Orchestrating a brighter world

NEC

NIAS (NEC Information Assessment System)
Integrated File Server Management Software

December, 2020

AI Platform Division,
NEC Corporation

Challenges of Disordered File Server

Trash Box

- ✓ No organized rule for file/folder creation and management
- ✓ **Huge amount of old files and unused files** spoil the efficient file search and usage

Repeated Disk Expansion

- ✓ **Capital investment or cloud service usage cost** unexpectedly increasing due to rapid increase of file data
- ✓ Back-up and disaster recovery needs more and more cost to handle large data

Information Leakage

- ✓ **No rule of access right setting** relying on specific users
- ✓ **Information are not appropriately managed based on file organization rule**

Time Consuming Work

- ✓ Information change and update history management of Active Directory requiring big effort
- ✓ **Information system division manages every request** for access right change

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Inactive Data Occupying File Server

- Increase ratio of file capacity is 1.55 times every year resulting in 9 times increase in five years
- In addition;

68%

files are not referenced more than 90 days

76%

files are not updated more than 1 year

53%

files are large (10MB or more) but it occupies only 1% of total file number.

28%

Files are duplicated files

Deletion of it results in 14% capacity reduction

Stored data increases dramatically, but the most of the unused data is occupying the file servers.

(NEC's survey with 50 companies/organizations)

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NIAS Solution Overview

Safer and more efficient operation management of file servers

Cost Saving

a. Visualization

Automated graphical report creation enabling to immediately grasp the file server.

b. Organization / Capacity Reduction

Periodical unused data organization and reduction by deleting or archiving to cloud environment.

Removing Risks

c. Access Rights Setting

Modification of access rights using view list. Easy detection and optimization of inappropriate access rights

Efficiency

Option product

d. Resource Management

Active Directory setting, quota setting, and workflow for approval

V4.2 NEW

e. Data Migration

Data migration from on-premise file server to other file servers including IaaS, and Box

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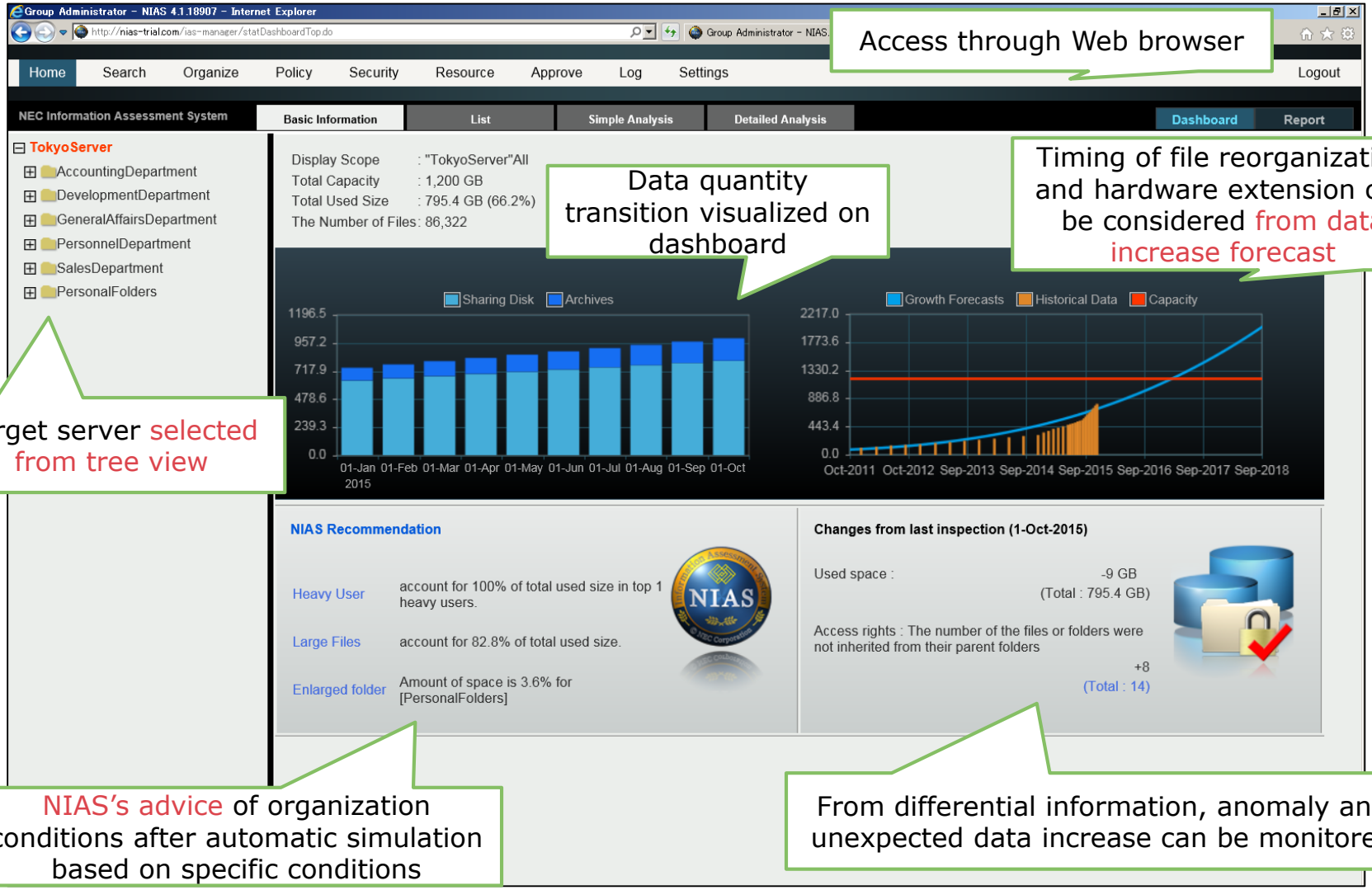
Status Check on Dashboard

