

ActiveImageTM 2022

PROTECTOR

ActiveImage Protector 2022 Cluster

System Protection Solution optimized for failover cluster
- Product Summary -

March 8, 2023
Actiphy Inc.

System Protection Solution optimized for failover cluster

1. What is ActiveImage Protector 2022 Cluster?
2. Why backup of cluster system is necessary?
4. Benefits of ActiveImage Protector 2022 Cluster
 - Backup / recovery of cluster system
 - New features
4. Main features
 - Backup / Recovery features
 - Scheduled backup

System Protection Solution for failover cluster system such as MSFC

- Recurring incremental backup of cluster shared volume
- Supported storages include S3-compatible object storage, SFTP server, LTO tape device as backup destinations **NEW**
- File / Folder Backup **NEW**

New Features of ActiveImage Protector 2022 Cluster

Supported public cloud storage services include S3-compatible object storage

LTO tape devices are supported as the destination.

File / Folder Backup

Support for SFTP servers providing secure communication

Boot Environment Builder without installation of Windows ADK

Subscription and perpetual licenses are now available.

Windows Server 2022 is supported.

* As for the summary of the new main features, please refer to ActiveImage Protector 2022.

One or more additional risk factors remain in cluster environment.

Risk Factors	Cause of Failures
Hardware Failure	Failure of components, inadequate specification, etc.
Software Failure	Bugs in OS or bugs in / conflicts between applications, configuration error, etc.
Human Error	Data loss / corruption caused by operation error.
Computer Virus	Data loss, tampering data, data corruption, etc., caused by virus infection.
Disaster	System failure caused by natural disaster including earthquake, flood disaster, fire disaster, terrorism, etc.

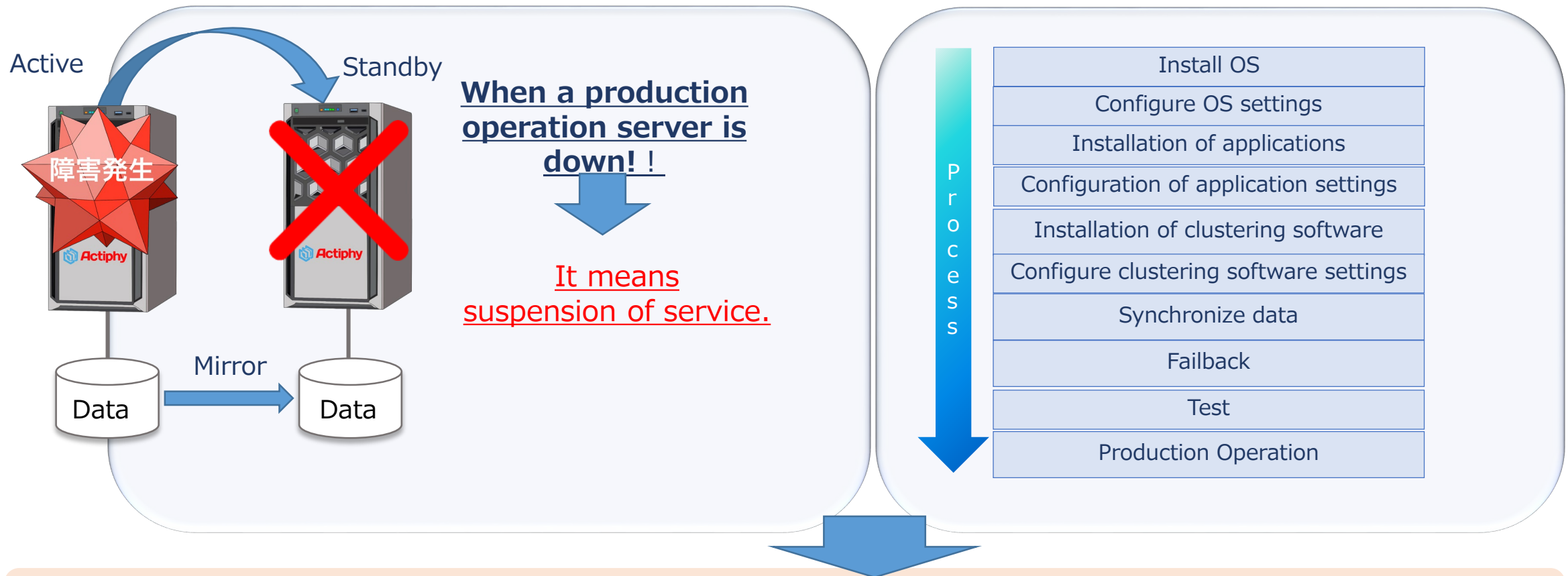


Backup is necessary for a countermeasure against human error / virus infection.

When restoring failed system, the system may have to be reconfigured.

