered on the fo	llowing įSNS servers:	Refresh
The system is r Name	egistered on the fo		Refresh A <u>d</u> d Server
The system is r Name To add an iSNS To remove an i	server, click Add S		A <u>d</u> d Server
The system is r Name To add an iSNS	server, click Add S	erver.	
The system is r Name To add an iSNS To remove an i	server, click Add S	erver.	A <u>d</u> d Server
The system is r Name To add an iSNS To remove an i	server, click Add S	erver.	A <u>d</u> d Server
The system is r Name To add an iSNS To remove an i	server, click Add S	erver.	A <u>d</u> d Server
The system is r Name To add an iSNS To remove an i	server, click Add S	erver.	A <u>d</u> d Server
The system is r Name To add an iSNS To remove an i	server, click Add S	erver.	A <u>d</u> d Server

9. In this example, for the iSCSI server the IP address "192.168.100.51" is entered in the **[IP address or DNS name]** field. For the **[Port]** the default value "3260" is being used. Click **[OK]**.

Discover Target Portal						
Enter the IP address or DNS name and p want to add.	port number of the portal you					
To change the default settings of the dis the Advanced button.	covery of the target portal, click					
IP address or DNS name:	Port: (Default is 3260.)					
192.168.100.51	3260					
<u>A</u> dvanced	<u>Q</u> K <u>C</u> ancel					

10. Go back to [Target] tab. iSCSI target is indicated for [Discovered targets]. Click [Connect].

rgets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
Quick C	Connect				
		on to a target usir arget and then click	ng a basic connection, f Quick Connect.	type the IP	address or
<u>T</u> arget	:			Q	uick Connect
Discove	ered targets				
					<u>R</u> efresh
Name				Status	
ign. 19	991-05.com.	microsoft:demo-svr	01-2022071511135	Inactive	
click Co	onnect.		elect a target and then	· C	Connect
click Co To com	onnect.	onnect a target, sel	-		Connect Disconnect
click Co To com then cl For tar	onnect. npletely disco ick Disconne get properti	onnect a target, sel ct.	-		
dick Co To com then d For tar select f	onnect. Inpletely disco ick Disconne get properti the target ar nfiguration o	onnect a target, sel ct. es, including configi nd click Properties.	ect the target and		 Disconnect
dick Co To com then d For tar select f	onnect. Inpletely disco ick Disconne get properti the target ar nfiguration o	onnect a target, sel ct. es, including configi nd click Properties. f devices associate	ect the target and uration of sessions,		Disconnect

11. When establishing a connection to the target, [Add the connection to the list of Favorite Targets] is enabled by default. As the stated in description below, enabling this option will make the system automatically attempt to restore the connection every time this computer restarts]. Click **[OK]** to establish the connection.

Connect To Target	×
Target name: iqn.1991-05.com.microsoft:demo-svr01-20220715111352-target	
Add this connection to the list of Favorite Targets. This will make the system automatically attempt to restore the connection every time this computer restarts.	
□ <u>E</u> nable multi-path	
Advanced OK	Cancel

12. Please make sure that [Status] of the [Discovered targets] item has changed to [Connected] in [Target] tab.

.ər init	iator Prop											
		peru	=5									
argets	Discover	r y F	avorite	Targets	s Volu	imes and	Devices	RAD	IUS	Conf	figuratio	n
Quick C	Connect -											
	cover and ame of the							ype th	ne IP	addre	ess or	
DING TR			jetanu	ulen cic	K Quici	Connect						
Target	t:								Qu	iick Co	onnect	
Discove	ered targe	ets										
01300 11	crea tar <u>a</u> c									Ref	resh	
Name	-							Statu	_			
iqn. 19	991-05.co	m.mi	crosoft:	demo-s	/r01-20	02207151	.1135	Conn	ecter	d		
To con	nectusion	a adv	anced	ontions	select	a target a	and then					
	nnect using	g adv	anced	options,	select	a target a	and then			Con	nect	
	nnect using onnect.	g adv	anced o	options,	select	a target a	and then			Con	nect	
click Co											-	
click Co To con	onnect.	sconr	nect a t								nect	
click Co To con	onnect. npletely di	sconr	nect a t								-	
click Co To com then cl For tar	onnect. npletely di: lick Discon rget prope	sconr nect. erties	nect a t , includi	arget, si	elect th guratio	e target i	and			Disco	onnect	
click Co To com then cl For tar	onnect. npletely di lick Discon	sconr nect. erties	nect a t , includi	arget, si	elect th guratio	e target i	and			Disco	-	
dick Co To com then d For tar select	onnect. npletely di lick Discon rget prope the target	sconr nect. erties t and	nect a t , includi click Pri	arget, si ng confi operties	elect th guratio	ne target a	and ions,		Ē	Disco	onnect	
dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,		Ē	Disco Proper	nnect	
dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,		Ē	Disco Proper	onnect	
dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,			Disco Proper	nnect	
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dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,			Disco Proper	nnect	
dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,			Disco Proper	nnect	
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dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions,		Ē	Disco Proper	nnect	
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dick Co To com then d For tar select For co	onnect. npletely di lick Discon rget prope the target nfiguratior	sconr nect. erties, t and n of d	nect a t , includi click Pro levices	arget, si ng confi operties associat	elect th guratio	ne target a	and ions, :, select			<u>D</u> isco Proper De <u>v</u> io	rties	

13. Next, go to **[Control Panel] - [Computer Management]** and select **[Disk Management]** in the left menu. A new disk, in the case "Disk 1", is added and the status indicates "Offline".

Computer Management							_	×
Eile Action View Help								
	T							
			(_		
Computer Management (Local		Type File System		- 14 - A		Fr	Actions	
 System Tools Task Scheduler 	 Simple Simple 		Healthy (Recovery Pa Healthy (EFI System P		450 MB 99 MB	45 99	Disk Management	-
> 🐻 Event Viewer	Simple		Healthy (Recovery Pa		450 MB	45	More Actions	•
> 🐹 Shared Folders	💻 Simple	Basic	Healthy (EFI System F	artition)	99 MB	99		
> 🜆 Local Users and Groups		Basic NTFS		ile, Crash Dump, Primary Partition)	49.45 GB	32		
> 🔕 Performance	AIP Simple	Basic FAT32	Healthy (Primary Part	ition)	57.68 GB	57		
🛔 Device Manager								
 Storage Windows Server Backup 								
T Disk Management								
> Services and Applications								
	<					>		
	= Disk 0					^		
	Basic			(C;)				
	49.98 GB	450 MB	99 MB	49.45 GB NTFS				
	Online	Healthy (Recovery F	Par Healthy (EFI Sys	Healthy (Boot, Page File, Crash Du	mp, Prir			
			1					
	"O Disk 1							
	Basic 49.98 GB	150.140		10.15.00	- 1			
	Offline (1)	450 MB Healthy (Recovery F	99 MB Par Healthy (EFI Sys	49.45 GB	- 1			
					- 1			
			1	L.				
	Disk 2 Removable	AIPBE (E;)						
	57.69 GB	57.69 GB FAT32						
	Online	Healthy (Primary Pa Primary partition	artition)			~		
< >		 Finnary partition 						

14. Right-click on "Disk 1" and the following context menu is displayed. Select **[Online]** and "Disk 1" is recognized as local disk.