Status of file server can be checked with intuitive UI



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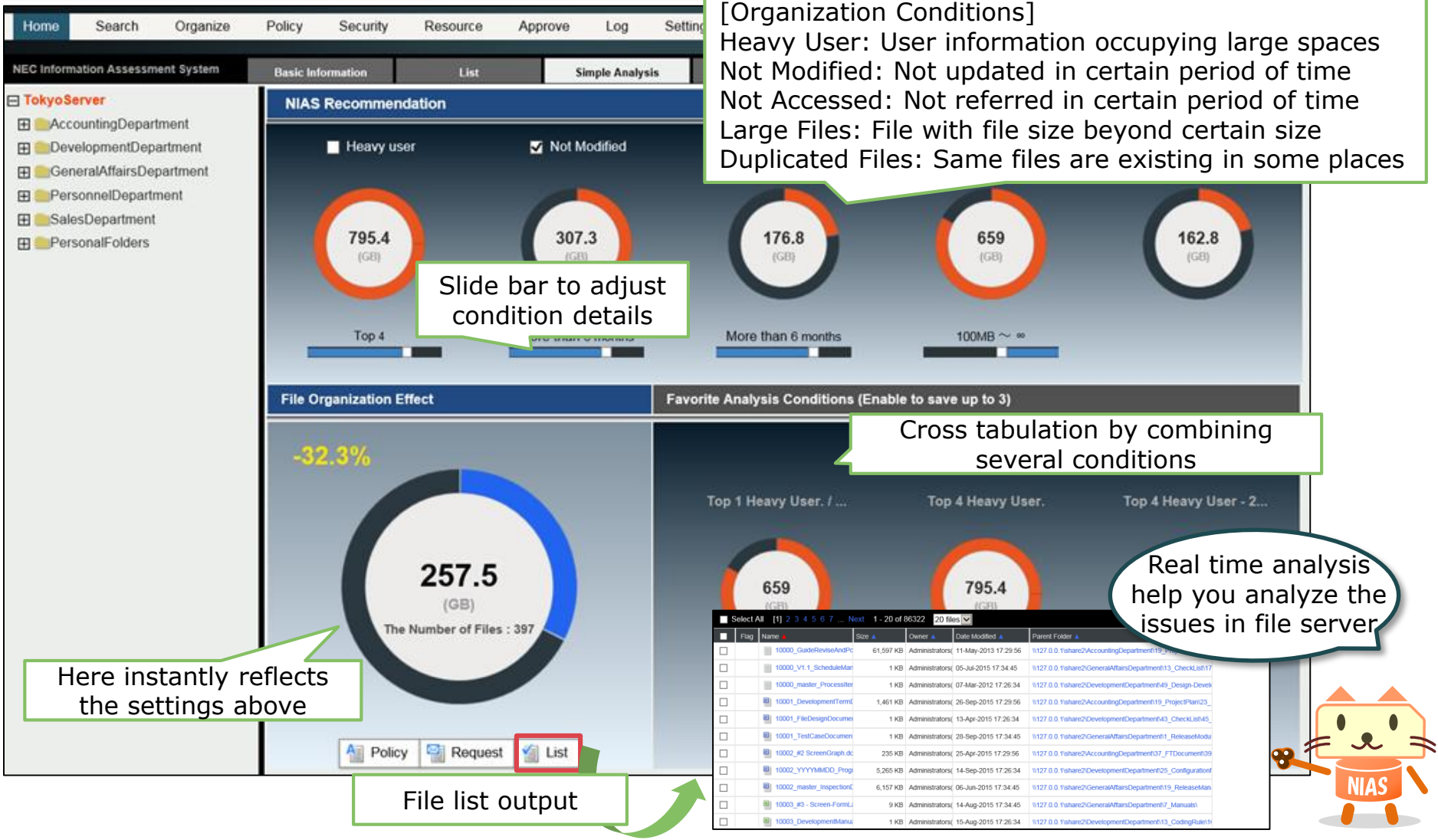
Rapid Simulation of Outcomes (1/2)