When a production operation server is down

Reconfiguration of failed server requires a lot of man hours



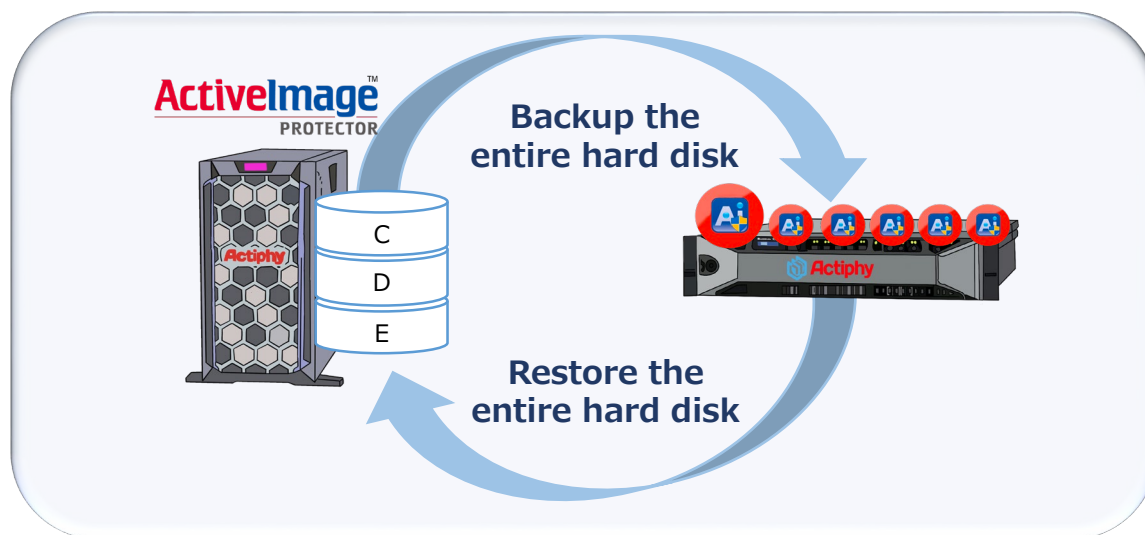
Backup of system area as well as data area is required.

Intuitive and user friendly GUI provides easy-to-use controls of backup operation

Protect the entire system

ActiveImage Protector Cluster backs up and protects your entire hard disk, including the live Windows operating system along with all your applications and data. **In the event of a system failure, backup images can be restored to restart the operation.**

Back up and restore the entire system

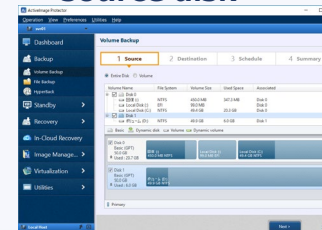


Simple backup and recovery operation

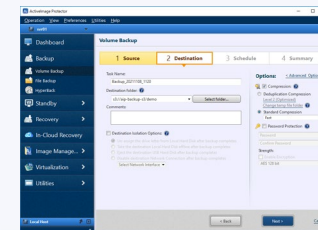
Intuitive and user friendly management console provides easy-to-use controls of backup settings and recovery operation. **Even an in-experienced system manager can easily start backup operation.**

Wizard-driven interface guides you through configuring backup settings

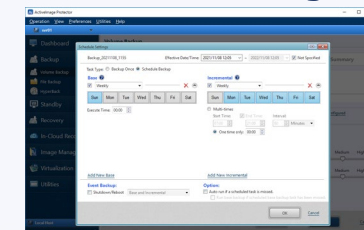
Select a backup source disk



Specify backup destination

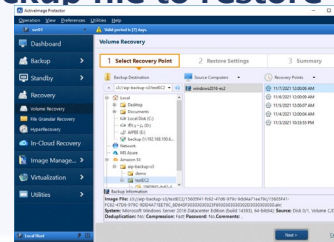


Configure backup schedule settings

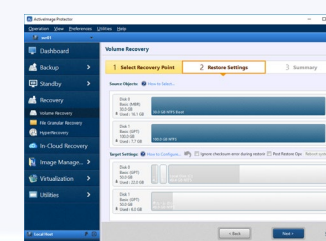


Wizard-driven interface guides you through restore operation

Select point-in-time backup file to restore



Specify restore target disk



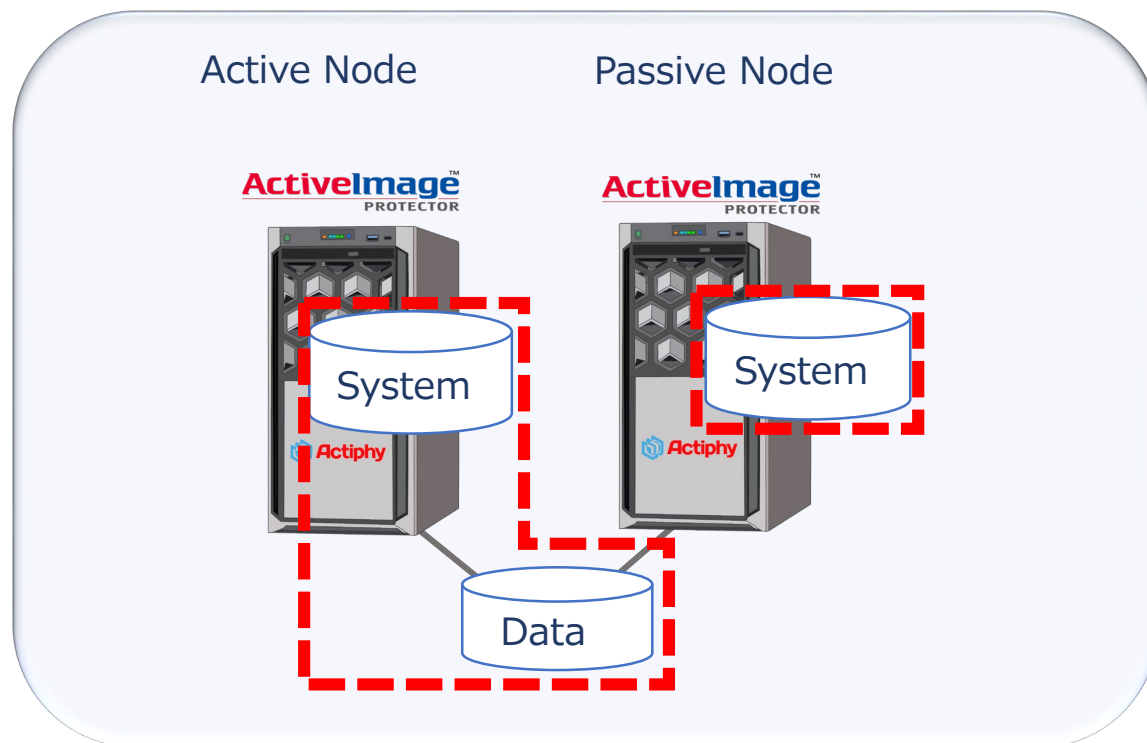
Boot up the server and restart operation

Restore to the point-in-time state of the server.
No need to configure the respective settings, i.e., network, etc.