🔚 Computer Management						-	×
File Action View Help							
🗢 🔿 📶 🛛 🖬 🛩							
😹 Computer Management (Local Volume La	ayout Type	File System	Status		Capacity I	Actions	
	mple Basic mple Basic		Healthy (Recovery Pa Healthy (EFI System P		450 MB 4	Disk Management	
	mple Basic		Healthy (Recovery Pa		450 MB	More Actions	•
> 🐹 Shared Folders 🛛 📟 Si	mple Basic		Healthy (EFI System P		99 MB 🛛 🕴		
	mple Basic			ile, Crash Dump, Primary Partition)	49.45 GB 57.68 GB		
	mple Basic	FA152	Healthy (Primary Part	ation)	57.08 GB :		
🛃 Device Manager 🗸 📴 Storage							
> 🚯 Windows Server Backup							
📅 Disk Management							
>							
<					>		
					-		
- Disk 0				(
Basic 49.98 GB	450 M	p	99 MB	(C:) 49.45 GB NTFS			
Online		b ny (Recovery Pa		Healthy (Boot, Page File, Crash Dur	np, Pri		
*O Disk 1							
Basic					_		
49.98 GB Offline	Online		99 MB ar Healthy (EFI Sys	49.45 GB			
Chine U	Proper	ties	ar Healthy (EFI Sys				
	Help			1			
— Disk 2 Removable							
57.69 GB		GB FAT32					
< > Unallocat	ted 📕 Primar						
						,	

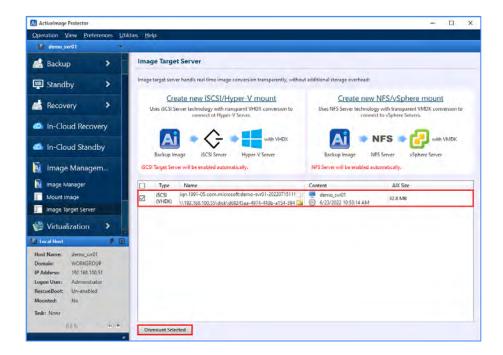
15. Because "Disk 1" is recognized as local disk, and a drive letter is assigned to the partition.

🚪 Computer Management						-	×
<u>File Action View H</u> elp							
🗢 🔿 🙇 🖬 🛛 🖬 🗩	2 🖾						
🜆 Computer Management (Local		Type File System			Capacity	Actions	
🗸 👔 System Tools		Basic	Healthy (Recovery P		450 MB 4	Disk Management	
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> 👔 Event viewer > 就 Shared Folders		Basic	Healthy (EFI System		430 IVID 99 MB		· ·
> A Local Users and Groups		Basic NTFS		File, Crash Dump, Primary Partition)			
> N Performance	📼 (F:) Simple	Basic NTFS	Healthy (Primary Par		49.45 GB		
Device Manager	AIP Simple	Basic FAT32	Healthy (Primary Par	rtition)	57.68 GB		
🗸 🚰 Storage							
> 🐌 Windows Server Backup							
📅 Disk Management							
> 🚡 Services and Applications							
	<				>		
	= Disk 0	-			1 ^		
	Basic			(C:)			
	49.98 GB	450 MB	99 MB	49.45 GB NTFS			
	Online	Healthy (Recovery F	Par Healthy (EFI Sys	Healthy (Boot, Page File, Crash Dur	mp, Pri		
	= Disk 1			1			
	Basic		_	(F:)			
	49.98 GB	450 MB	99 MB	49.45 GB NTFS			
	Online	Healthy (Recovery F	Par Healthy (EFI Sys	Healthy (Primary Partition)			
		1					
	= Disk 2						
	Removable	AIPBE (E:)					
	57.69 GB	57.69 GB FAT32			~		
< >		Primary partition					

16. You can browse the contents using Windows file explorer.

-12 - 1	Drive Tools Local Disk (F:)					-	a x
File Home Share	View Manage						~ (
< * * * - * This	PC > Local Disk (F:)				4 Ö	Search Local Disk (F:)	م
duick access	Name	Date modified	Type	* Size			
	Logs	9/12/2016 8:47 PM	File folder				
This PC	PerfLogs	6/18/2022 5:39 PM	File folder				
> Desktop	Program Files	6/6/2022 4:06 PM	File folder				
2 🔛 Documents	Program Files (x86)	7/16/2016 10:23 PM	File talder				
> 🕹 Downloads	tmp	5/27/2022 6:13 PM	File feilder				
> h Music	Users	5/26/2022 4:12 PM	Filefolder				
> E Pictures	Windows	6/10/2022 5:41 PM	Filefolder				
> 📑 Videos							
5 Local Disk (C:)							
> AIPBE (E:)							
> 👝 Local Disk (F:)							
AIPBE (E:)							
Metwork							
- HELMON							

17. When you are finished using the iSCSI disk, please disconnect the iSCSI initiator. Tick the checkbox for the iSCSI target and click [Dismount Selected]. If you get 'The session cannot be logged out since a device on that session is currently in use' message, go to [Disk Management], set the iSCSI disk to offline and try again.



10. Remote Management Console

Monitor the status of ActiveImage Protector agents installed on a networked remote host.

- 1. Go to Windows Start menu [Actiphy] \rightarrow [ActiveImage Protector].
- 2. Go to [Preference] \rightarrow [Console] and check in the checkbox for [Enable Network Client Management Console] and click [Apply]. Click [OK] and go back to Dashboard.

Preference		
 General Proxy Notification Deduplication Alert Console HyperBack HyperVisor Online Portal 	Console window settings:	
	OK Cancel	Apply

3. Click [Management Console] located in the upper left of the window. Before using the Remote Control feature, you need to add any clients you wish to control to the list of Managed Computers. Click [Add New Computer].

Activelmage Protector			- o x
Operation View Preferences Ut	lities Help		
S Management Console			
demo_svr01 (Local)	२ व		Dashboard
亚 Managed Computers Total: 0	Connect All		477 Refresh
Add New Computers	Clear all	Volume Size Used Space Associated 4500 MB 347,2 MB Disk 0 940 MB Disk 0 Disk 0 944 GB Disk 0 Disk 0	
Image Manage > Virtualization Utilities	📑 Basic 🧟 Dynamic disk 🖙 Volum Disk 0		_
La Local Host Host Name: demo_svr01 Domain: WORKGOUP IP Address Logon User: Administrator RescueBoot: Un-enabled Mounted: No Toda: Non		Lecal Dirk () 910 MB IFI	
	Primary		

4. You are presented with two options to add clients [Auto Search] and [Manual Setting]. In this example, [Auto Search] and [All] versions are selected. After the search has completed we tick the checkbox for the computer "DEM0_SVR03", which has ActiveImage Protector installed, and click [Add].

Add New Romote H	ost							
Computer Name o	r IP Address							
Admin Username		Password			Connecti	on Test		
Computer Name: D IP Address: 1 Operating System:	92.168.100.53		tion (build 14393)	64-bit	Add to List			
Installed Product: A	ctivelmage Prote Auto Search	ctor; Virtual; 6.5.0.	7616 tector Installed	All		All	•	
Computer -	ar printer and	IP Address	Operating Sy		Edition	Version	License	Expiration
DEMO_SVR03 demo_svr02	WORKGROUP	192.168.100.53 192.168.100.52	Windows Server Windows Server		Virtual Server	6.5.0.7616 6.5.0.7616		None
demo_svr02	WORKGROUP		Windows Server		Virtual	6.5.0.7616		None
tal Computers: 3								

5. The client is added to the list of Managed Computers. Select and double-click on any client from the list. A [User Authentication] dialog will be displayed.