Easy condition setting to list organization target files



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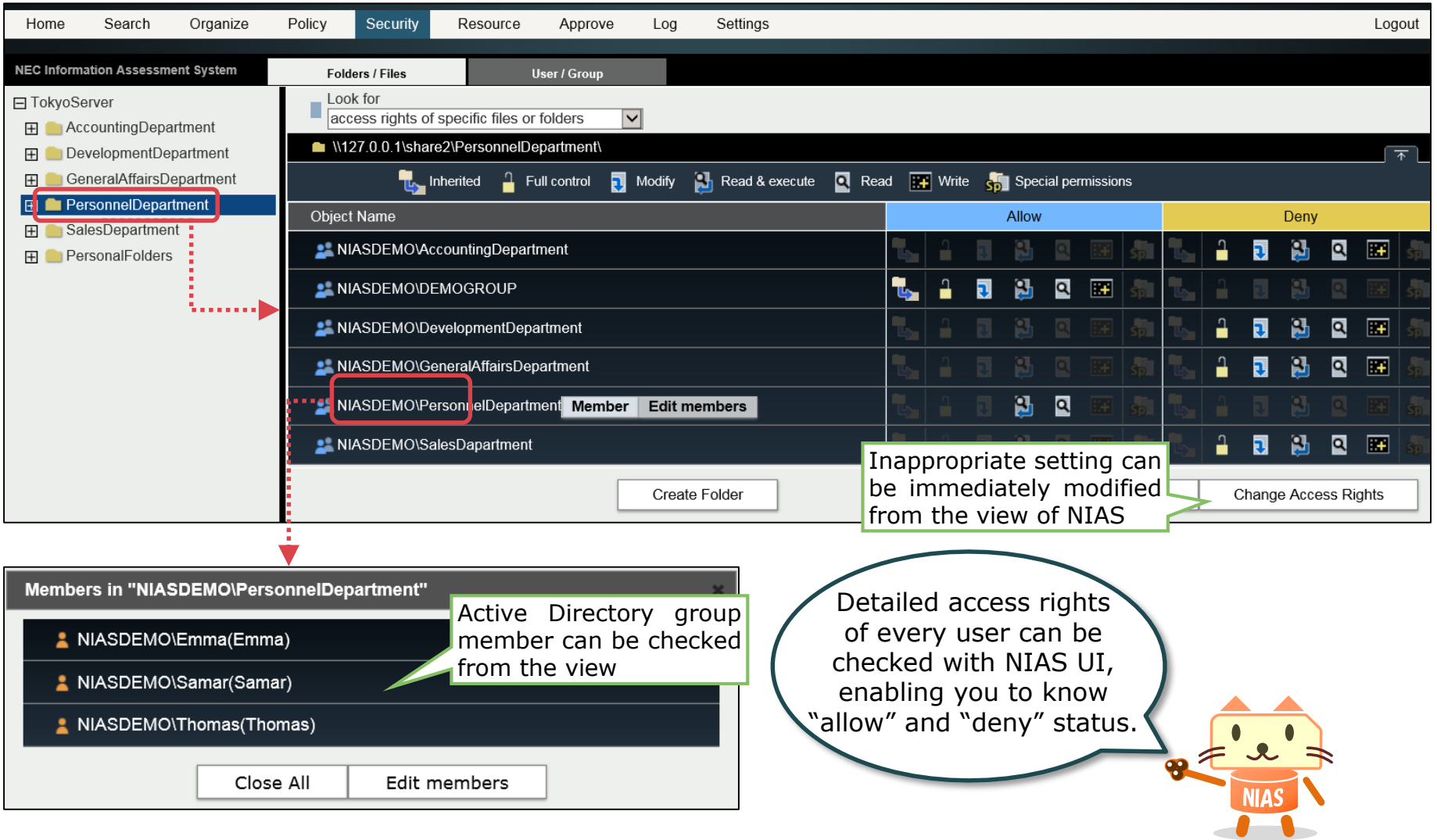
Visualization of Access Rights