Entirely back up cluster system including system area and cluster volume.

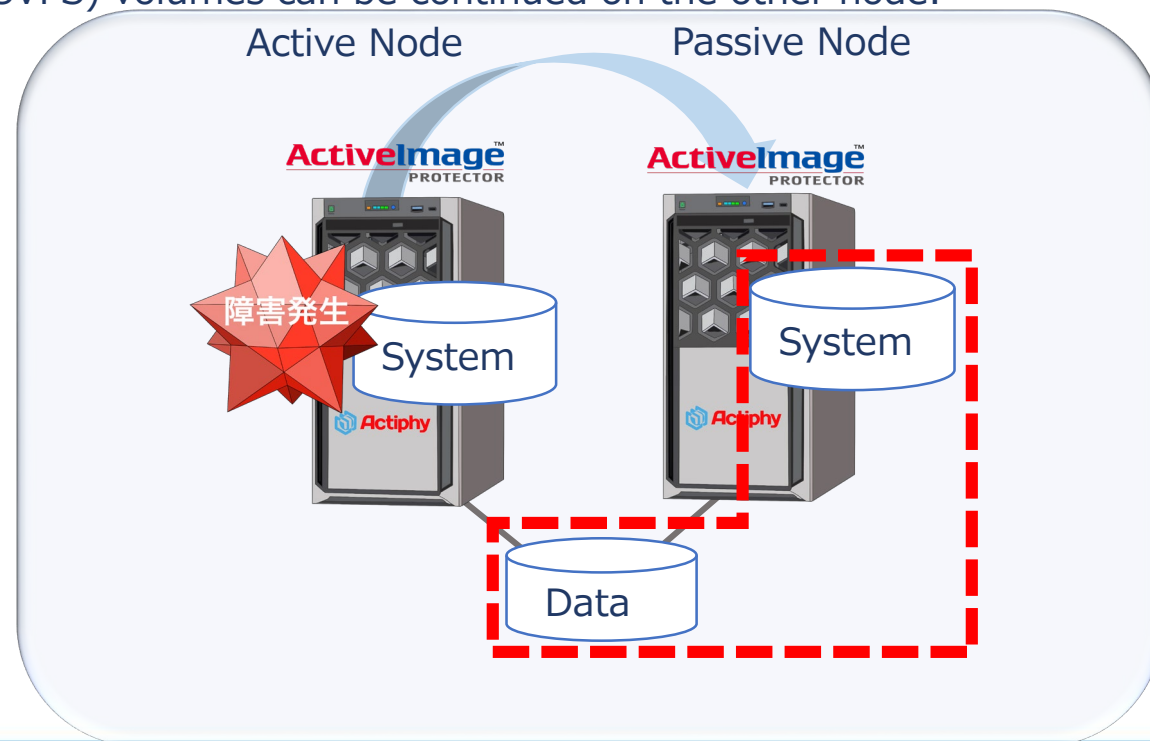
Normal Operation

Backup task is executed from active node to back up system area and data volume in shared disk. System area only is backed up from passive node. Incremental backup of CSV shared by nodes and quorum area is also supported.



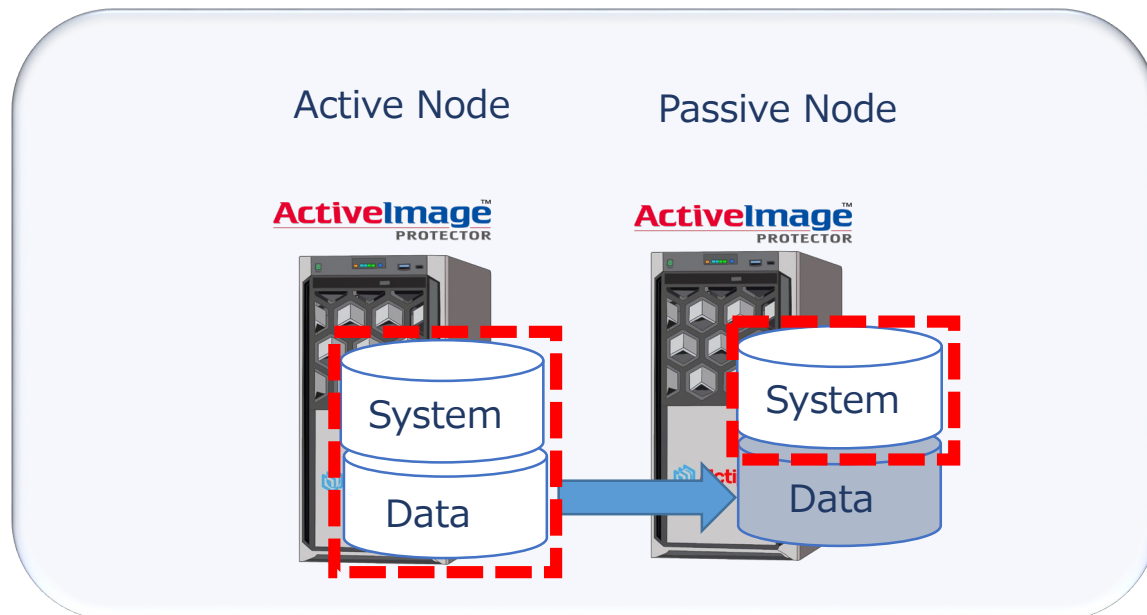
In the event of failure

In the event of system failure on active node, failover occurs, node switching takes place and system area and the data volume in shared disk on the server running as active node is baked up. Even when failover from the backup node to the other node takes place, incremental backup chains of Clustered Shared Volume File System (CSVFS) volumes can be continued on the other node.