Activelmage Protector				- 0
Operation View Preferences Utilitie	s Help			
S Management Console *	and the second se	-		
demo_svr01 (Local)	0 I x			Dashboard
Managed Computers Total: 1	Connect All		_	- Refresh
DEMO_SVR03	backed up 🗈 💉	skup Status	Last Run	Next
-			and (m)	
Add New Computers	Clear all			>
🚺 Image Manag 🔰 📃 🚍	Current Task			<u> </u>
	🕑 Task log			-
🕑 Virtualization 🦻 🔚 🚍	Schedule			
and the second	Disk Information	Volume Size Used Space Associate		-
Utilities 2	Volume Name File System	Volume Size Used Space Associate	a	
🛿 Local Host 👘 👔 🔲		450.0 MB 347.2 MB Disk 0 99.0 MB Disk 0		
Host Name: demo_svr01	Local Disk (C:) NTFS	49.4 GB 14.7 GB Disk 0		
Domain: WORKGROUP	🔄 Basic 😤 Dynamic disk 🖙 Volume	Dynamic volume		
IP Address: 192.168.100.51 Logon User: Administrator	Disk 0			
RescueBoot: Un-enabled	Basic (GPT) 50.0 GB B Useds 15:0 GP 450.0 MB NTES	Lotal Disk (C) 99.0 MB EFT 49.4 GB NTT S		
Mounted: No	4 Used : 15.0 GB 450.0 M8 NTES	99.0 MB EFI 49.4 GB NTI S		
Task: None				
0.0 %.				
and the second s	Primary			

6. Enter the credential information to access the client.

User Authentication		×
Administrator	*******	
	ОК	Cancel
	ų — m	

7. After a client is connected, you are able to preform remote operations on the client. Right clicking a client will display a menu, from that menu click on remote to remote control the console on the client.

Activelmage Protector			- 0 X
Operation View Preferences Utiliti	es Help		
😨 Management Console 🛛 👼			
🖳 demo_svr01 (Local)	9 I *		Dashboard
Managed Computers Total: 1	Connect All		* Netresh
DEMO_SVR03			
Add New Computers Add New Computers Add New Computers Add New Computers Advanced Adv	s Clear all	Volume Size Used Space Associated 450.0 MB 347.2 MB Disk 0 94.0 MB Disk 0 494.4 GB 16.4 GB Disk 0	
Virtualization Utilities Utilit	Basic S Dynamic disk w Volum Disk 0 Boac (GPT) \$0.0 GF \$0.0 GF \$0.0 GF \$0.0 MB strps	c Dynamic volume Level Dick (s) Sho MB FFT Level Dick (C) 454 do HFFS	
IP Address: 192.168.100.51 Logen User: Administrator RescueBoot: Un-enbited Mounted: No Issle: None			

8. When the remote console is successfully established, the status bar will turn green. After having connected one time, you only need a single click to reconnect in the future. Most operations such as running backup/recovery tasks, image management operations and monitoring log information can be done on remote clients. To disconnect from the remote client and return to the local client, double click on the local host name.

Activelmage Protector				- 0 ×
Operation View Preferences Help				
🛃 Masagement Console 🔷				
🖳 demo_svr01 (Local)	n □ *			Dashboard .
🛃 Managed Computers Total: 1	Connect All			- Refresh
👷 💂 DEMO_SVR03 💣 Not back	ed up 🕨 💉	-		
		tected! + task to protect your data. = h Backup Wizard	C RescueBoot @	
the second s	Clear all Disk Information	Volume Size Used Space	Associated	
Virtualization >	Nume File System Disk 0 NTFS Disk 0() NTFS Disk 1() EFI Disk 1 Disk 1() Disk 1 FAT	450.0 MB 347.2 MB 99.0 MB 29.4 GB 14.7 GB 30.0 GB	Associated Disk 0 Disk 0 Disk 0 Disk 1	
👬 Remote Host 🛛 🖈 🔳 🔜	Basic 🖄 Dynamic disk 🗀 Volum	e 🚥 Dynamic volume		
Logon User: SYSTEM RescueBoot: Un-enabled	Disk 0 Bosic (GP7) 30.0 GB Used: 15.1 GB Disk 1 Basic (MBR) 30.0 GB Used: 0.0 Bytes	Lacar Disk († 990 MB EP) 994 G	Detr (C) B ATTS	
	Primary			

11. Creates and maintains dormant virtual replicas

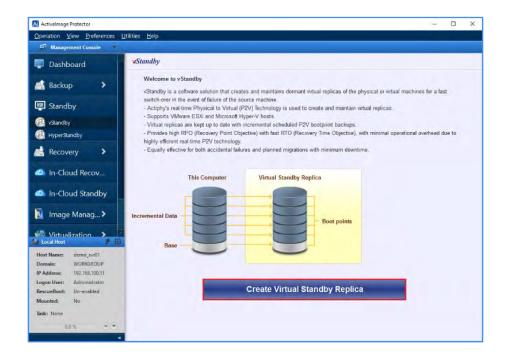
11-1.vStandby

vStandby is a software solution that creates and maintains dormant virtual replicas of physical or virtual machines to provide a switch-over option in the event of failure of the source machine. This virtual standby replica is kept current by taking scheduled incremental P2V boot points of the source machine. This ensures a successful startup of the standby virtual machine at the time of the switch-over. The following is an example of how to configure backup settings for vStandby.

1. Select [Standby] in the left menu and click [vStandby].

Activelmage Protector		- 🗆 ×
Operation View Preferences Utilities He	lp	
G Management Console *		
Dashboard Standb	У	
🛋 Backup 🔸	-	
👜 Standby 🔹	VStandby Create 9andby VM from Physical Machine.	
📩 Recovery 🔸		
In-Cloud Recov	HyperStandby	
In-Cloud Standby	Create Standby VM from Backup Image File.	
🧕 Image Manag >		
👹 Virtualization 🔰 🗕		
Utilities		
Host Name: demo_svr01 Domain: WORKGROUP		
IP Address: 192.168.100.51 Logon User: Administrator		
RescueBoot: Un-enabled Mounted: No		
Task: None		
0.0%		

2. The [Welcome to vStandby] window is displayed. Click [Create Virtual Standby Replica].



3. The **[Select Source Disk]** window is displayed. Select the checkbox of the source disk in the disk map or the list to create the standby virtual replica. Click **[Next]**.

Activelmage Protector	- ū ×
Operation View Preferences U	Itilities Help
🛒 Management Console 🛛 👻	
Dashboard	Create Virtual Standby Replica and Schedule Bootpoint Snapshots.
Backup > Image: Standby Image: Vstandby Image: HyperStandby > Image: Recovery > In-Cloud Recov In-Cloud Standby	Select Source Disk Image: Select Source Disk Select Source Disk
Mage Manag>	Disk Map List
Virtualization Tocal Host Tocal	년 Disk 0 Basic (GPT) 50 00 GB Used 15 32 C8 450 00 MB 영9 00 MB 43 45 GB
Logon User: Administrator RescueBoot: Un-enabled Mounted: No Task: None	
0.0 % 0.0	Cancel Next

4. Select ESXi or Hyper-V as a host destination to create the standby virtual replica on. This example shows that [Hyper-V] is selected and "192.168.100.60" is specified as the target Hyper-V Host. Click [Connect].

Active/mage Protector		- 🗆 X
Operation View Preferences Ut	ilities Help	
😨 Management Console 👻		
🕎 Dashboard	Create Virtual Standby Replica and Schedule Bootpoint Snapshots.	
🛋 Backup 🔹 🗲	Select Host Destination for Virtual Standby Replica	
👜 Standby	○ ESXi	Connect
🙆 vStandby	Host Information	
R HyperStandby		
📥 Recovery 🔹 🗲		
In-Cloud Recov		
In-Cloud Standby		
🛐 Image Manag>		
Virtualization > F		
Host Name: demo_svr01 Domain: WORKGROUP IP Address: 192.168.100.51 Legon User: Administrator RescueBoot: Un-enabled Mounted: No		
Task: None 0.0 % 0	Cancel	Prev

5. Please enter the credential information in the popup window to logon to the Hyper-V host. Here we have entered "Administrator" for the **[User Name:]** and a password for the **[Password]**.

