New System Protection Solution responding to the cloud computing era

1．Support for Object Storage

2．Support for Public Cloud Storage

3．Support for LTO Tape Devices

4．File / Folder Backup

5．Support for SFTP

6．Boot Environment Builder without the need
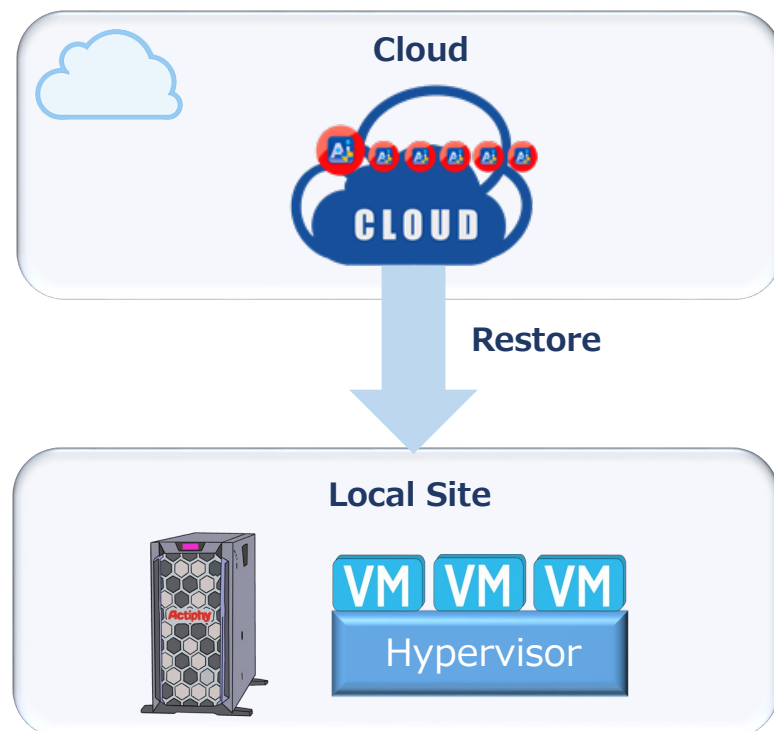   for installation of Windows ADK

7．Others

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Saves the created backups directly to Object Storage

Backup Source

- Client PC
- Physical Server
- Virtual Server
  - VM VM VM
  - Hypervisor
- Cloud
  - VM VM VM
  - CLOUD

Traditional Method

Backup →

Primary

ImageCenter LE

Replication

Secondary Destination

CLOUD

Save backups directly in Object Storage

Direct Backup →

Primary Destination

CLOUD

Supported Object Storage

- · Amazon AWS S3
- · Microsoft Azure Blob Storage
- · Object storages compatible with Amazon S3

Flexible disaster recovery plan or disaster contingency planning using backups in the event of a server failure
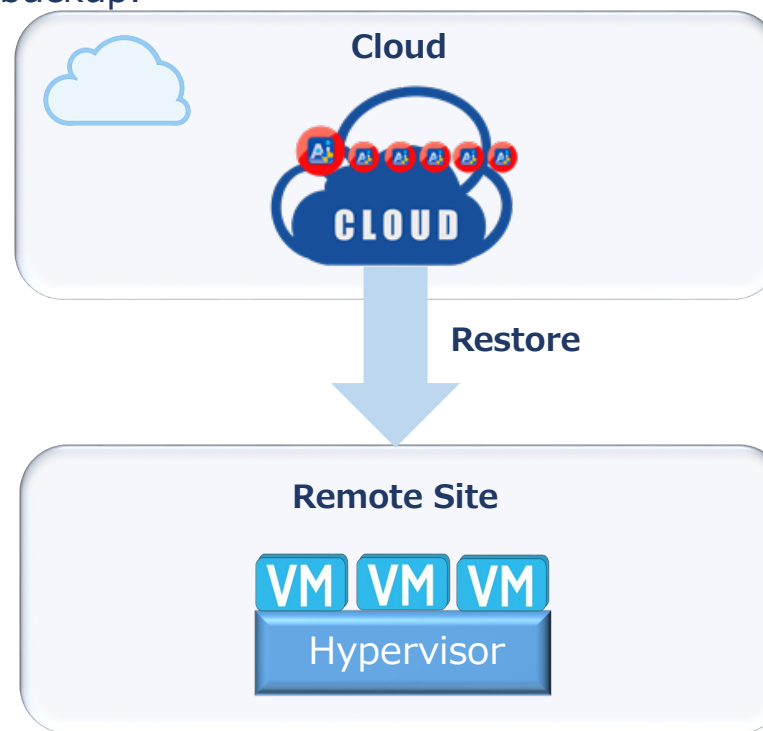
Restore to Local Site