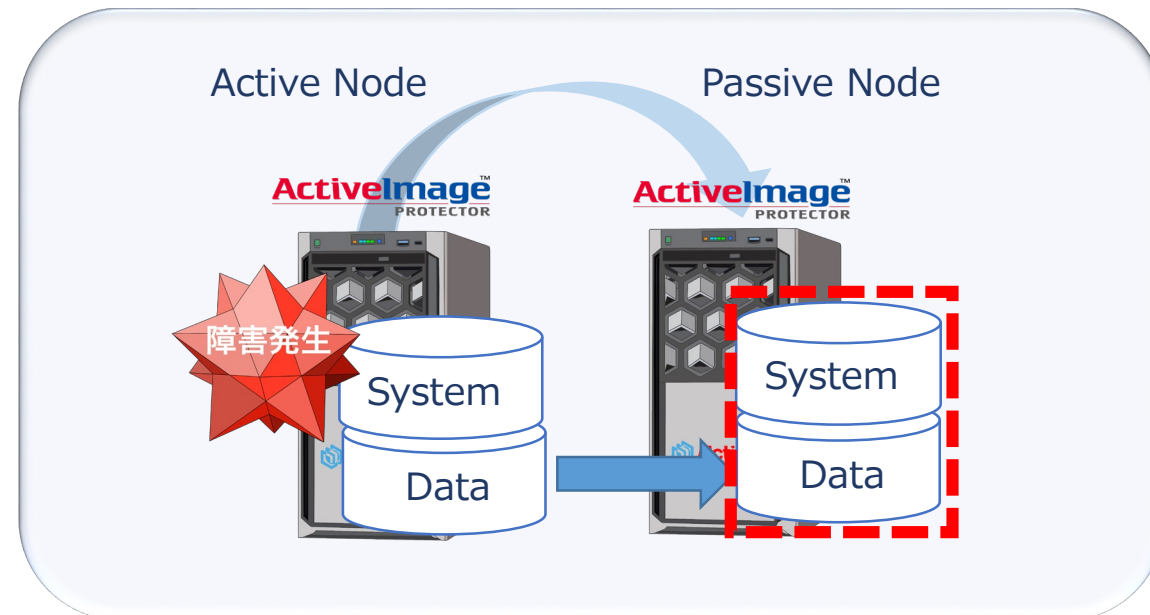


Entirely back up cluster-configured system area and cluster volume.**Normal Operation**

Backup task is executed from active node to back up system area and data volume in mirror-configured disk. System area only is backed up from passive node. Backup of quorum area is also supported.

**In the event of failure**

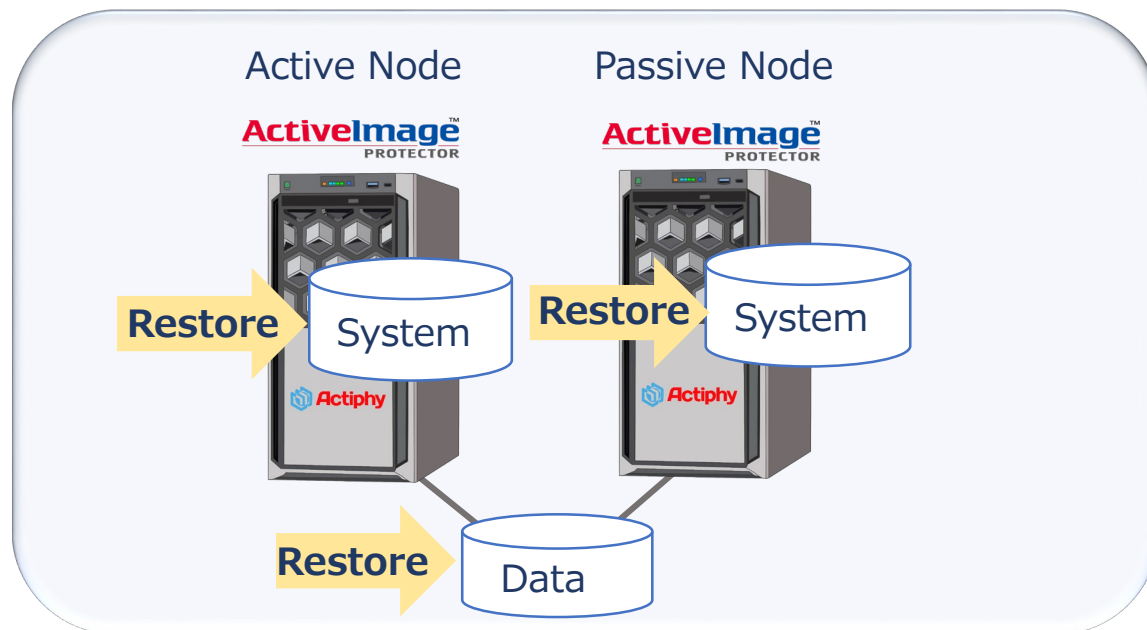
In the event of system failure on active node, failover occurs and backup of system area and data volume in mirror-configured disk is taken over from active node.