Connect to Hyper-V Host	×
IP Address or Host nam 192.168.100.60	10:
Username: Administrator	Password:
Save Credentials	
	Cancel OK

6. The **[Host Information]** of the Hyper-V host is displayed as follows. Click **[Next]**.

Active/mage Protector		- 🗆 X
	Jtilities Help	
🛱 Management Console 👻		
Dashboard	Create Vittual Standby Replica and Schedule Bootpoint Snapshots	
💒 Backup 🔹	Select Host Destination for Virtual Standby Replica	
🕎 Standby	O ESXi @ Hyper-V Connect to: 192.168.100.60	Connect
(vStandby	E Host Information	
HyperStandby	- Host Name HYPER-V01	
🛃 Recovery 🔉	- Prost traine PTYPEX-V01 - Domain/Workgroup: WORKGROUP - Operating System: Microsoft Windows Server 2016 Standard	
In-Cloud Recov	- CPU: 8	
In-Cloud Standby	Memory 15.87 GB	
🚺 Image Manag >		
Virtualization		
Host Name: demo_svr01		
Domain: WORKGROUP IP Address: 192.168.100.51		
Logon User: Administrator		
RescueBoot: Un-enabled Mounted: No		
Task: None		
0,0 % U T	Can	cel Prev Next

7. Configure the hardware settings for the standby replica VM in the **[VM Settings]**. For **[Network Settings]**, select the values for **[Virtual Switch]** and **[IP Config]**. To use the same values as the source machine, select the **[Virtual Switch]** and for **[IP Config]** select **[Use source settings]**. Click **[Next]**.

A Activelmage Protector Operation View Preferences Ut	ilities Help					
🖉 Management Console 📼						
📮 Dashboard	Create Virtual Standby Replica and Schedule B	ootpaint \$	Snapshots			
🛋 Backup 🔹 🗲	Configure Virtual Standby Replica					
👜 Standby	VM Settings	_	Network Settings 🔂 –			
	VM Name:		Virtual Switch		IP Config	
VStandby	demo_svrD1		Virtual Switch 01		Use source settings	*
HyperStandby	VHD(X) Name:					
😭 Recovery 🔹 🕨	demo_svr01	_				
	Select Volume D: (Free Space 612.55 GB)					
In-Cloud Recov		-				
In-Cloud Standby	Select Folder: D:Wirtual	*				
🚺 Image Manag >	Disk Type: Dynamic O Foxed					
	CPU:(Max:8) RAM:(Max:16)					
Virtualization	2 4 GB					
Host Name: demo_svr01						
Domain: WORKGROUP						
IP Address: 192.168.100.51 Logon User: Administrator						
Logon User: Administrator RescueBoot: Un-enabled						
Mounted: No						
Task: None				-		_
0.0%			Cancel		Prev Neo	

8. Configure the weekly or monthly schedule for creating incremental boot points on the standby virtual replica. In the following example, vStandby is scheduled to executed daily from 9:00 to 21:00 in 60-minute intervals. Click **[Next]**.

Activelmage Protector			- 🗆 ×
Operation View Preferences Utilities	s Help		
😨 Management Console 📼			
📮 Dashboard	Create Virtual Standby Replica and Sched	ule Bootpoint Snapshots	
🛋 Backup 🔸 📑	7 Schedule		
Standby Vstandby	Schedule Type: Weekly OMonthly Monday Tuesday	Range: Repeat: Start Time: End Time: Interval:	
R HyperStandby	☑ Wednesday ☑ Thursday ☑ Friday ☑ Saturday	9 D0 /M 9 D0 PM 80 Min • Effective Dates/Time: Start. End.	
Recovery > In-Cloud Recov	By Event: Shutdown/Restart	7/15/2022 1 10 PM	ific
In-Cloud Standby			
Mintualization			
Local Host			
Host Name: demo_sw01 Domain: WORKGROUP IP Address: 192.168.100.51			
Logon User: Administrator RescueBoot: Un-enabled			
Mounted: No			
Task: None		Cancel Prev	Next

9. Configure Option settings. Specify the maximum number of boot points to create on the virtual standby replica (maximum of 30). When the number of the boot points reaches the predefined limit, the oldest 2 boot points will be merged. Click **[Next]**.

Active/mage Protector		- □ >
Deration View Preferences U	tintes Help	
Dashboard	Create Virtual Standby Replica and Schedule Bootpoint Snapshots.	
📫 Backup 🔹 🗲	V Options	
👜 Standby	Boot Point Creation	
VStandby	Always keep 30 boot points	
HyperStandby	Scripts	۲
Recovery >	Performance	(<u>*</u>)
In-Cloud Recov	Priority Throttling (VO performance)	
In-Cloud Standby	Network Bandwidth Limit:	
Minage Manag>	Notification	*
Virtualization	Send Email	
Host Names demo_svr01		
Paddress: 192.168.100.51		
ogon User: Administrator		
RescueBoot: Un-enabled Mounted: No		
ask: None		
0.0%	Cancel	Prev Next

10. Review your configuration the Summary window. Click [Finish] to proceed.

Active/mage Protector			п×
Operation View Preferences	Ublities Help		
🛱 Management Console 🍝			
Dashboard	Create Virtual Standby Replica and Schedule Bootpoint Snapshots.		
🛋 Backup 🔸	Summary		
👜 Standby	Source		۲
VStandby	Target		۲
Recovery	🔁 Virtual Standby Replica		۲
In-Cloud Recov	😁 Schedule		•
In-Cloud Standby			٢
Image Manag ≯			
Virtualization >			
Host Name: demo_svr01 Domain: WORKGROUP			
IP Address: 192.168.100.51 Logon User: Administrator RescueBoot: Un-enabled			
Mounted: No			
Task: None		-	
0.0% 0 •	Cance	bi Pres	Finish

11. The task will start and create the virtual standby replica on the host. When the virtual standby replica creation is complete, click **[OK]** to create the first boot point now, or later to have it run at the first scheduled run time.

Active/mage Protector				- 🗆 3
Operation View Preferences Utili	ities <u>H</u> elp			
😰 Management Console 🔹				
Dashboard	Greate Virtual Standb			
🛃 Backup 🔶 🔸	Summary			
n Standby	Source			۲
🔁 vStandby	Target			
HyperStandby	Section Section			
Recovery >	Virtual Standby Rep	Contraction of the second seco		۲
A Necovery	# Schedule	Preparing Virtual Standby Replica_	×	(\$)
In-Cloud Recov	La schedole	Creating Shared Folder	Complete	·
	V Options	✓ Creating VM.	Complete	
In-Cloud Standby		Creating Disk.	Complete	
		Adding NIC	Complete	
Mage Manag>		Create Profile	Complete Complete	
Virtualization		Create First boot point now?	Later OK	
Host Name: demo_svr01		-		
Domain: WORKGROUP				
P Address: 192.168.100.51				
logon User: Administrator RescueBoot: Un-enabled				
Nounted: No				
lask: None				
0.0% 0. *			Cancel Pres	Emish
0.0 %			Garicel Free	emisn

12. When the task schedule is configuration is complete the console defaults to Dashboard view indicating the progress of tasks.