Only single click to grasp the access right of specific folder



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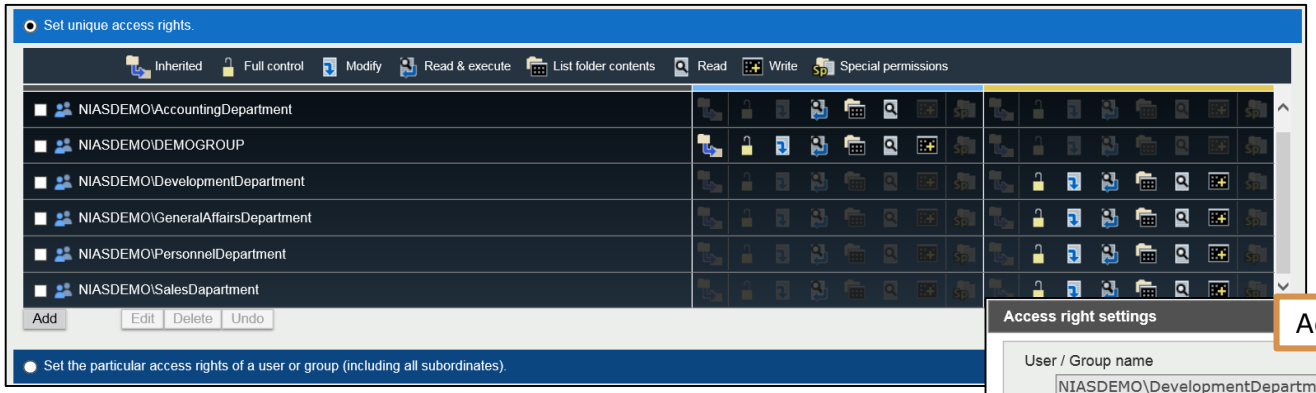
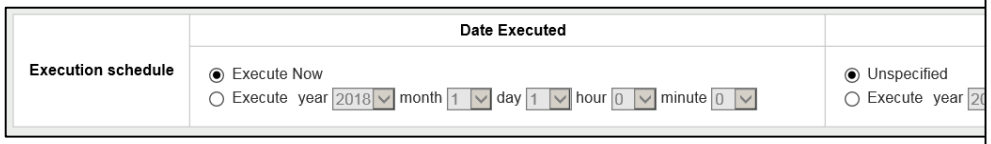
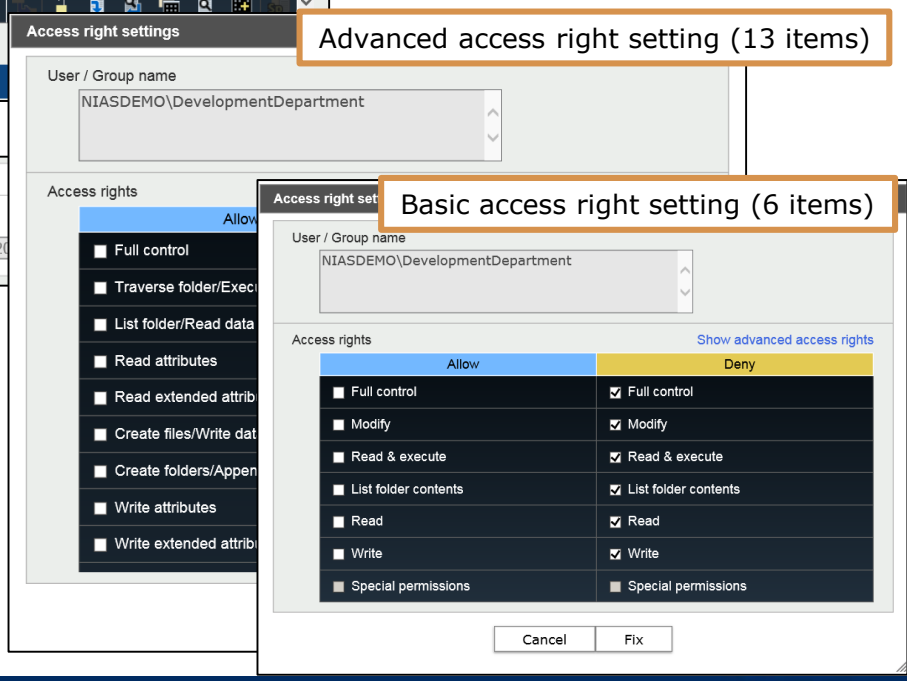
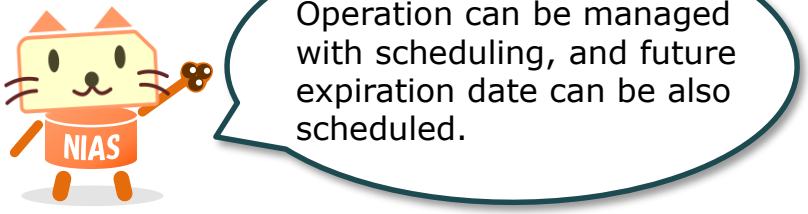
Access Right Modification

Detailed access rights of specific folder is shown in the single view. Access right can be modified with the view list while confirming if it was modified properly, leading to setting error prevention









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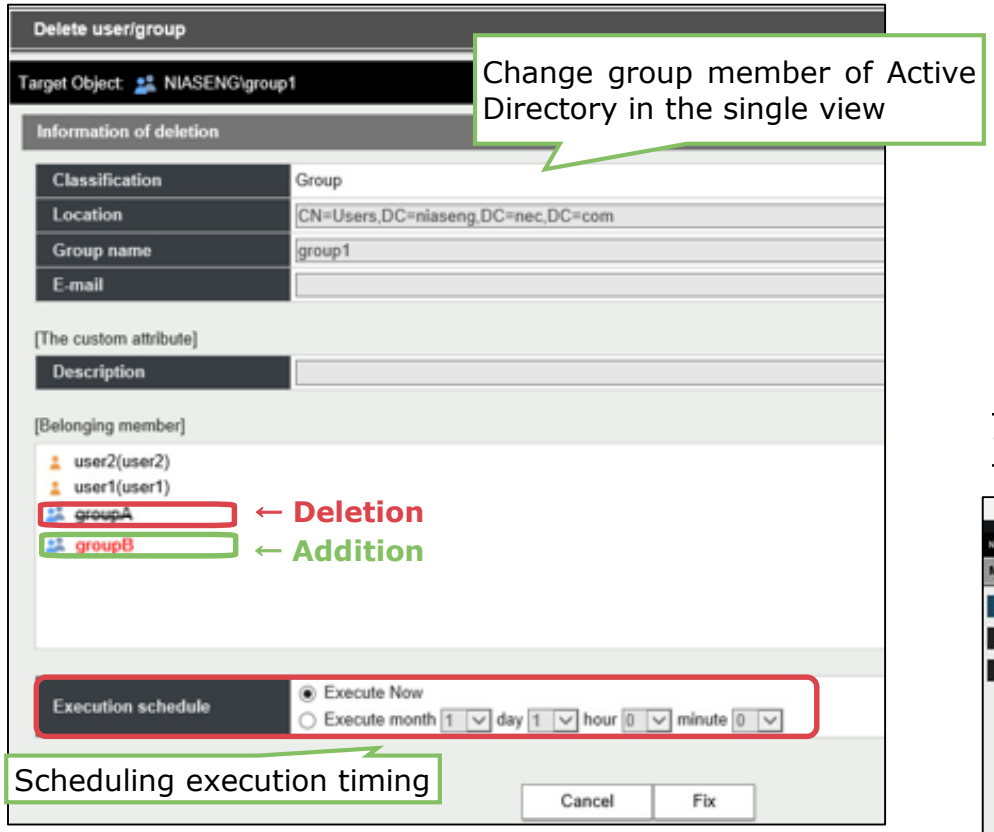
Time-Saving Setting in Single View

