ILM Software for File Servers
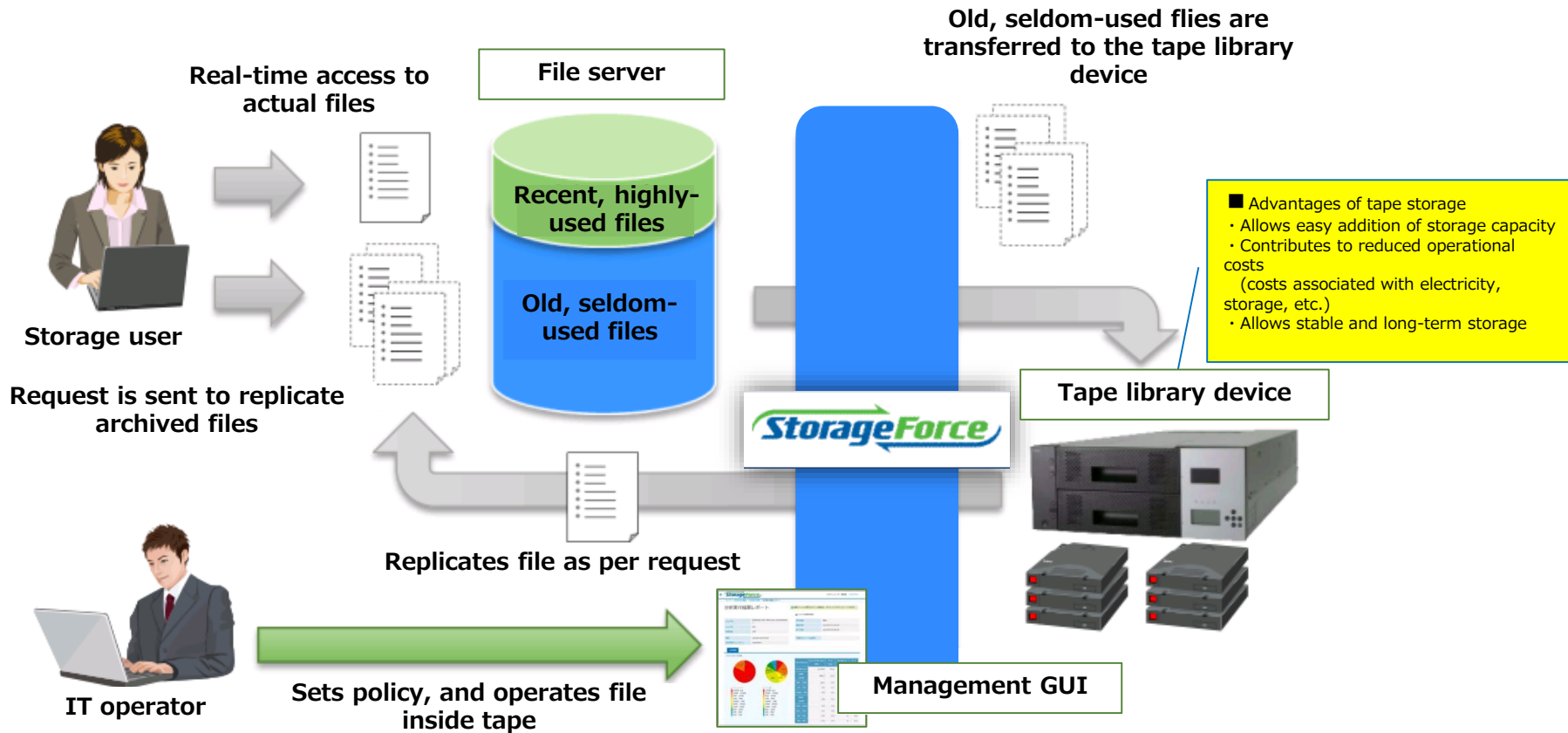## (StorageForce V2 for Tape)

Environmental Load Evaluation Model
NEC Solution Innovators, Ltd.

Summary of StorageForce

StorageForce detects old, seldom-used files and automatically transfers that data to a "tape library device," thereby improving operational efficiency of file servers. The storage GUI can be used to visualize usage information to ensure easy and optimal operation of the system.