Active/mage Protector					- 1	x D
	ities Help					
😰 Management Console 🗢						
🕎 Dashboard	Dashboard					
🛋 Backup 🔸	Previous status: None		USR demo_svri	indby Replica:)1 Point Taken:		
👜 Standby	1000		None None	Point laken)		
📿 vStandby	Progress					
R HyperStandby	2 7/15/2022 1.12:55 PM	Converting volume 3 to virtual	image.	7.2%		×
a Recovery	 Schedule 					-
 In-Cloud Recov In-Cloud Standby 	Schedule Type: Start-End Time: Effective Dates:		Weekly Mon - Fn, Sat, Su 9:00 AM - 9:00 PN 7/15/2022 - N/A			
Image Manag>	Interval: By Event: Next Scheduled Task Disable Schedule Edit Schedule	Delete Schedule Run Now	60 minutes N/A 7/15/2022 2:00 PN			
tocal Host	History		O Date:		O Last 15	days
Host Name: demo_svr01	i Date Eve	ant 🦪 Detail	_			
Domain: WORKGROUP IP Addresse 192.168.100.51 Logon User: Administrator RescueBoo: Un-enabled Mounted: No Task: create_vsr	7/15/2022 1:12:56 PM vSt VSt	andby P2V Run profi	le: create_vsr task id: 100	1		
6.9% II •				P	'age: 1/1 🚺 🕴	R FE

13. The Dashboard shows regularly scheduled incremental boot points task results. These boot points can be used to boot the VM should a switchover to the standby virtual machine become necessary.

Activelmage Protector				- 🗆 X
Operation View Preferences Ut	ilities <u>H</u> elp			
📓 demo_svr01 🔹				
Dashboard	Dashboard			
🚵 Backup 🔹 🗲	Previous status 2022/07/21 16:07:50	6 Success	Virtual Standby Replica demo_swr01 Last Boot Point Taken:	
🕎 Standby			2022/07/21 16:07:56	
vstandby	Progress			
HyperStandby	✓ 2022/07/21 16:07:58	Operation completed successfully	100.0%	×
Recovery >	 Schedule 			+
In-Cloud Recov	Schedule Type: Start-End Time:		Weekdy Mon - Fri, Sat, Sun 9:00 - 21:00	
In-Cloud Standby	Effective Dates: Interval:		2022/07/21 - N/A 60 minutes N/A	
Image Manag>	By Event: Next Scheduled Task Disable Schedule Edit Sche	dule Delete Schedule Run Now	2022/07/21 17:00	
💕 Virtualization 🗲 🗖	History		Date:	Last 15 days
🔛 Local Host 🔹 🖡 🖸	i Date	Event Detail		and the second
Host Name: demo j.vv01 Domain: W00K0R0UP IPAddress 192.166100.31 Logon User: Administrator RescueBoot: Un-enabled Mounted: No	 2022/07/21 16:15:45 2022/07/21 16:07:58 		5 83 GB in 00:07:47 ID=1658387277; No Erro reate_vsr task id: 1001	rs; Operation complete
Task: None			Pi	age: 1/1 14 4 P PL

14. You can monitor the virtual standby replica / standby VM from Hyper-V Manager. In this example, the incremental disk changes of the source machine are taken on a 60-minute interval and added as checkpoints to the virtual standby machine.

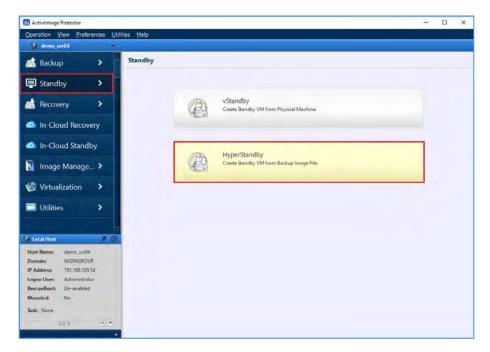
Hyper-V Manager	Virtual Machines	Actions	
HVPER-VOT	Virtual Machines Name State CPU Usage Assigned Mem demo_sw01 Off Checkpoints Root,Not,Boot V30220715_18130 V35ard02 V35ard02 V35ard02 Now V35ard02 Now	HVPER-V01 New Import Virtual Machine Hyper-V Settings Virtual Switch Manager Virtual SAN Manager Little Disk Stop Service Remove Server Disker View Little Help	• •
	demo_svr01 Created: 7/15/2022 112 10 PM Clustered: I Configuration Version: 8:0 Generation: 2 Notes: MscAddress=00-0C-29-11 -EC-9A Summary Mamory Networking Replication C	Start Checkpoint Revert Move Export	•

11-2.HyperStandby

HyperStandby creates and maintains dormant virtual replicas of physical or virtual machines from ActiveImage Protector backups on a predefined schedule. HyperStandby can be used as a switch-over solution in the event of a failure of the source machine.

Below is an explanation of the operating procedures to use HyperStandby.

1. Select [Standby] in the left menu and select [HyperStandby].



2. Click [Add Image] in the list dialog and check a box to select a backup.

Activelmage Protector						- 🗆 x
	ilities Help					
demo_svr04	_					
💒 Backup 🔹	Folder	Image File	Source Computer	2 Standby	Status	0
🕎 Standby						
(vstandby						
🖓 HyperStandby						
📩 Recovery >	Add Image					
In-Cloud Recovery	Create Task					
In-Cloud Standby	Current Task	👔 Task Log				
 Image Manage > Virtualization > - 	Total Size Processed size Remaining Size Total Data Processed Total Time Used	Estimated Time Duration Time Remaining Time		•	Task Summary: Task ID Image File Latest backup Started Ended	
Local Host T Host Name: demo_svr04	and the second				chico -	
Domain: WORKGROUP IP Address: 192.168.100.54	● Last 30 🔄 days	O From 6/15/2022 to 7/	15/2022			
Logon User: Administrator RescueBoot: Un-enabled Mounted: No Task: None	🕈 Date	Event	Detail			
0.0%					Page	1/1 14 4 1 11

3. Specify a folder that contains backup image files. This example shows entering a path to a shared folder "<u>\192.168.100.55\disk</u>". Click **[OK]**.

19 Computer	1
Contraction Desktop	
Documents	
🖻 🏭 (C:)	
▷ 📖 (D:)	
▷ 📖 (E:)	
🙀 Network	
der: \\192.168.100.55\disk	
Lancester	
ОК	Cancel

4. Enter credential information to the shared folder. Click [OK].

RFE for Folder	×
192.168.100.55\Administrat Connect Cancel	
i.e. hostname\username or domain\username	
Please enter username and password!	
 Image: Computer 	
🦲 Desktop	-11
Documents	
> 🚨 (C:)	
▷ 💼 (D:)	- 11
) 🚔 (F-)	
Folder: \\192.168.100.55\disk	
OK Cance	al

5. Select the source computer and recovery point of the base (full) backup. Click [OK].

Select Image File		×
Source Computers	Base Recovery Points	
j🖳 demo_svr03	2022/06/19 0:00:02	
) demo_svr01	2022/06/17 9:40:53	
j∰ demo_svr02		
👰 demo_svr04		
	Cancel	OK
	concer	OIL

6. The backup is added to the image list.

ActiveImage Protector Operation View Preferences	Utilities Help				
🕼 demo_svr04 🔹					
🚽 Dashboard	Folder	Image File	Source Computer	2 Standby	Status
🛃 Backup 🔹 🗲	\\192.168.100.55\disk\d68245a	D68245AA-4974-4438-A154-394	🚑 demo_svr01		
🛒 Standby					
HyperStandby					
Recovery	Add Image				
In-Cloud Recov	🐈 Create Task				
In-Cloud Standby	🕐 Current Task 🔤 👔 Task I	.og		Task Summary:	
Image Manag>	Total Size Processed size Remaining Size	Estimated Time Duration Time Remaining Time	Ĭ	Task ID Image File Latest backup	
Virtualization >	Total Data Processed Total Time Used			Started Ended	
Local Host 🕴 🗖					
Host Name: demo_svr04 Domain: WORKGROUP	●Last 30 🔄 days ○From	2022/06/15 to 2022/07/15			
IP Address: 192.168.100.54 Logon User: Administrator	Date	Event Detail			
RescueBoot: Un-enabled Mounted: No					
Task: None					
m# 0(0)				0	1/1 14 4 5 51