In the event of a server failure, restore from the backup of physical / virtual machine saved in cloud storage.
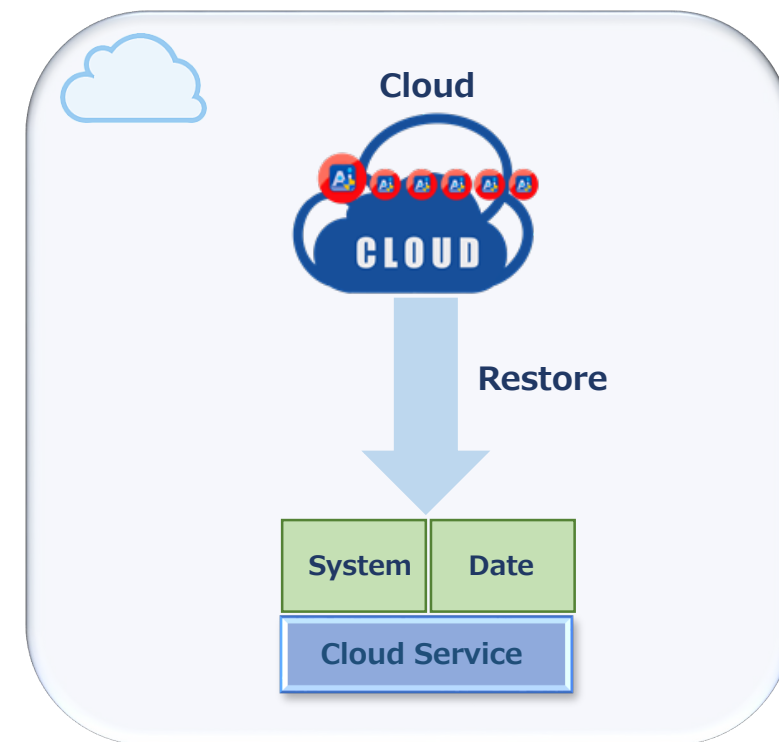
Restore to Remote Site

In the event of a disaster, temporarily run spare-wheel virtual server on remote site and restore the crashed system from backup.

Restore to Cloud Storage

In the event of a disaster, instantly start-up a standby virtual machine in cloud storage and restore the crashed system from backup.
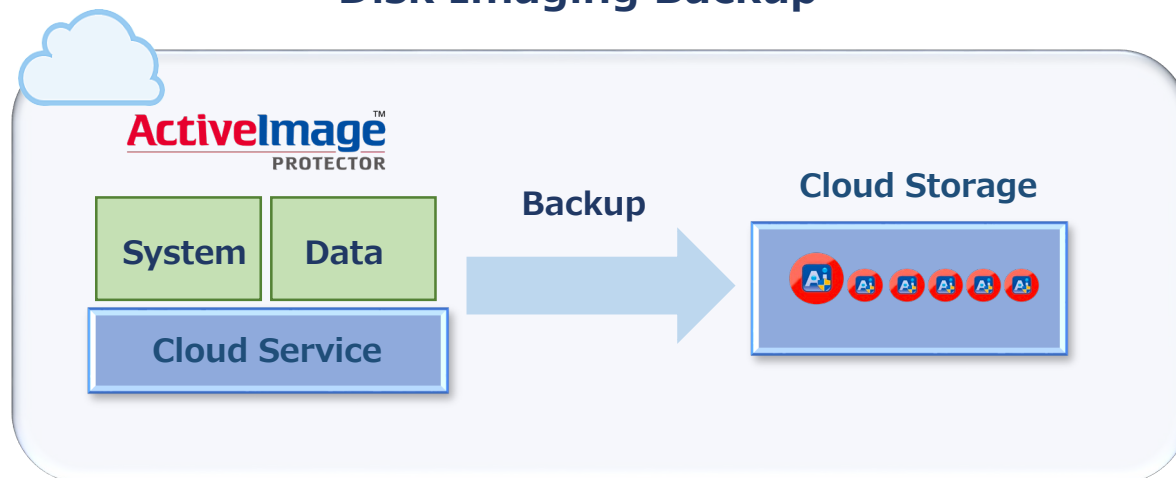
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Support for the Virtual Machines configured on Amazon EC2, Microsoft Azure

Mostly the same operating procedures as backup of physical machines

Install ActiveImage Protector on virtual machines configured in cloud environment and perform disk imaging backup of the virtual machines by using mostly the same operating procedures as backup of physical machines. The created backup image files are saved in the same cloud region, directly to cloud storages e.g., Amazon AWS S3 and Microsoft Azure Blob Storage.
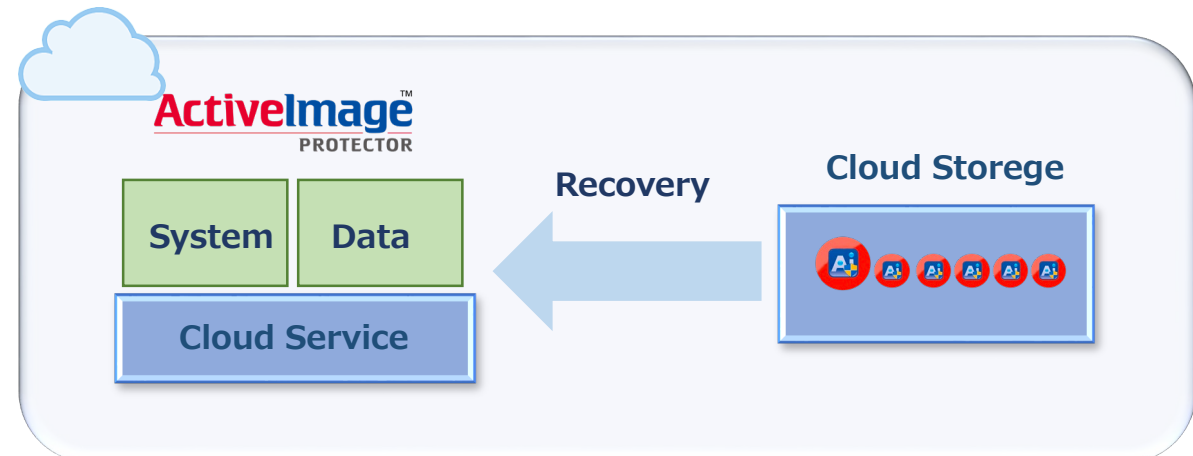
Restore a virtual machine

