Enscribe File System:

- 3-level hierarchy file system
  - System Level -The top level identifier that specifies which system or node in the network contains the file
  - Volume Level -The middle level that identifies the disk volume where the file resides
  - Sub-Volume Level -The lowest level that acts as a directory or folder within the volume

- native record oriented file system
- File types -
  - Entry -Sequenced → appends records in order
  - Relative → records addresses by slot number (RRN)

    RRN- Read Record Number
  - Key sequenced → records organised in B-tree by a primary key, optional alternate keys
- Auditing (via TMF): Ensures ACID transactions across multiple files
- Concurrency: Record - level locking (READUPD +WRITEUPD)

Record - Oriented Concept:

- Record is the fundamental unit of data in Enscribe file system
- Instead of treating a file as one long bitstream, Enscribe treats it as a collection of self- contained records
- Application read/write entire records, never partial bytes

File Naming Hierarchy: supports a 3-level hierarchy (sometimes considerrdas 4 including the system name)

1. System name - Identifies the Nonstop system
2. volume - Physical /logical disk volume
3. Sub volume - Directory like grouping
4. file name - The actual file

FUP Commands (File Utility Program):
FUP is a comprehensive file management utility in HP NonStop (Tandem) systems that provides commands for manipulating Enscribe files. It's the primary tool for file operations, maintenance, and administration.

- Create - FUP CREATE \
- Edit - TEDIT \
- Read - FUP INFO \
- List -
  - Sequential - FUP LIST \
  - Key - FUP LIST \, KEY
- Delete - FUP PORGE \

Volumes

- List Volumes: FUP INFO \MYNODE.*
- Sub volume: FUP INFO \MYNODE.$DATA01.*
- Setting default volume: VOLUME $DATA01, SUBVOL CUSTSUB
- checking working directory : STATUS

Enscribe as a Database:

- Record Oriented access
- Random access by key

- Transaction (ACID)
- concurrency

Limitations vs RDBMS-

- No SQL interface
- No Joins , foreign keys, or query optimiser
- Each file is essentially a 'table' , relationships must be coded in the application
- Schema enforcement is minimal, record layout is defined by the program, not the file system