7. Right-click on the added image file, in the dropdown menu click [Create Task].

Activelmage Protector		- 🗆 X
Operation View Preferences Ut	ilities <u>H</u> elp	
📓 demo_svr04 🗧 🗧		
📮 Dashboard	Folder Image File	Source Computer 🖉 Standby Status
🛋 Backup 🔸	🔒 \\192.168.100.55\disk\d68245a 🕅 D68245AA-4974-4438-A154-394	E7 demo_svr01
🗐 Standby	Cancel Task Change Credential	
🚱 HyperStandby	Vittualize Disk	
Recovery >	Add Image	
In-Cloud Recov	🐈 Create Task	
In-Cloud Standby	Current Task	Task Summary:
📓 Image Manag >	Total Size Estimated Time Processed size Duration Time	Task ID Image File
💕 Virtualization 🗲	Remaining Size Remaining Time Total Data Processed Total Time Used	Latest backup Started Ended
Local Host 2		
Host Name: demo_svr04 Domain: WORKGROUP		
IP Address: 192.168.100.54		
Logon User: Administrator RescueBoot: Un-enabled Mounted: No	Date Event Detail	
Task: None		
		Page: 1/1 14 4 3 31

8. The [Create Profile] window displays the information of the source backup. Please review the information of the backup and click [Next].

Source Targ	get Standby Settings Schedule Option Summary
	.168.100.55\disk\7bab6c18-b299-499b-a893-5adb32f7c Browse
Profile Name: demo	_svr01220721184447
🔊 lmage Info 📄 🛯	Disk Map 📄 Disk List
Folder name:	//192.168.100.55/disk/7bab6c18-b299-499b-a893-5adb32f7dc2b
Base image:	7BAB6C18-B299-499B-A893-5ADB32F7DC2B_6430305F30303030315F693030
Image version:	6.5.0.7616 (301)
Source computer:	demo_svr01
Operating system:	Microsoft Windows Server 2016 Standard Edition (build 14393), 64-bit
CPU:	2
Memory:	4.00 GB

 Select the type of the hypervisor. You can select Microsoft Hyper-V or VMware vSphere (ESXi) as a target. The example screen below shows that "Microsoft Hyper-V" is selected for [Hypervisor Type], and the IP address "192.168.100.60" is specified for [Host Name or IP address]. In this case "Administrator" is entered for [User Name] and a password for [Password]. Click [Connect].

<u></u>	-0				
Source	Target	Standby Settings	Schedule	Option	Summar
🌶 Select Target	t				
Hyper-V OESX	(i O Stor	age Server			
Hyper-V Host					
192.168.100.60				Connect	
Administrator				Save Credenti	als
Administrator i.e.hostname\usernan	me or doma			Save Credenti	als
i.e.hostname\usernan				Save Credenti	als
Administrator i.e.hostname\usernam Please enter usernam () Host Information	e!			Save Credenti	als
i.e.hostname\usernan Please enter usernam	e!			Save Credenti	als
i.e.hostname\usernan Please enter usernam () Host Information	ie! 1			Save Credenti	als
i.e.hostname\usernan Please enter usernam (1) Host Information Host Name:	ie! 1			⊠Save Credenti	als
i.e.hostname\usernan Please enter usernam (i) Host Information Host Name: Domain/Workgroup	ie! 1			⊠Save Credenti	als
i.e.hostname\usernam Please enter usernam i Host Information Host Name: Domain/Workgroup Operating System:	ie! 1			⊠Save Credenti	als

10. Please review the host information and click [Next].

Source Tar	get Standby Settings Schedule	Option	Summar
🐓 Select Target			
Hyper-V O ESXi	◯ Storage Server		
Hyper-V Host			
192.168.100.60		Connect	
 Host Information 			
Host Name:	HYPER-V01		
Domain/Workgroup:	WORKGROUP		
Operating System:	Microsoft Windows Server 2016 Standard		
CPU:	8		
	15.87GB		
Memory:			
Memory:			

11. On the [Configure Standby Virtual Machine] window please configure the settings for the standby replica VM. The example below shows that the folder "Virtual" in "D drive" is selected as the destination for the virtual machine, the [CPU] is set to 2 with "4GB" for [RAM], these are same values as backup source. In [System Settings] the backup source and firmware are automatically selected to be the same as the source. Please note, when selecting firmware that differs from the backup source, the virtual machine may fail to boot. For [Virtual Switch:] and [IP Address:] the same values as the source have been selected. After configuring the settings, click [Next].

Create Profile	
<u> </u>	- O O
Source Target Stand	Iby Settings Schedule Option Summary
🙀 Configure Standby Vir	
😽 VM Setting:	System Settings:
VM Name	Operating System Firmware
demo_svr01220721185034	Windows Server 2016 (64 bit) 🔻 UEFI 💌
VHD(X) Name	Network Settings:
demo_svr01220721185034	Virtual Switch IP Config
Select Volume	Virtual Switch 01 Virtual Switch 01
D: (free space 567.36GB)	
Select Folder	
D:\Virtual	•
Disk type	
Dynamic Fixed	
CPU (max:8) RAM (max:	15)
2 🖨 4 🖨 GB	Add NIC
	Cancel Back Next

12. Configure a weekly or monthly schedule for creating boot points on the standby virtual replica. This example shows that **[Immediate]** is selected. When backups are created, boot points are added. Click **[Next]**.

Create Profile	
0-0-0	
Source Target Standby Settings Schedule Option Sum	imary
_	
7 Schedule	
Immediate	
○ After each 2 🗼 new incremental file	
O At 21:00 -	
Schedule Type: Weekly Monthly	
🗹 Sun 🗹 Mon 🗹 Tue 🖉 Wed 🗹 Thu 🗹 Fri 🗹 Sat	
Cancel Back	Next

13. Configure the options settings. Specify the maximum limit for the number of boot points to create virtual standby replicas (up to 30). When the specified number of the boot points reaches the predefined limit, the oldest boot points are merged. Enabling **[Only create most recent incremental image boot point]** option will create a boot point for the most recent image file each time the task runs.

eate Profile	•					
Q					-0	
Sour	ce	Target	Standby Settings	Schedule	Option	Summary
Ľ,	Boot Po	oint Creat	iion			
			nt incremental image l			
	Always keep	p 30 🖨 boo	t points per each imag	e set		
	Option					
	🖂 🗌 Seno	ding Email	Task Success	and Failure 🔻		
	A Perform	nance				
	Executio	on Priority		I/O Performance		
	Lowest	Low	Medium High	Light		Fast
				Use network th	hrottling	
				Bandwidth Limit	200 🚔 KB/Sec.	
				Cancel	Back	Next

14. When option settings are configured, click **[Finish]**. The following **[Summary]** dialog is displayed.

te Profile					
0-			-0	-0-	-0
Source	Target	Standby Settings	Schedule	Option	Summary
🚊 Sum	imary				
A S	ource				
X	arget				
S S	tandby Settings				
7 S	chedule				
首 0	Option				
			Cancel	Back	Fini

15. Click **[OK]** and virtual standby machine and profile will be created.

Confirm		
	to create Standby VM on ta	rget host. Do you
want to continue?		

16. When virtual standby machine and profile creation process completes, the following dialog is displayed. Click the **[Close]** button and the **[Dashboard]** window will be displayed.