Active Directory setting and folder creation (quota setting) is enabled. Application/approval workflow with access right setting is offered with this option function

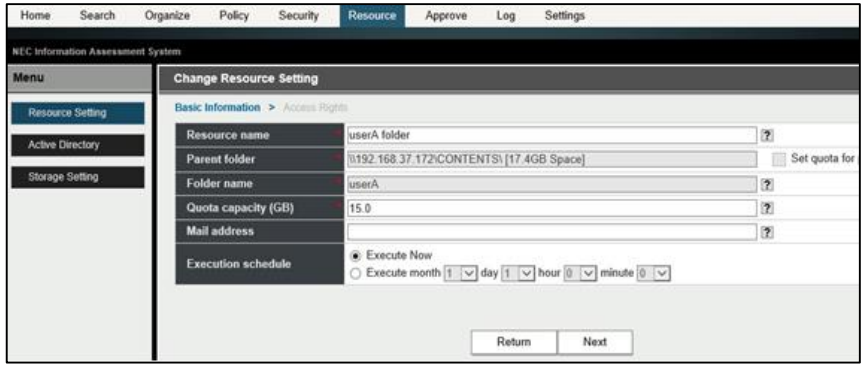
Account management with Active Directory



Change group member of Active Directory in the single view

Scheduling execution timing

Folder creation (quota setting) with storage



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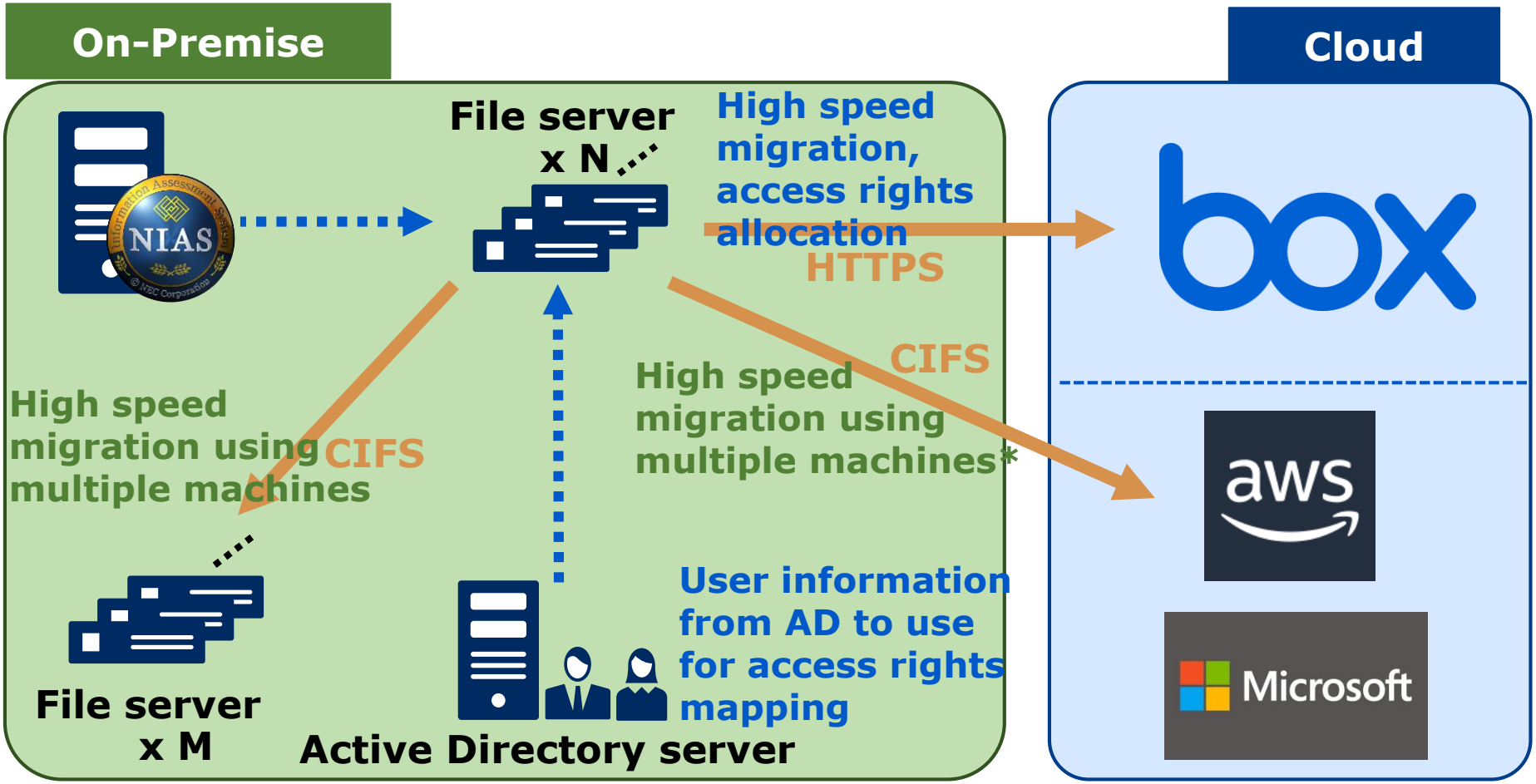
Data Migration to CIFS File Server and Cloud Storage “Box”