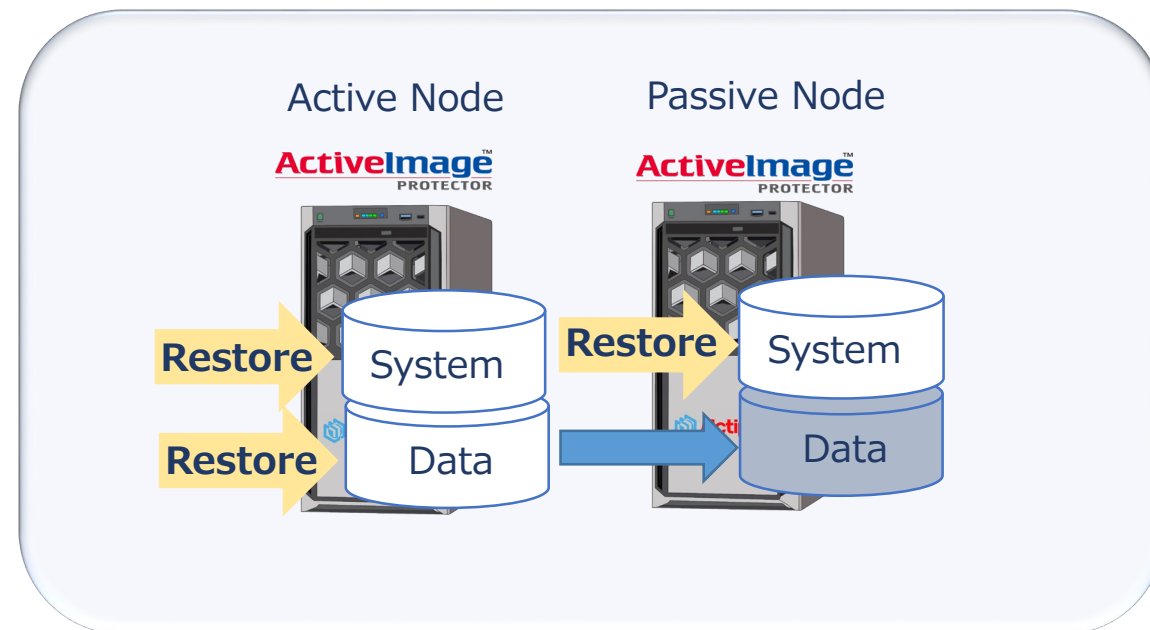
Cluster-configured system area and data volume, in the event of any failure, is quickly restored to the state before the failure took place.

Even in case of system failure or data loss on both nodes, the system area and data area can be entirely restored from backup file. Restore from backup of quorum area is also supported.

Restore shared disk



Restore mirror-configured disk



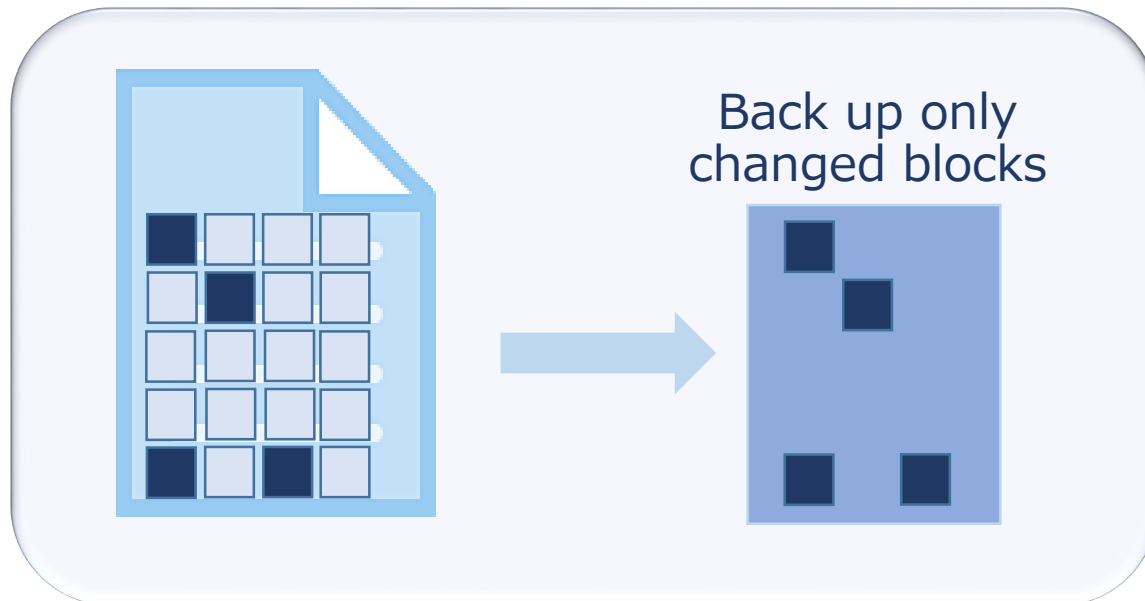
File / Folder backup is provided.

NEW

Block-based File Backup

Recurring scheduled backup of a selected file / folder is allowed. **Daily incremental backup saves only changed blocks in a file saving storage space requirements.**

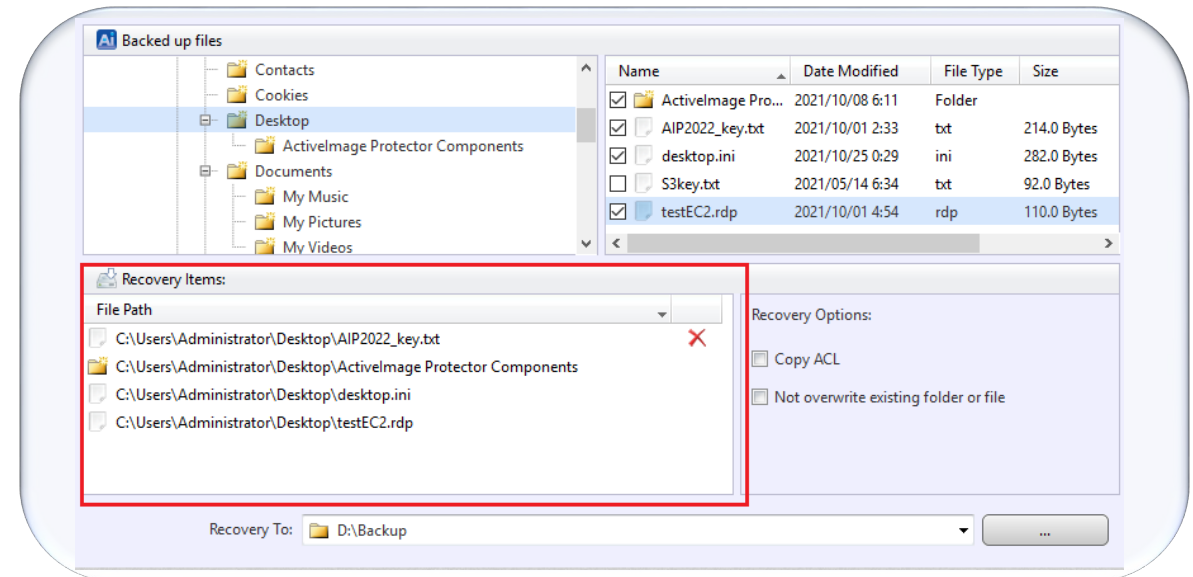
Incremental backup saves only changed blocks