Create Profile					×	
						
Source	Target	Standby Settings	Schedule	Option	Summary	
Prep	oaring Standl	by VM				
· · · · · · · · · · · · · · · · · · ·	Creating VM.			Complete		
	Creating disk.			Complete		
	Creating nic.			Complete		
· · · ·	Creating Profile.			Complete		
· · · ·	Creating Schedu	lle.		Complete		
· · · ·	The profile creat	ed successfully!				
					_	
		Clo	se			
			Cancel	Back	Finish	

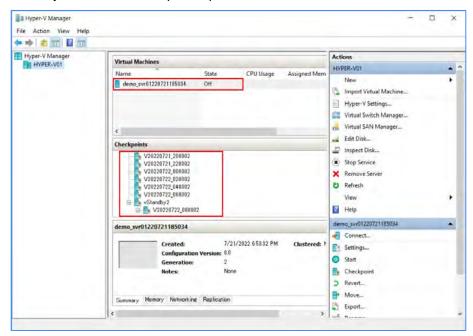
17. The dashboard view indicates the status of the running tasks.

Operation View Preferences	Utilities Help					
🙀 Management Console 🔹						
Dashboard	Folder	Image File	Source Compute	r 🙆 Standby	Status	Ì
🛋 Backup 🔹 🗲	🕌 \\192.168.100.55\disk\	18AB6C18-B299-499	😝 demo_svr01	ademo_svr0122	7.0%	
👰 Standby						
Vstandby						
HyperStandby	Add Image					
📩 Recovery 🔉 🗲	🜵 Create Task					
🗆 In-Cloud Recov	Current Task	Task Log 🛃 Source	A HyperStandby	Profile		
In-Cloud Standby	Computer name: demo_sv Operating system: Microsol 14393), 6 CPU: 2	ft Windows Server 2016 Stand	ard Edition (build Basi	e image: 78A8 ige version: 6.5.0	2.168.100.55\disk\7bab6c1 36C18-8299-4998-A893-5 .7616 (301) imon , Fast	
🧕 Image Manag >	Memory: 4.00 GB	1.00 GB(Used 15.11 GB) GPT	Sep	arated image: No mment:	mon, rast	
Virtualization >						
Host Name: demo_svr01 Domain: WORNSROUP IP Address: 192.168.100.51	⊛Last 30 🔤 days () From 2022/06/21 to 20	22/07/21			
Logon User: Administrator RescueBoot: Un-enabled Mounted: No	• Date	Event	Detail			
Task: demo_svr01220721185034						
62%						1/1 14 4 2 21

18. Upon completion of a task, the information window is displayed in the dashboard.

Operation View Preferences	Utilities Help					
💀 Management Console 🔹 💌						
Dashboard	Folder	Image File	Source Computer	권 Standby	Status	Û
🖆 Backup 🔹 🕨	🕌 \\192.168.100.55\disk\?	A 78A86C18-8299-499	🐬 demo_svr01	🥫 demo_svr0122	✓ 2022/07/22 8:01:42	
🖳 Standby						
vStandby						
HyperStandby	Add Image					
Recovery	Add Image					
In-Cloud Recov	🗘 Current Task 👔 1	Task Log				
In-Cloud Standby Image Manag>	Total Size Processed size Remaining Size Total Data Processed Total Time Used	Estimated Time Duration Time Remaining Time		0	Task Summary: Task ID Image File Latest backup Started Ended	
Host Name: demo_svr01 Domain: WORKGROUP P Address: 192.168.100.51 Logon User: Administrator		From 2022/06/22 to 2022	/07/22			
RescueBoot: Un-enabled Mounted: No	Date	Event	Detail			
Task: None	 ✓ 2022/07/22 8:01:43 ④ 2022/07/22 8:00:49 	HyperStandby Comple HyperStandby	ete Processed 0.05 GB in	00:00:53 ID= 165844444 v01220721185034 task id	t: No Errors; Operation comp 4: 1020	pleted succ

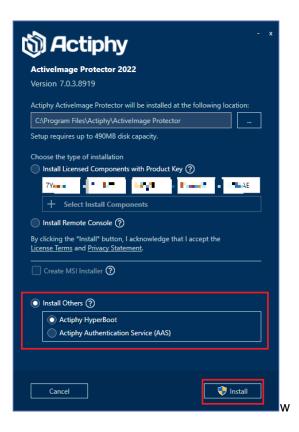
19. You can also monitor virtual standby machines from Hyper-V Manager. Checkpoints are added for the virtual standby machine as backups complete.



11-3.HyperBoot

HyperBoot is a free standalone add-on that can boot any ActiveImage Protector backup image as a virtual machine in minutes, bypassing lengthy physical to virtual conversion and recovery process. You can install HyperBoot from the ActiveImage Protector installer in the product media. The following is a description about the operating procedures of HyperBoot.

1. Run "Setup.exe" directly from the product media and start the installer. Select [Install Others] \rightarrow [Actiphy Hyperboot] \rightarrow [Execute].



2. When setting up HyperBoot, there are no additional options to set. Click [Install] to start the installation process.



3. When the following window is displayed, installation process completed. Click [Done] to end the setup wizard.



- 4. Start HyperBoot. Go to Windows Start menu and select [Actiphy] → [HyperBoot].
- 5. Click [Add Hypervisor] to add a hypervisor to boot virtual machine.

🖉 HyperBoot				- 0 3
🔁 HyperBoo	ot	Add hypervelor	Settings	(?) Help
Destinations	() Clients & Recovery Points	Hypervisors		_
Insuit due brailion path	2 Select storage destination to see clients and	d recovery points.		
 ▲ Local Storage ▲ D: ▲ 2012-0, (6) ▲ 2012-0, (6) ▲ 2012-0, (6) 				

6. This example shows that "Hyper-V" is selected for [Add Target:], IP address of Hyper-V host "192.168.100.60" for [Host Name or IP address:], "Administrator" for [User Name:] and Password. Click [Add].

Microsoft Hyper-V	
192.168.100.60	
Administrator	
Damain	

7. After adding a hypervisor click **[OK]**. The software we return to the default console.

HYPER-V01 192,158,100,60 Windows Server 201	2	Host Name	IP Address	Version
	£.	HYPER-VOT	192,168,100,60	Windows Server 2016

8. In the console you can confirm that Hyper-V has been added to [Hypervisors].

HyperBoot					- D X
🔮 HyperBo	oot		Add hypervelor	Settings	2 Help
Destinations		Clients & Recovery Points	Hypervisors		
(Insuit destination path:	C	Select storage destination to see clients and recovery points.	🗸 🧧 Microsoft Hyper-V (192.168.100.64	Windows Server 2016	
 ▲ QC Local Storage ▲ DC ▲ D, T(y, x, y, x) ★ D, T(y, x, y, x) ★ D, ADSE (C) 			Drag and drop a client	ta configure HyperBoot	

9. Select the recovery point of ActiveImage Protector backup from **[Destinations]**. This example shows that "\\192.168.100.55\disk" is entered for the shared folder destination point containing image files. Press the Enter key.

🔀 HyperBoot				0
🔁 HyperBoo	ot	Add hypervelor	Settings	? 100
Destinations	() Clients & Recovery Points	Hypervisors		
192-188-100-55/dtsk	G Select storage destination to see clients and recovery points.	🗸 🥌 Microsoft Hyper-V (192.168.100.60) V	Vindows Server 2016	
 ► □ C: ► □ MUS - A_C(C) ► □ ADSE (C) 		Drag and drop a client to	configure HyperBost	

10. In **[Destination Auth]** dialog, please enter your credentials for the shared folder, [User Name:] and **[Password]**. Click **[Connect]**.