V4.2 NEW

Reinforce data migration functions for “from on-premise to cloud” and “from on-premise to on-premise” (cloud storage is only Box)



*Dedicated networks such as VPN is required.

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SCSK Corporation

SI

Analyze file server usage and visualize unnecessary files. Increased awareness of file organization led to **40TB reduction**

Challenges

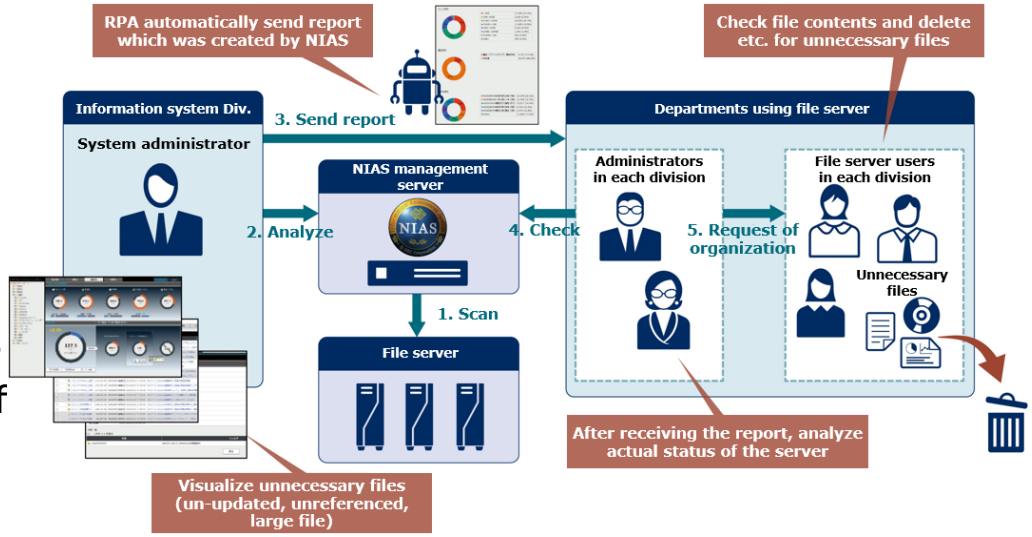
- 200TB file server is managed by 200+ organizations, and data management is a responsibility of each department, and deletion of unnecessary files has not been controlled with proper rule.
- Capacity shortage of existing file server is big concern, as file server replacement is not done in near future. Also, data migration cost reduction is required.

Why NIAS?

- Company-wide 200TB file server visualization, file reduction and access rights management.
- As a result of the benchmark test, the performance of NIAS was greatly higher than that of other companies in terms of processing power for detecting unnecessary files and crawling speed.

Benefit

- ✓ Sufficient capacity up to server replacement was secured, and capacity reduction of about 40 TB became possible.
- ✓ Report that visualized the problem changed the awareness of the users. Unnecessary files such as long-term un-updated / unreferenced, duplicated, large-capacity, etc. has been removed.



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NIAS contributes to the expansion of users and stable operation of **file storage services using NAS**