The virtual machines configured in cloud environment can be restored from backup without the need for any extra operating procedures.
ActiveImage Protector provides more flexible file / folder restore feature.

Disk Imaging Backup

ActiveImage™ PROTECTOR

| System | Data |

Cloud Service

Backup →

Cloud Storage

Entirely restore the virtual machine from backup

ActiveImage™ PROTECTOR

| System | Data |

Cloud Service

← **Recovery**

Cloud Storege

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Backup and Disaster Recovery Solution Provider offers in-house developed New Backup / Restore Feature supporting virtual machines configured in Cloud Storage

Newly in-house developed Restore feature supporting virtual machines configured in cloud storage
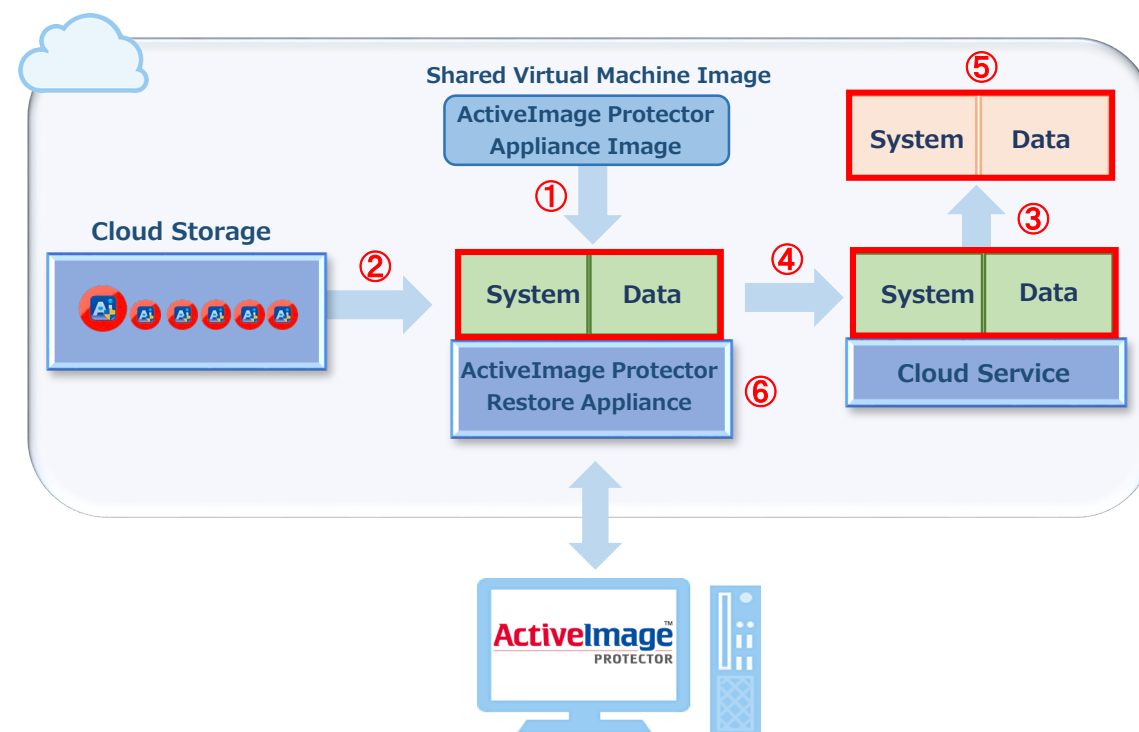
The backup image file located in the cloud storage can be restored to a virtual machine configured in the cloud environment, using the same operating procedures as restoring a workstation or server in an on-site environment.

1. "ActiveImage Protector Appliance Image", shared virtual machine image is located in the respective regions in cloud environment.

2. Internal processing of Cloud Restore

(1) Temporarily boot up "**Restore Appliance" from "Appliance Image"**.

(2) "**Restore Appliance**" creates virtual disk from backup.

(3) Disconnect the virtual disk connected to the restore target virtual machine.

(4) Connect the created virtual disk.

(5) Delete the disconnected virtual disk. Otherwise, you can keep the disk.

(6) End the temporarily running "**Restore Appliance**".