U	Destination Auth	×
	Administrator	1
	i.e. host name or host IP or domain\username	
	•••••	Π
		┛┃
	Cancel Connect	

11. After selecting a backup drag and drop the recovery point you want to boot to the blank in right pane.

Destinations	Clients &	Recovery Points	Hypervisors		
1192.185.109.594desk ▲ @ Local Storage + @ D: + @ Tys=J ₄ (E) + @ 1195=J ₄ (E) ▲ @ 1195=J65(10.594desk ▲ [Enter-J66=-4091-4963-4001E	Cient Name	(3) Last Recovery Point (5) 2022-06-23 11:00:02	Microsoft Hyper V (192.168.199.6 Drag and drop a client	1) Windows Server 2016 to configure HyperBoot	
 dag10c2d5 v175-401d-93ic-04401 dag120c2-0886-4844-9802-49ca 					

12. In this example, "Microsoft Hyper-V" is selected for [Target hypervisor]. Please configure the settings for [CPU], [RAM], [Network], etc. If necessary, please change [VM Name:]. A default path is configured for the setting [Save HyperBoot Recovery Point to:]. However, enabling [Save to the same location with original image set.] option will create the config file in the same folder as the backup images. This might be convenient when booting backup images on a different host using HyperBoot. After you have finished configuring settings, click [Save].

Microsoft Hyper-V (192.168 100.60) VMM Name: HB-denio_svr01 Firmware: Dperating System: EFF Vindows Server 2016 (64 bit) C CPU: (Max: 8) PRAM: Max(16 GB) 2 Image: Additional machine Disk 0 50GB Disk 0 50GB Disk 0 50GB Virtual Switch 01 T		ypervisor.					Boot from:			
HB-demo_svr01 Firmware Operating Systems EFF Vindows Server 2016 (64 bit) © CPU: (Max: 8) PRAM: Max(16 GB) 2 2 © Use Dynamic Memory for the virtual machine Disk Size Type Disk 0 Solg 3PT	Micros	soft Hyper-V (192,168,100.60	0)			Latest Recovery	Point		
Firmware: Operating System: EFF VWindows Server 2016 (64 bit) © CPU: (Max: 8) PRAM: Max(16 GB) 2 2 © Use Dynamic Memory for this virtual machine Disk Size Type Disk 0 SOGB Operation Sove to the same location with original image set. Image: Sove to the same location with original image set. Image: Sove to the same location with original image set. Do not delete HyperBoot recovery point when deleting HyperBoot recover	VM	Name:					Do not boot fi	om HyperBoot recove	ny point.	
EFF Windows Server 2016 (64 bit) C CPU: (Max: 8) RAM: Max(16 GB) 2 3 3 4 GB Use Dynamic Memory for this virtual machine 0 Disk Size Type Disk 0 50GB Vetwork: 1	HB-der	mo_svr01					Save HyperBoot R	ecovery Point to.		
CPU: (Max: 8) RAM: Max(16 GB) Use Dynamic Memory for this virtual machine Disk size Disk Size Type Boot Disk 0 50GB I 3PT Network:	Firmwar	në:	Operating Sys	item:			C:\Program File	s\Actiphy\HyperBoot\R	lecoveryPoints 🔹	
Z Image: Constraint of the solution of the solut	EF)	Υ.	Windows Se	erver 2016 (64 bit	L)		Save to the sa	me location with origin	nal image set.	
2 1 4 GB I Use Dynamic Memory for this virtual machine Disk assignments. Disk Size Type Boot Disk 0 SOGB JBr 0 SOGB	CPU	(Max: 8)	AM RAM	x(16 GB)					oint when deleting	type
Disk assignments: Disk Size Type Boot Disk 0 SOGB IGPT	2			_	4	GB	virtual machin	e		
		Disk 0	2008	Jde I						
		Disk 0	2008	Jaer						
			1000	(3P)						
	Network	k:	4000	Jer.		7				
	Network	k:	8000	Jeri						
	Network	k:	5008							
Automatically open console on VM starting.	Network	k: I Switch 01								
III Automatically open console on VM starting.	Network	k: I Switch 01								
Automatically open console on VM starting.	Network	k: I Switch 01				7				

13. The information for the virtual machine is displayed in **[Hypervisors:]**. Click on ">" to start the virtual machine.

Destinations	Clients &	Recovery Points	Hypervisors	_		
 (102.188.100.56/ms) (2) Local Storage (2) C (3) T(1) - (1) (4) T(1) - (1) (5) T(1) (6) T(1) (6) T(1) (7) T(1) <	40 103	© Last Recovery Point © 2022-06-23 11.0002	Microsoft Hyper-V (19) Image: A constraint of the second secon	2.168.100.60) Window VM Name Source Image Location Recovery Point State:	H8-demo_svr01 demo_svr01 \\192.188100.551aa Latest Recovery Por Boot ready	

14. Click on the left icon to launch the VM connection console.

🛿 HyperBoot			Add hypervision) ?
Destinations (1192-168-100 556/068	Clients & Recovery Points Clients & Recovery Points Client Name Glast Recovery demo_cvi01 O2022-06-23 11	r introductiny	per-V (192.168.100.60) Window VM Name Source Image Location	ws Server 2016 HB-demo_svr01 demo_svr01 \\182.168.100.53\rinke\d.	×
 ▲ 4455 (C) ▲ (1) 121.065100.53/stack ▲ (1) 10543-266-4541-4933-064116562 ▲ 10523-568-4571-4758-916-04311563860 ▲ 44236:263-1755-4976-916-04407023 ▲ 44236:263-1755-4976-916-04407023 ▲ 44120:263-2685-4844-9902-492638766 		17.3 C C	ag and drop a client to confi	2022-06-23 11:00:02 Running	

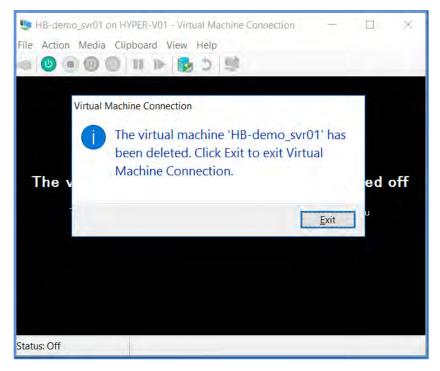
15. The backup is booted as a virtual machine on Hyper-V.

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Hyper-V Manager	Virtual Machines	Actions HYPER-V01	
	Name State CPU Usage Assigned HB-demo_svr01 Runnine 2 % 4096 MB	Mem New Import Virtual Machine Hyper-V Settings Virtual Switch Manager Virtual SAN Manager Edit Disk	,
	The selected virtual machine has no checkpoints.	Inspect Dasc Stop Service Remove Server Refresh View Help	,
	HB-demo_svr01 Created: 7/15/2022 53831 PM Cluster Configuration Version: 80 Generation: 2 Note: None Summary Memory Network.ing Replication		•

16. You can access the virtual machine through the Hyper-v console.



17. When you power down the virtual machine, HyperBoot will delete it. If the console is still open, HyperV will display the following message. Click the **[Exit]** button to disconnect from the virtual machine and close the console.



12. Reference

- Actiphy's Web site: Actiphy's Web site provides access to comprehensive information, including product information, related documents, technical support, updates, etc. <u>https://www.actiphy.com/global</u>
- Knowledge Base
 <u>https://enkb.actiphy.com/</u>
- ActiveImage Protector Help Center
 Support information is accessible at the following web site.
 https://actiphyhelp.zendesk.com/hc/en-us
- For any inquiries about ActiveImage Protector, please contact: Global Sales Dept., Actiphy Inc. E-mail: global-sales@actiphy.com

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