Challenges

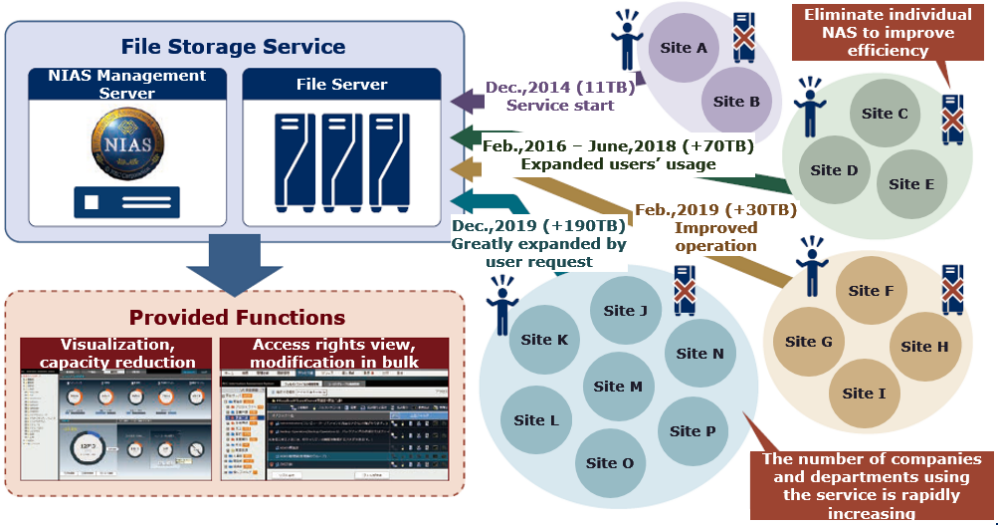
- As unnecessary file deletion and access rights setting modification required a lot of time and effort. Therefore “File storage service" using NAS for each group company started, but in order to smoothly organize files and reduce capacity, a tool to visualize NAS was required.
- Inconsistencies in access rights occur in timing of personnel change. It took a long time to set up

Why NIAS?

- NIAS, which uses unique memory DB, can realize high-speed response and users can use the service comfortably.
- A simple and easy-to-read GUI makes it possible to quickly get the required information, when it is required.

Benefit

✓ In user department, complicated work for inventorying and modifying access rights was saved, and information leakage risk was reduced. Service was expanded from 11TB to 300TB due to users’ request, which eliminated unnecessary investment by realizing file server visualization, instead of simply increasing the number of NAS



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Sumitomo Bakelite Co., Ltd.

Manufacturing

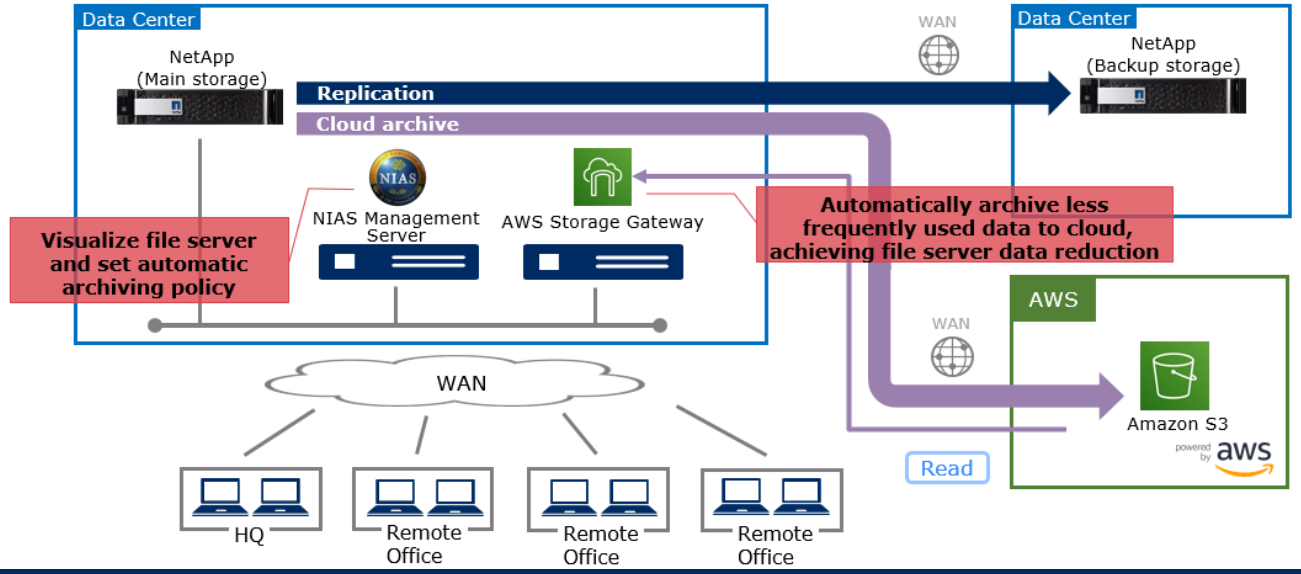
NIAS manages data on integrated storage and moves less frequently used data to Amazon S3 to reduce operational cost.

Challenges

- Cost increase due to unmanaged file server locating at several remote places. Data increased to more than 15 times in 5 years.
- Unnecessary files were occupying free space of file server. Administrators could not delete files without users' permission.
- Hardware extension required huge amount of time and cost.

Benefit

- ✓ Stable operation after file server integration using NIAS's visualization function.
- ✓ NIAS specifies unused files (e.g. files not updated over 1 year) and automatically sends these files to cloud storage.
- ✓ Using both economical S3 storage and on-premise file server saves time and cost to manage the files by 60% in 5 years.



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gloops, Inc.