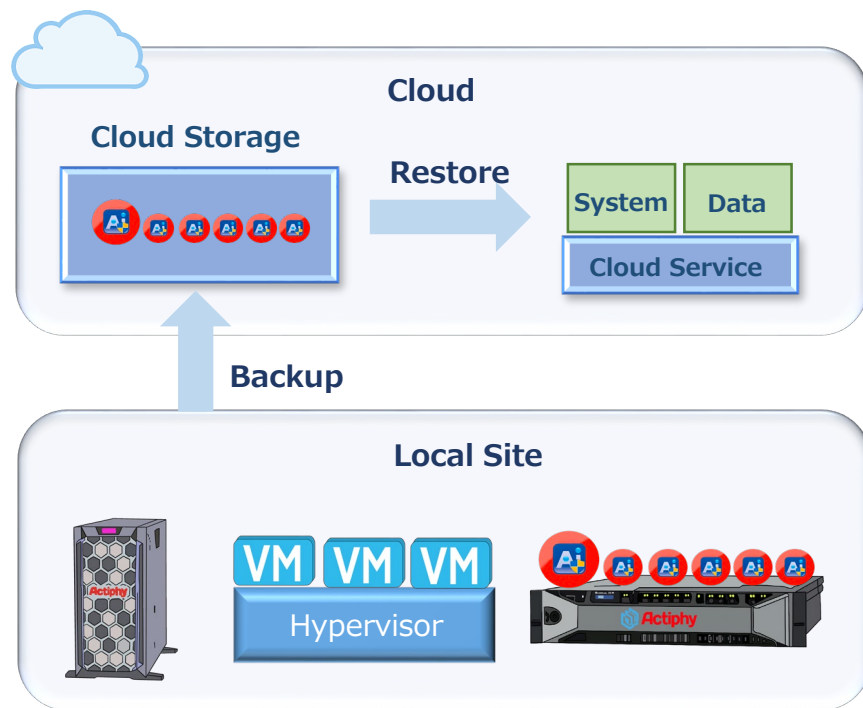**Internal processing of Cloud Restore**

Shared Virtual Machine Image

ActiveImage Protector Appliance Image

⑤ System | Data

Cloud Storage

② ActiveImage Protector Restore Appliance

① System | Data

④ ③ System | Data

Cloud Service

⑥

ActiveImage PROTECTOR

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Flexible restore from backups to different sites

Restore backups of physical/virtual machines on local site to virtual machines configured on cloud environment
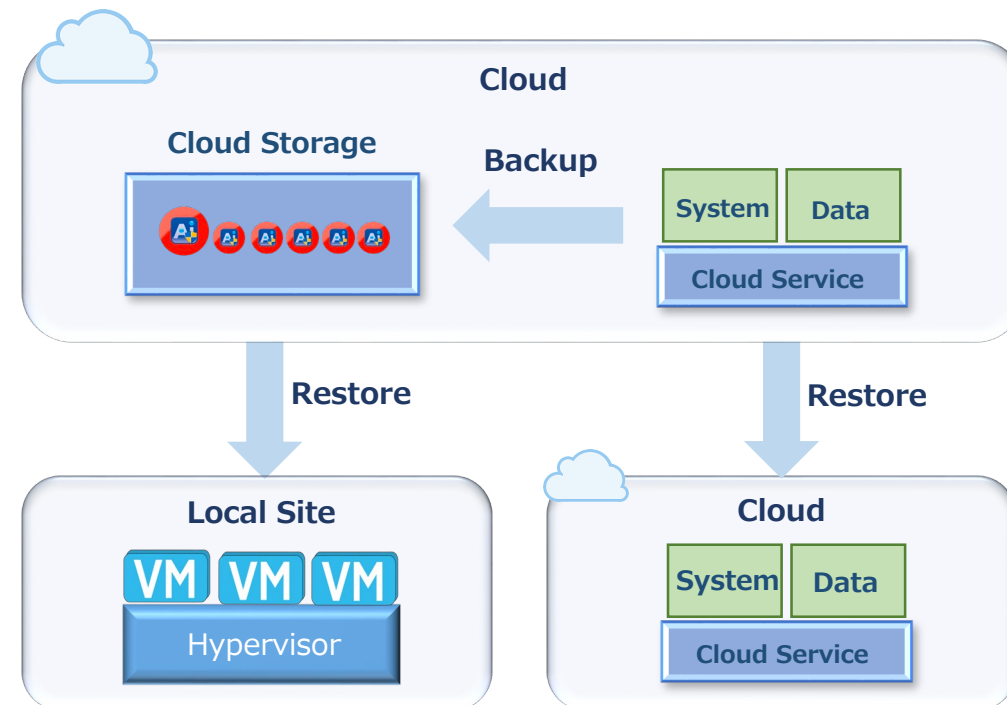
Restore from backups of physical / virtual machines on local site that are saved in cloud storage to virtual machines configured on cloud environment.

Cloud

Cloud Storage

Restore

System | Data

Cloud Service

Backup

Local Site

VM VM VM

Hypervisor

* When migrating to cloud environment, you need to have ActiveImage Protector Cloud License.