Easily restore file / folder

Select a file / folder to restore from a backup file. The stream information and access rights assigned to files are inclusively restored. **Granular specific files and folders can be flexibly selected and restored.**

Select and restore specific file / folder



Flexibly select a backup destination depending on the system configuration.

A variety of Storage Media are supported

Save your backups to any available storage location, including **USB HDD, cloud object storages, etc., supporting a variety of system configuration and backup policies.**

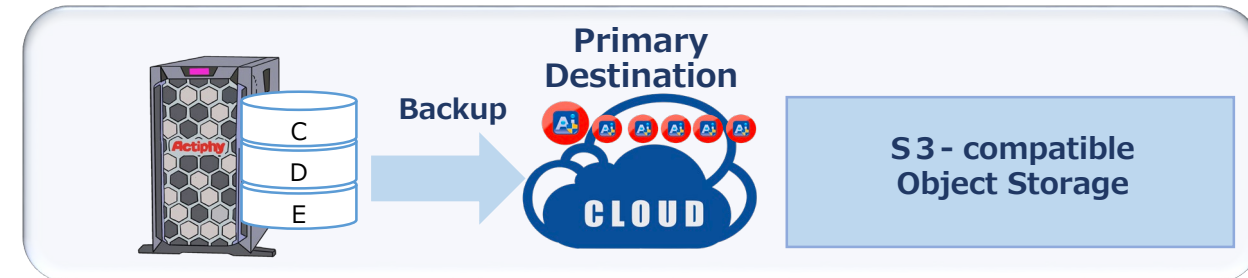
A variety of Storage Media



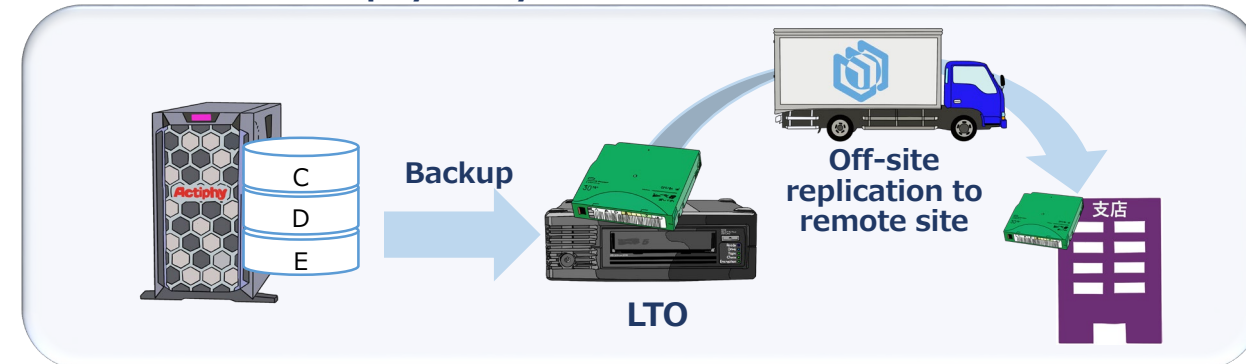
Save your backups to any available storage location **NEW**

Supported storages include **S3-compatible object storage, SFTP server and LTO tape devices** as backup destinations.

Backup systems directly to cloud storage

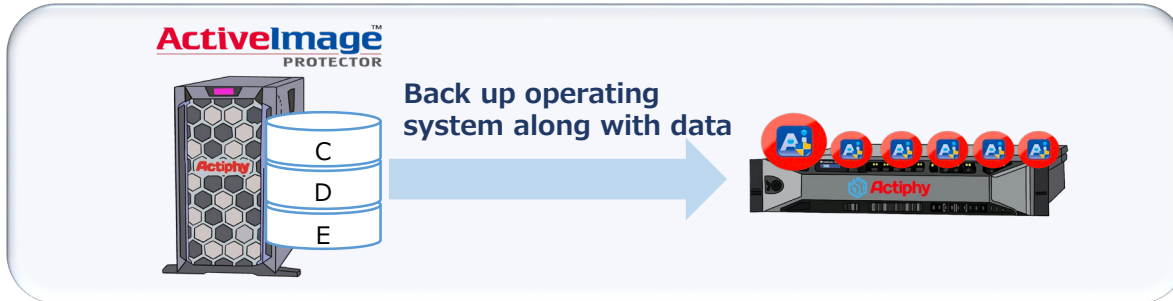


Backup data saved on LTO tape can be physically isolated at remote site



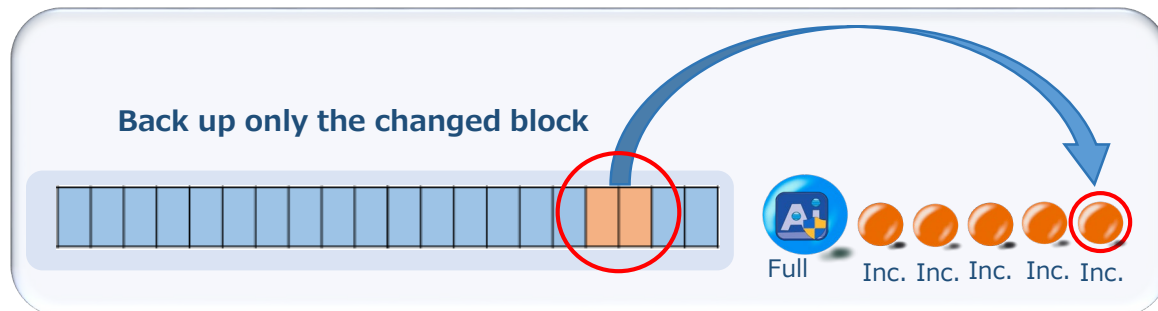
Backup the operating system along with all your data

