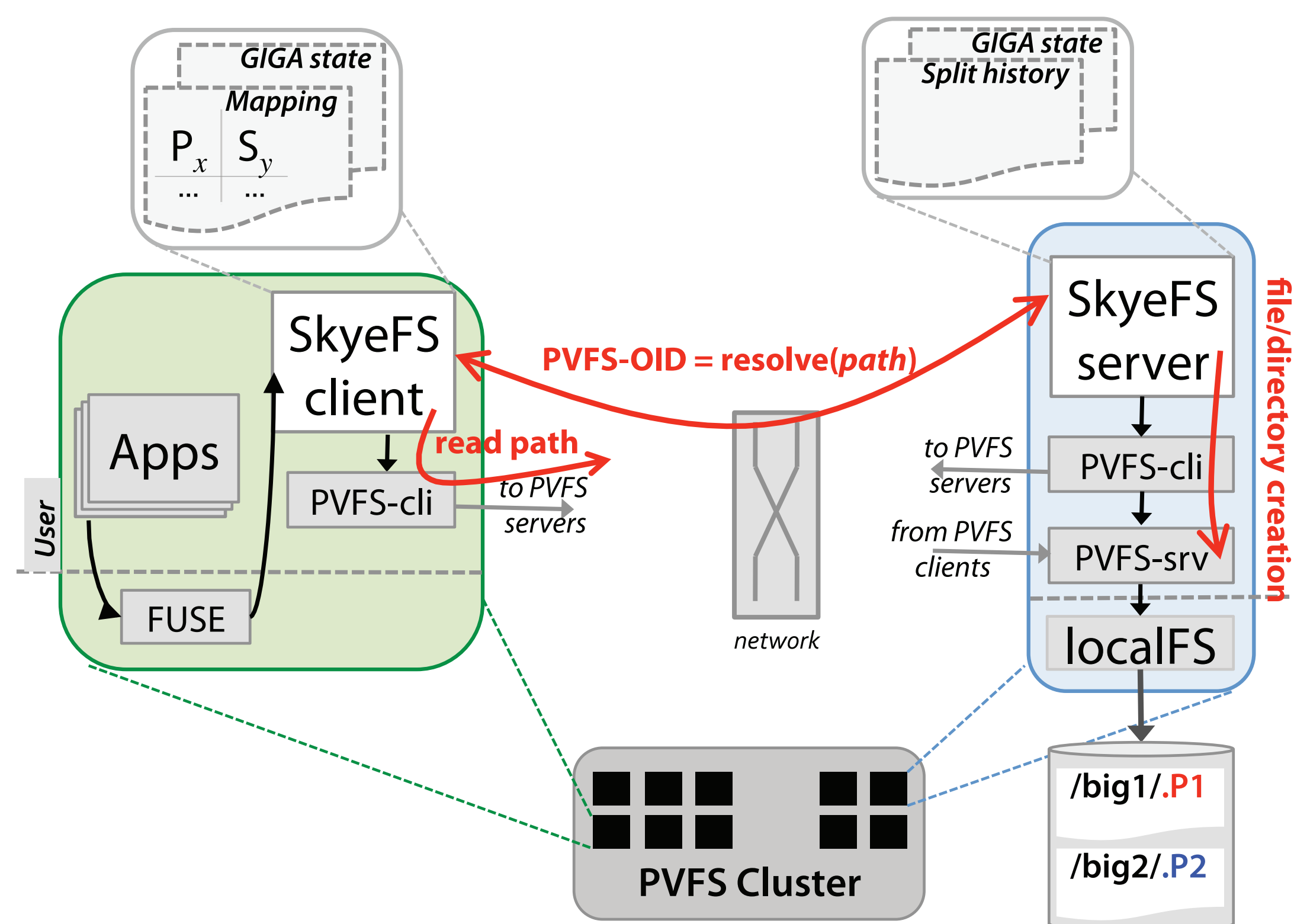


# SkyeFS: Scalable Directories (GIGA+) for PVFS

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## PVFS Features Used in SkyeFS