Migration from backups to on-site environment

Restore and migrate the virtual machine using backups saved in cloud storage to virtual machine on local site or different cloud environment.

Cloud

Cloud Storage

Backup

System | Data

Cloud Service

Restore

Restore

Local Site

VM VM VM

Hypervisor
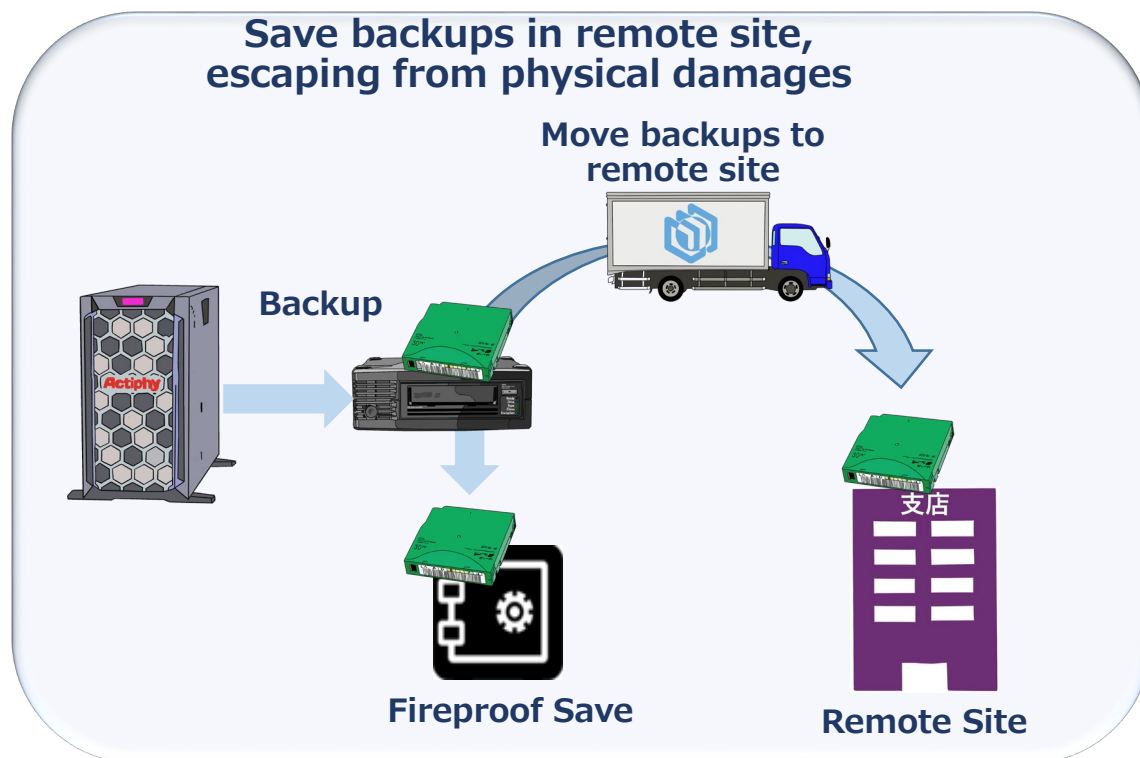
Cloud

System | Data

Cloud Service

* When migrating to on-site environment, you need to have ActiveImage Protector license for on-site environment

* When migrating to cloud environment, you need to have ActiveImage Protector Cloud License.

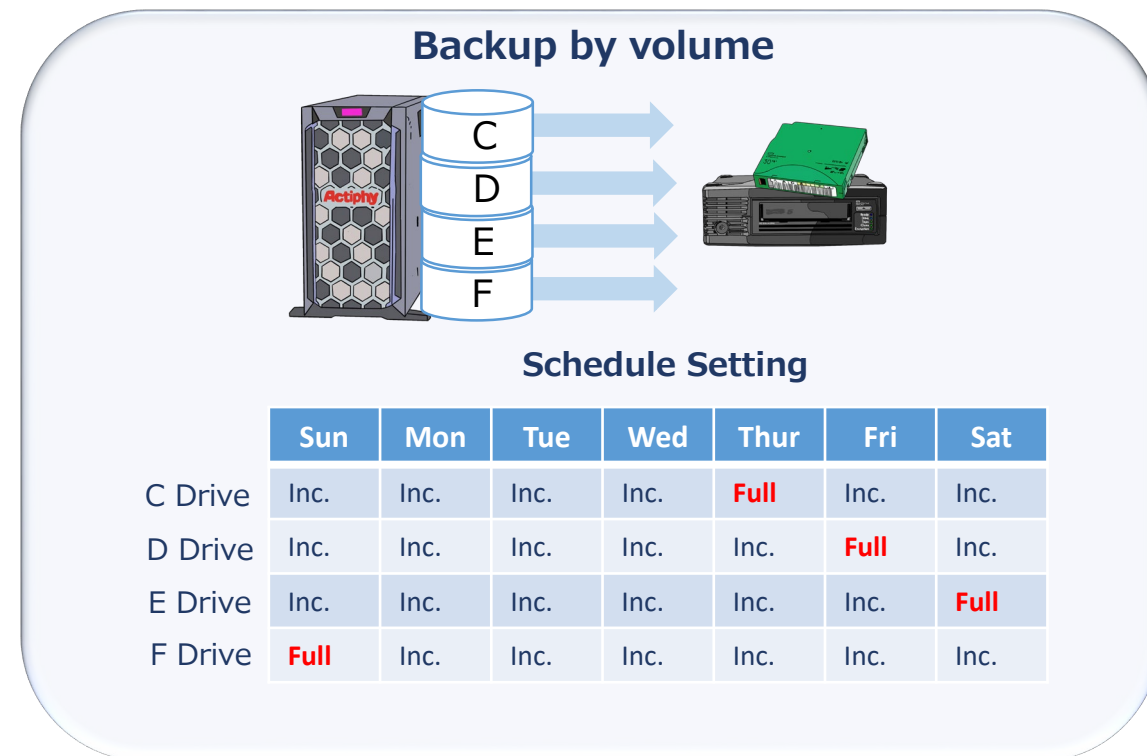# LTO Tape Device suited for backing up large data volumes