ActiveImage Protector is a **disk imaging backup of live Windows system (OS/application) along with all you data.**



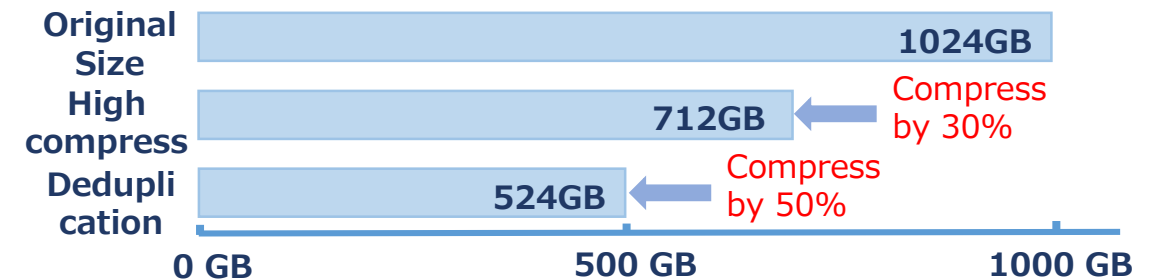
Incremental backup includes only the changed blocks from the last backup

Daily incremental backup includes only the changed block since the last backup and is scheduled on regular basis according to the predefined schedule. ActiveImage Protector only runs backup tasks according to the predefined schedule, minimizing the consumption of the system resources on the machine.



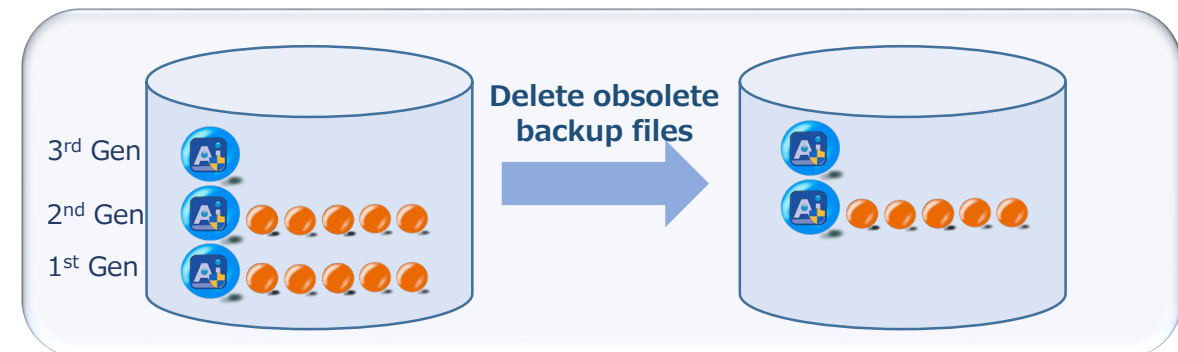
Deduplication Compression reduces storage requirements

Our Inline Data Deduplication Compression (IDDC) feature **eliminates duplicate data while simultaneously compressing it**, resulting in a significant reduction in backup storage requirements and network load.



Use Retention Policy to delete obsolete backup image files, resulting in reduction of the storage space.

Retention Policy feature allows you to **automatically delete the obsolete backup image set** when the number of backup image sets reaches the preset limitation and reduce the storage space requirements.



Restore the entire disk

Select the most up-to-date incremental backup file, specify the restore target disk and your system is restored to the most **updated state**. The restore target may be on-premise virtual environment, cloud environment as well as the original server.



Restore by volume

Restore a backup image of a specific recovery point to a specified volume. For example, **only "D:" drive can be selected from the data volume to restore.**



File / Folder Recovery

File Recovery Feature

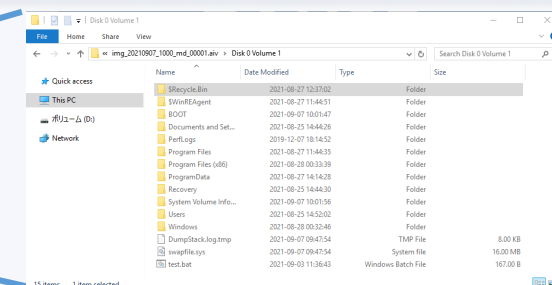
Granular point-in-time recovery of a file / folder is enabled. The stream information and access rights assigned to files are inclusively restored. When you only need specific files to restore in order to restart your duties, **File Recovery feature can provide you with flexible action.**



Image Explorer

Installed as a Windows Explorer extension, Image Explorer allows you to browse and copy files and folders from **ActiveImage Protector image file** without requiring a full image mount, saving your time and system resources. This will allow you to restore individual files or folder.

