Shift Transfer Tool Overview

The NAS-developed Shift tool can copy files locally on NAS enclave hosts, transfer files between hosts inside the NAS enclave, and transfer files between the NAS enclave and remote hosts. You can also use Shift to check the status of transfers at any time, receive email notification of completion, errors, and warnings, and restart interrupted transfers or transfers with errors.

All functionality is accessed through the Shift client, which is invoked via the **`shiftc`** command. The syntax for **`shiftc`** is similar to the syntax for the **`cp`** and **`scp`** commands.

Shift is the recommended method for transferring files to and from the Lou mass storage system, as it can create tar files as part of the transfer and split a transfer into multiple tar files for oversized directories (larger than 1 TB).

Advanced Features

Shift includes the following advanced features:

- Automatic parallelization of transfers
- Local and remote tar creation and extraction
- Synchronization based on modification times and checksums (similar to **`rsync`**)
- Automatic file integrity verification and correction
- Ability to restart transfers
- Automatic retrieval of files from tape storage (DMF-managed Lou filesystems)
- Ability to check status of current transfers

How to Use Shift

See the following articles for detailed information about how to use Shift:

- Using Shift for Local Transfers and Tar Operations
- Using Shift for Transfers and Tar Operations Between Two NAS Hosts
- Using Shift for Remote Transfers and Tar Operations
- Checking Shift Transfer Status and Restarting Transfers
- Shift Command Options

Additional Resources

You can also see presentation slides for three HECC training webinars that demonstrate how to use the tool:

- Simplifying and Optimizing Your Data Transfers (PDF)
- Advanced Features of the Shift Automated File Transfer Tool (PDF)
- Simple Automated File Transfers Using SUP and Shift (PDF)

Recordings of each presentation are also available in the Past Webinars Archive.

Note: Some hostnames and options may have changed since the webinars were presented.

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