LTO Tape-based backup provides security benefits

Backups can be directly saved in LTO Tape. Tape-based backup provides security benefits by saving the backup tapes in fireproof save or remote site.

Save backups in remote site, escaping from physical damages

Move backups to remote site

Backup

Fireproof Save

Remote Site

支店

Backup by volume when taking full backup of large-volume data

When taking full backup of large-volume data, it takes lengthy process time. Solving the problem, the backup source may be split to take backups by volume.
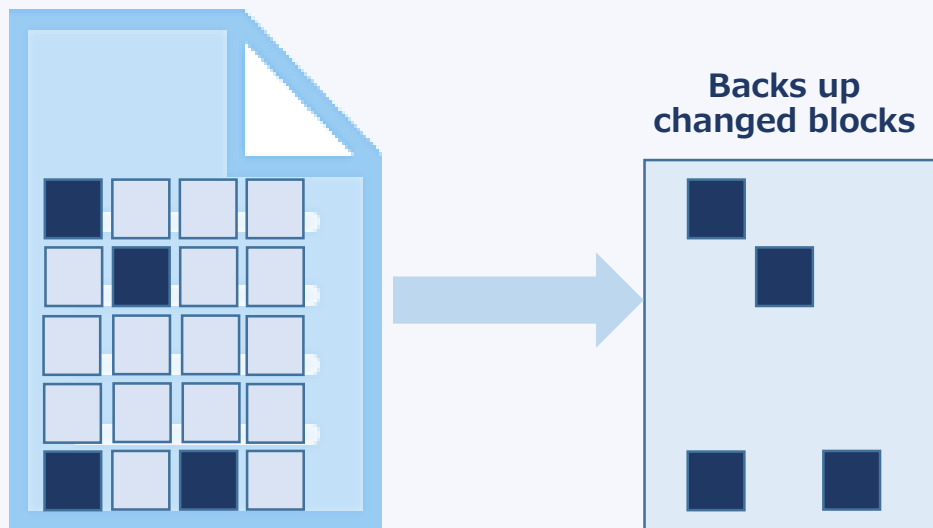
Backup by volume

C
D
E
F

Schedule Setting

	Sun	Mon	Tue	Wed	Thur	Fri	Sat
C Drive	Inc.	Inc.	Inc.	Inc.	**Full**	Inc.	Inc.
D Drive	Inc.	Inc.	Inc.	Inc.	Inc.	**Full**	Inc.
E Drive	Inc.	Inc.	Inc.	Inc.	Inc.	Inc.	**Full**
F Drive	**Full**	Inc.	Inc.	Inc.	Inc.	Inc.	Inc.

New File / Folder Backup

Only changed blocks are backed up in incremental backup

ActiveImage Protector's New File Backup feature does not simply make a copy of a file but detects the changes made in the file, so incremental backup of the changed blocks is created. As a result, backup storage requirements and backup time are significantly reduced.
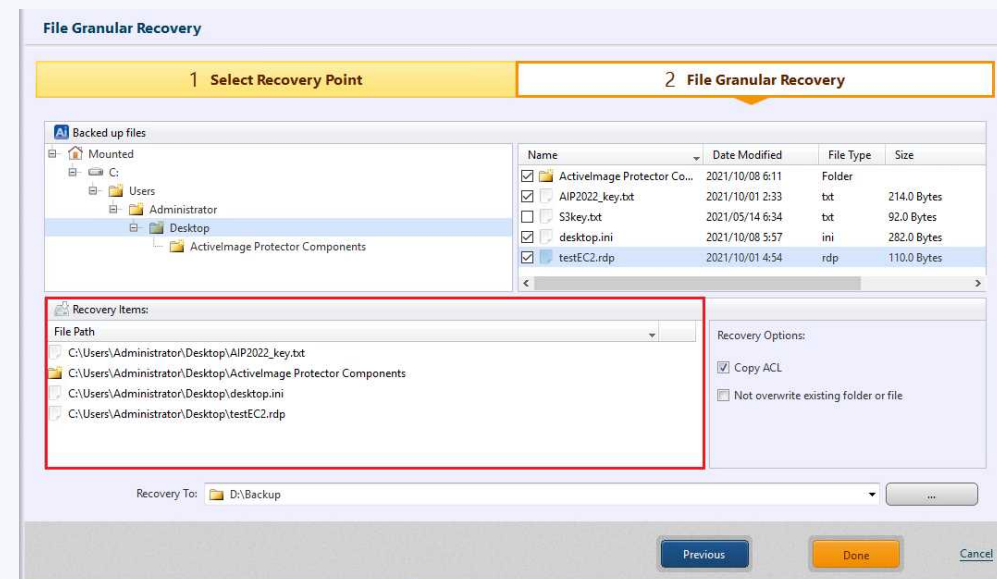
ActiveImage Protector provides New File Backup (Incremental Backup)