Media

NIAS helped visualize and **modify all access right inconsistencies** caused by rapid business growth and frequent organizational changes

Challenges

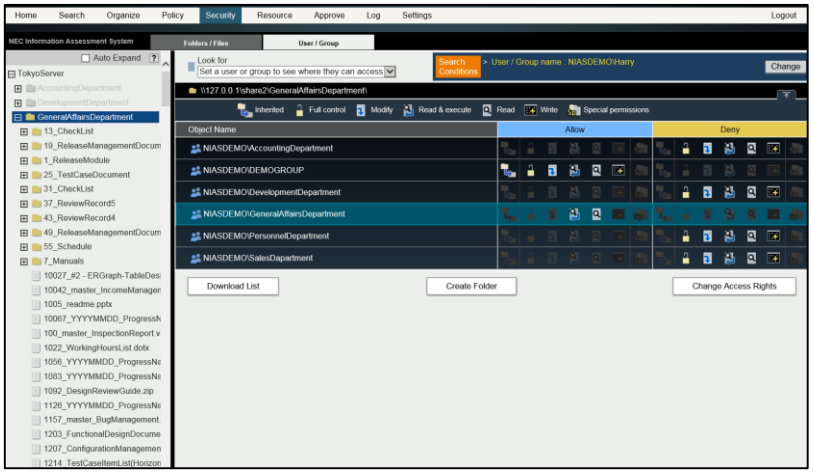
- Organizational changes to cope with a rapidly growing workforce following business expansion led to frequent changes in access rights and its inconsistencies.
- The large amount of files made it physically impossible to manually check the actual situation and change access rights.
- The amount of data on file servers increased suddenly, as did storage costs.

Why NIAS?

- Visualization and modification of access rights can be done in a single view
- Group member of Active Directory can be edited with NIAS easy-to-understand view
- Quick response in handling with more than 100TB data capacity
- Rich experiences of implementation

Benefit

- ✓ As much as 1.2 million inconsistencies were modified in 2, 3 days.
- ✓ Appropriate status greatly reduces the risks of information leakage.
- ✓ By managing duplicated or large files, large amount of capacity reduction / free space creation are enabled.



https://www.nec.com/en/global/prod/nias/case_study/gloops/

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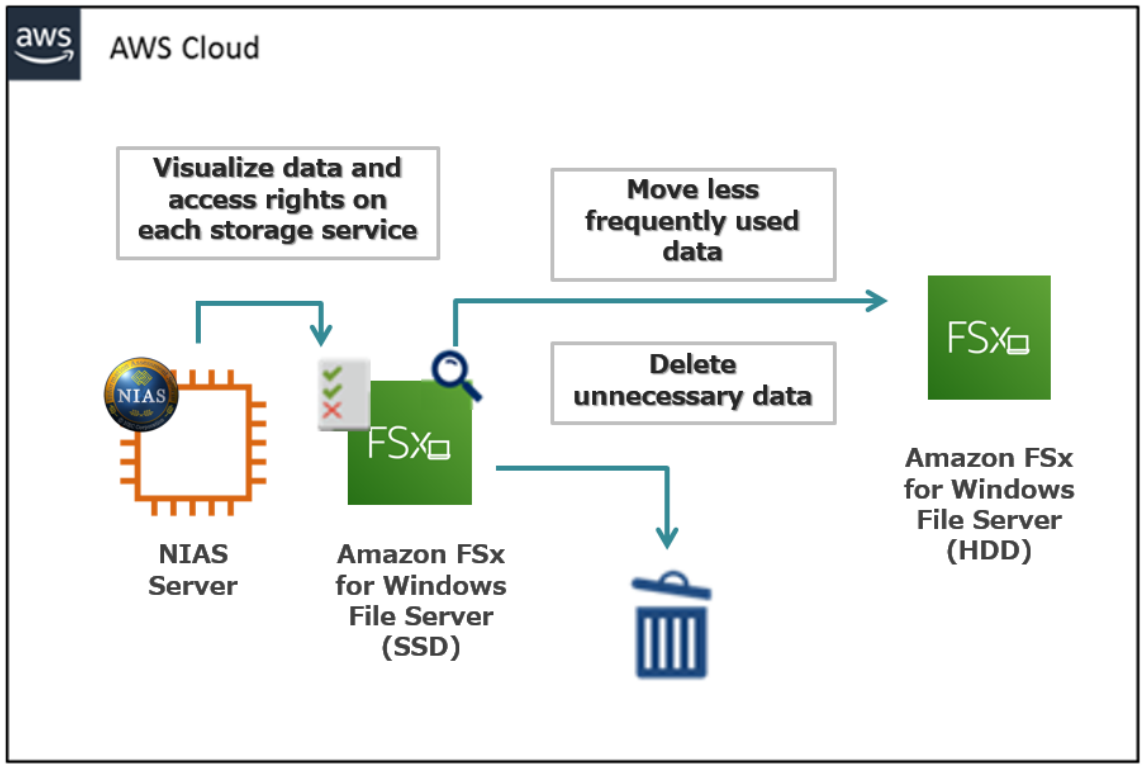
AWS × NIAS　File Server Optimization Solution

Security measure and optimal placement of data on cloud

- Low cost and high performance being fulfilled with FSx.
  Frequently used data remains in high speed SSD, and the others are archived to low cost HDD.
- Proper access rights management on cloud data to keep security.



Amazon FSx for Windows Verified!

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