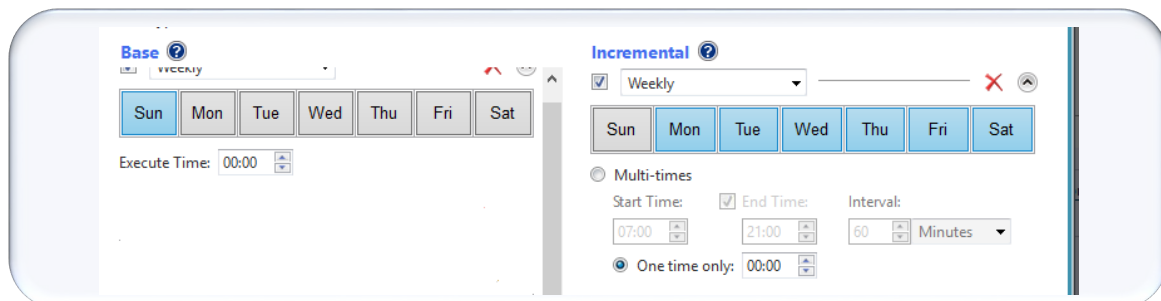
Click a backup file



Flexible Multi-scheduling

Backup tasks can be automatically executed according to the onetime, weekly or monthly schedule, specified date / time or a specific day of a week in a specific month.

OWeekly - Full backup may be scheduled to execute on the weekend while incremental backup tasks are scheduled from Monday to Friday. Incremental backup can be scheduled to run for multiple times a day.



The screenshot shows the Actiphy backup scheduling interface. On the left, the 'Base' section is set to 'Weekly' with a calendar showing Sunday selected. Below it, 'Execute Time' is set to 00:00. On the right, the 'Incremental' section is set to 'Weekly' with a calendar showing Monday through Friday selected. Below it, 'Multi-times' is selected with 'Start Time' at 07:00, 'End Time' at 21:00, and 'Interval' at 60 minutes. The 'One time only' option is also visible with a time of 00:00.

OMonthly - Select by clicking the date(s) of the month and the time of a day to perform a recurring full base backup tasks while incremental backup tasks are scheduled from Monday to Friday.

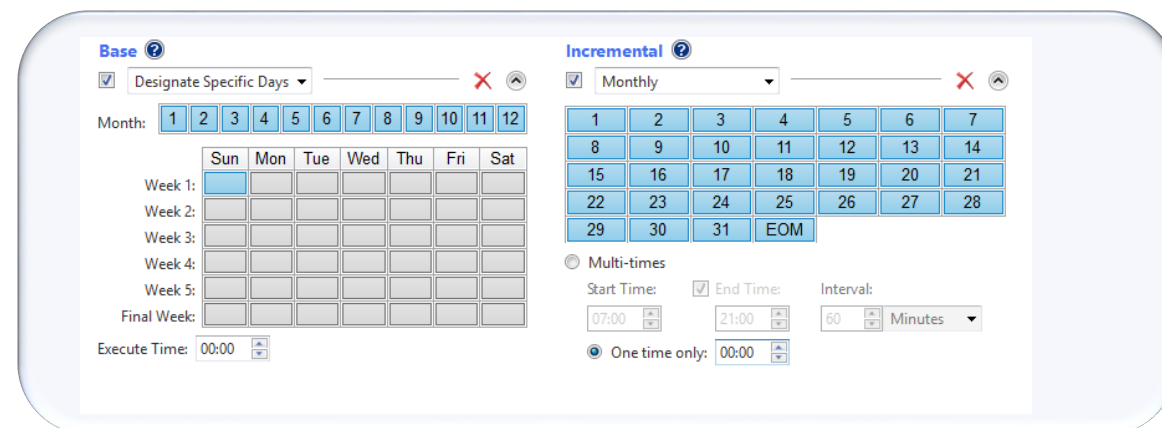
ODesignate Specific Days - Select by clicking a specific days of a week to perform a recurring full base backup while incremental backup tasks are scheduled from Monday to Friday.

OSpecified Date / Time - Select by clicking a date and time to schedule a full backup task on specific date while incremental backup tasks are scheduled for other days.

Customized Schedule Settings

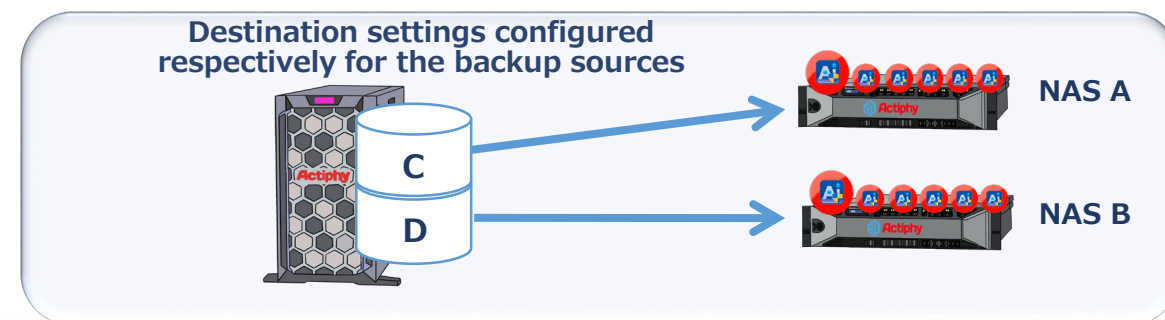
OMulti-scheduling

Incremental backup tasks are scheduled on weekly basis while full backup tasks are scheduled at the end of a month.



The screenshot shows the Actiphy backup scheduling interface for multi-scheduling. On the left, the 'Base' section is set to 'Designate Specific Days' with a calendar showing the 1st of the month selected. Below it, 'Execute Time' is set to 00:00. On the right, the 'Incremental' section is set to 'Monthly' with a calendar showing the 1st of the month selected. Below it, 'Multi-times' is selected with 'Start Time' at 07:00, 'End Time' at 21:00, and 'Interval' at 60 minutes. The 'One time only' option is also visible with a time of 00:00.

OMultiple Backup Destination Settings - Multiple backup task settings can be configured to direct backup files to multiple destinations. Backup files of C drive are created in NAS A while backup files of D drive are created in NAS B.





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