Backs up changed blocks

Restore File / Folder

Select a backup and restore a file or a folder including permission information including access right and stream information.
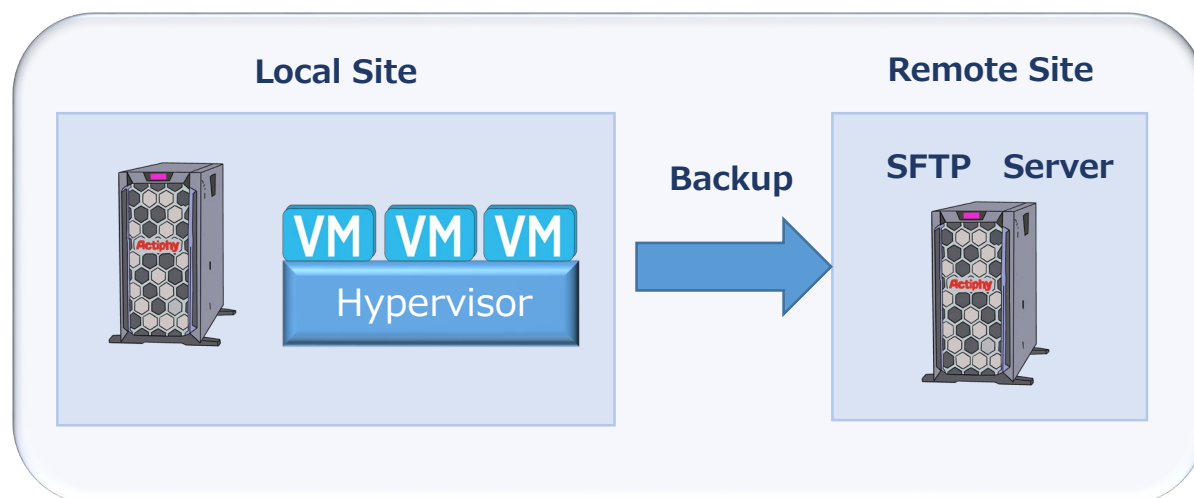
Select File / Folder to restore

File Granular Recovery

1 Select Recovery Point	2 File Granular Recovery

Backed up files

Name	Date Modified	File Type	Size
☑ 📁 ActiveImage Protector Co...	2021/10/08 6:11	Folder	
☑ 📄 AIP2022_key.txt	2021/10/01 2:33	txt	214.0 Bytes
☐ 📄 S3key.txt	2021/05/14 6:34	txt	92.0 Bytes
☑ 📄 desktop.ini	2021/10/08 5:57	ini	282.0 Bytes
☑ 📄 testEC2.rdp	2021/10/01 4:54	rdp	110.0 Bytes

Mounted
- C:
  - Users
    - Administrator
      - Desktop
        - ActiveImage Protector Components

Recovery Items:

File Path
- C:\Users\Administrator\Desktop\AIP2022_key.txt
- C:\Users\Administrator\Desktop\ActiveImage Protector Components
- C:\Users\Administrator\Desktop\desktop.ini
- C:\Users\Administrator\Desktop\testEC2.rdp