Moreover, the introduction of the tape library device for use as secondary file storage can contribute to reducing costs related to operation, such as capital investment in additional high-speed, general purpose file servers (primary storage) , and electricity costs

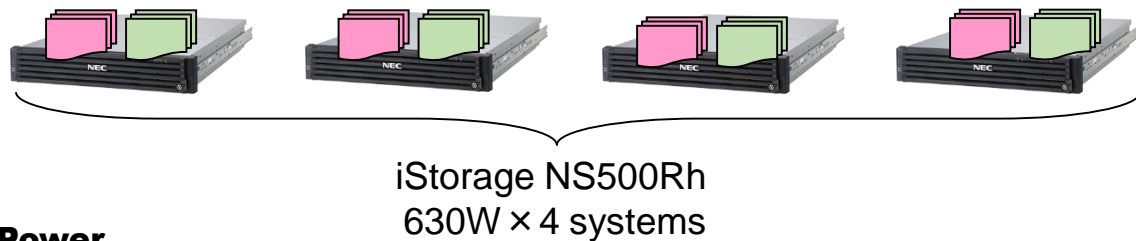(Reduced power consumption will lead to lower CO_2 emissions)

Old, seldom-used flies are transferred to the tape library device

Real-time access to actual files

File server

Recent, highly-used files

Old, seldom-used files

Storage user

Request is sent to replicate archived files

■Advantages of tape storage
・Allows easy addition of storage capacity
・Contributes to reduced operational costs
  (costs associated with electricity, storage, etc.)
・Allows stable and long-term storage

Tape library device

StorageForce

Replicates file as per request

IT operator

Sets policy, and operates file inside tape

Management GUI

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Before introduction

Usage capacity: 386.4TB
All **systems** demand High I/O performance
Round-the-clock operation

File server
(96.6TB, 4 systems)
High speed, general-use

iStorage NS500Rh
630W × 4 systems

: **Recent, highly-used files**

: **Old, seldom-used files**

Power consumption

2520W

- Mixture of "Recent, highly-used files," and "Old, seldom-used files"
- The growing data volume calls for the need to increase high-performance storage space, resulting in increased storage costs
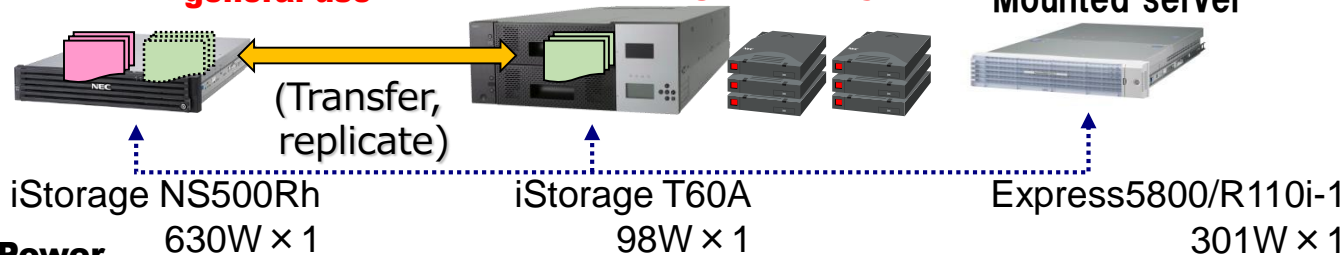
After introduction

Usage capacity: 456.6TB
File server demand high I/O performance
Round-the-clock operation

File server
(96.6TB) **High speed, general-use**

Tape library device
(360TB*) **Low-cost, high-capacity**

StorageForce
Mounted server

(Transfer, replicate)

iStorage NS500Rh
630W × 1

iStorage T60A
98W × 1

Express5800/R110i-1
301W × 1

* Maximum storage capacity (60 spools)

Power consumption

1029W

- "Old, seldom-used files" are transferred to the low-cost, high-capacity tape library device
- Improves data storage efficiency, reduces storage and power consumption costs, and enables long-term storage

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The introduction of StorageForce has led to decreased power consumption, resulting in a 59% reduction in CO_2 emissions

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