Recovery Options:
- ☑ Copy ACL
- ☐ Not overwrite existing folder or file

Recovery To: D:\Backup

Previous   Done   Cancel

Specify secure SFTP server as the destination storage for saving backups

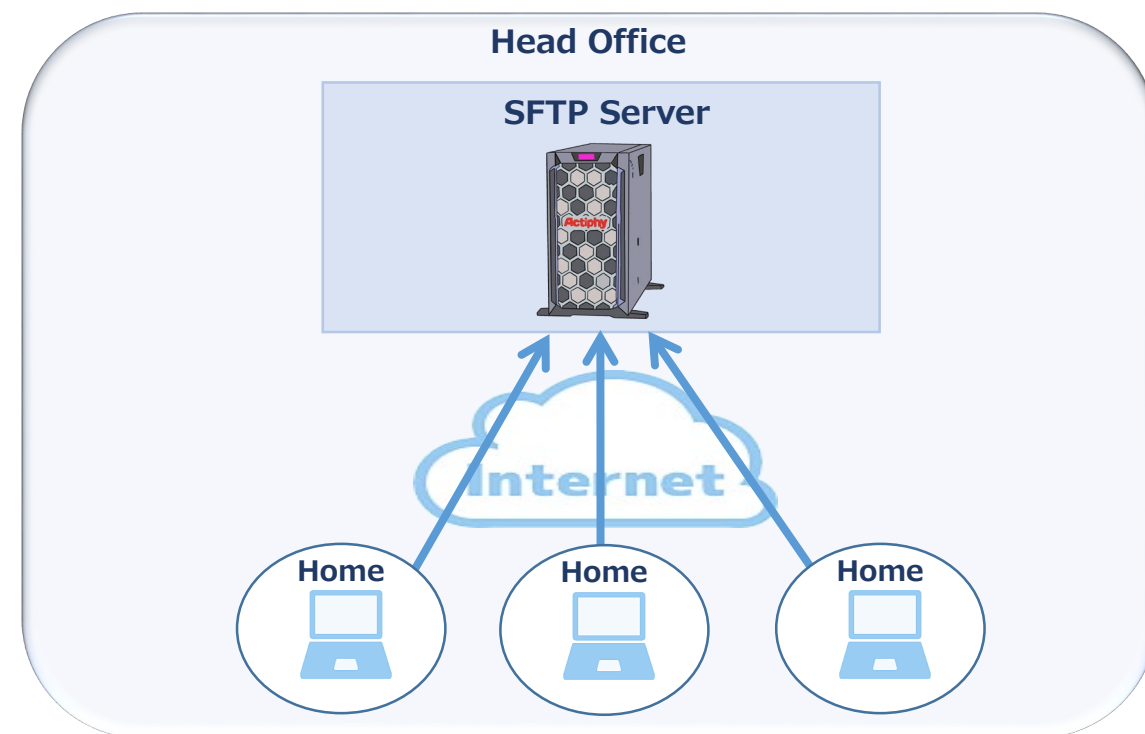### Support SFTP server as backup destination

ActiveImage Protector 2022 supports the SFTP protocol enabling secure data communication. Backups are directly saved in a server supporting SFTP protocol. Deployment of a server supporting SFTP in a remote on-site environment enables to save the backup image files directly to the server, without worrying about the cost of public cloud.

Save backups of employees' home workstations in SFTP server

In the event of a system failure of an employee's home workstation, you may have to provide an alternate PC. Regularly scheduled backup of the home workstation by using ActiveImage Protector enables to restore the entire system and data.

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Improve the convenience for system recovery and reduce operating time

Boot Environment Builder without the need for installation of Windows ADK

When using Windows-based boot environment builder, installation of Windows ADK or Windows PE is not required. The boot environment can be built based on Windows RE (recovery environment).

The drivers are automatically detected. Select the required driver to install, which improves the convenience of system recovery and reduces operating time for system engineers.

Windows-based Boot Environment Builder

Select Windows RE

Select Device Driver

Disk-to-Disk Copy

Disk-to-Disk Copy feature is now added back to offer greater flexibility and support migration of data from a hard disk to SSD, upgrading to a large-capacity disk, etc. Disk-to-disk Copy feature allows you to select the entire disk or a specific volume to copy, or copy in enlarged size. Data volumes from different disks can be flexibly combined using disk-to-disk copy for a new single disk.

Disk-to-Disk Copy

Migration of data from a hard disk to SSD

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ActiveImage Protector 2022 product lineup tailored to your system environments

Physical Environment

Windows Server License

➢ **ActiveImage Protector 2022 Server**

Linux Server License

➢ **ActiveImage Protector 2022 Linux**

Windows Client License

➢ **ActiveImage Protector 2022 Desktop**

Virtual Environment

On-site environment License

➢ **ActiveImage Protector 2022 Virtual**

Public Cloud License

➢ **ActiveImage Protector 2022 Cloud** **NEW**

Virtual Environment License (ex. KVM in on-site environment)

➢ **ActiveImage Protector 2022 Server vPack** **NEW**

Cluster Environment

Microsoft MSCS/MSFC License

➢ **ActivImage Protector 2022 Custer**

IT Professional (* 1)

➢ **ActiveImage Protector 2022 IT Pro**

Collaboration (* 1)

➢ **ActiveImage Protector 2022 CLUSTERPRO**
➢ **ActiveImage Protector 2022 plus CLUSTERPRO X**
➢ **ActiveImage Protector 2022 Express5800/ft Server**
➢ **ActiveImage Protector 2022 Express5800/ft Virtual**
➢ **ActiveImage Protector 2022 Server RDX**
➢ **ActiveImage Protector 2022 Linux RDX**

＊1：To be released at reasonable timing.

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- **Amazon S3, Microsoft Azure, object storages compatible with Amazon S3 are supported as the backup destination cloud storage.**

- **Backup/restore feature supports virtual machines configured on Amazon EC2, Microsoft Azure**

- **Supports LTO tape device as the backup destination storage**

- **File / Folder Backup**

- **SFTP protocol is supported. Deployment of a server supporting SFTP enables to save the backup image files directly to the server.**

- **Annual, three-year, five-year subscription licenses are now available.**

- **Boot Environment Builder without the need for installation of Windows ADK**

- **Windows Server 2022, Windows 11 are supported.**

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