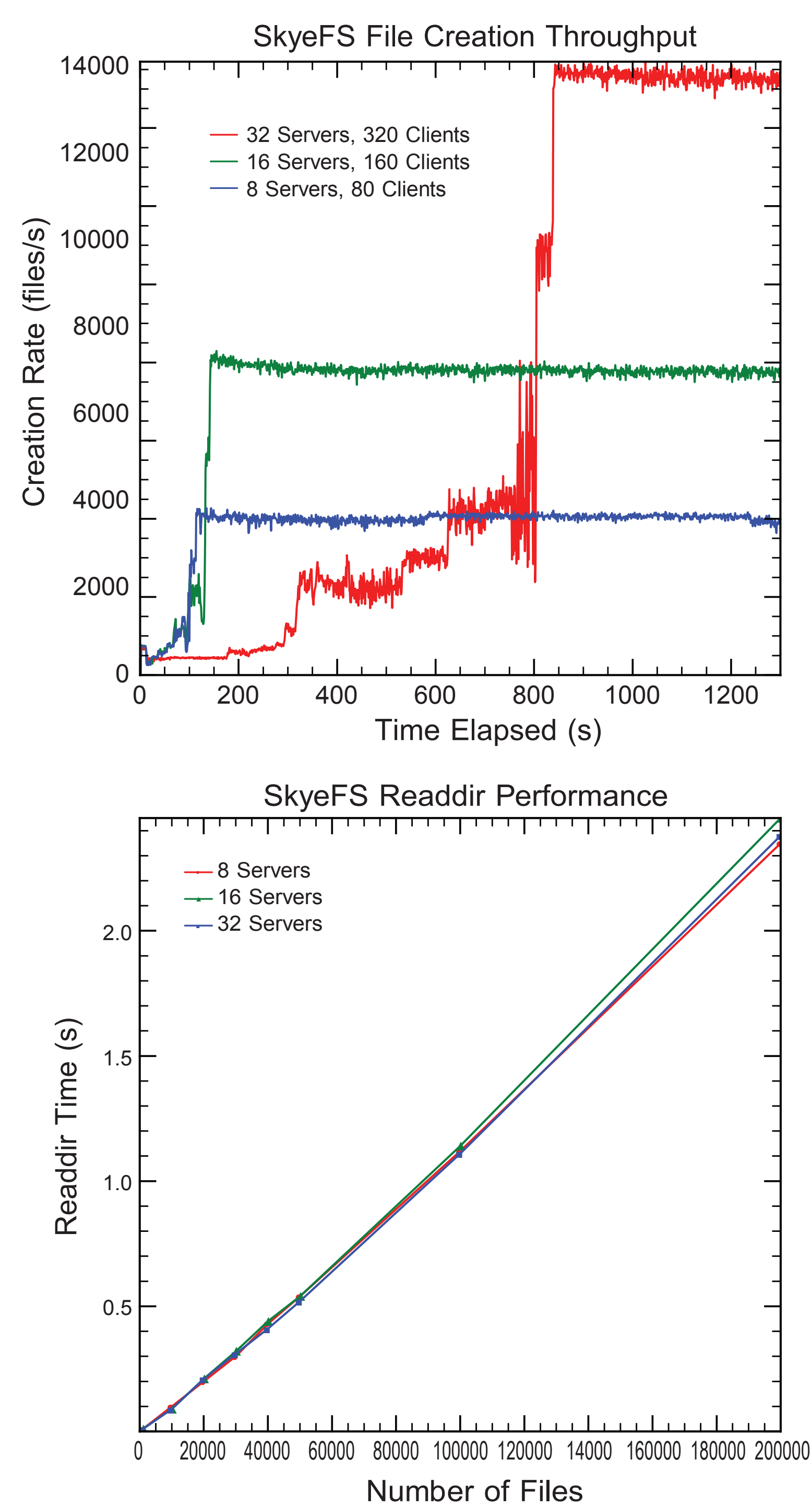
### Persistent Handles

- Each file and directory in PVFS has a unique handle
- Handles persist across renames of files allowing a client to hold them across multiple operations
- Most file operations are performed directly against PVFS by the SkyeFS client using these handles

### Metadata Server per Directory:

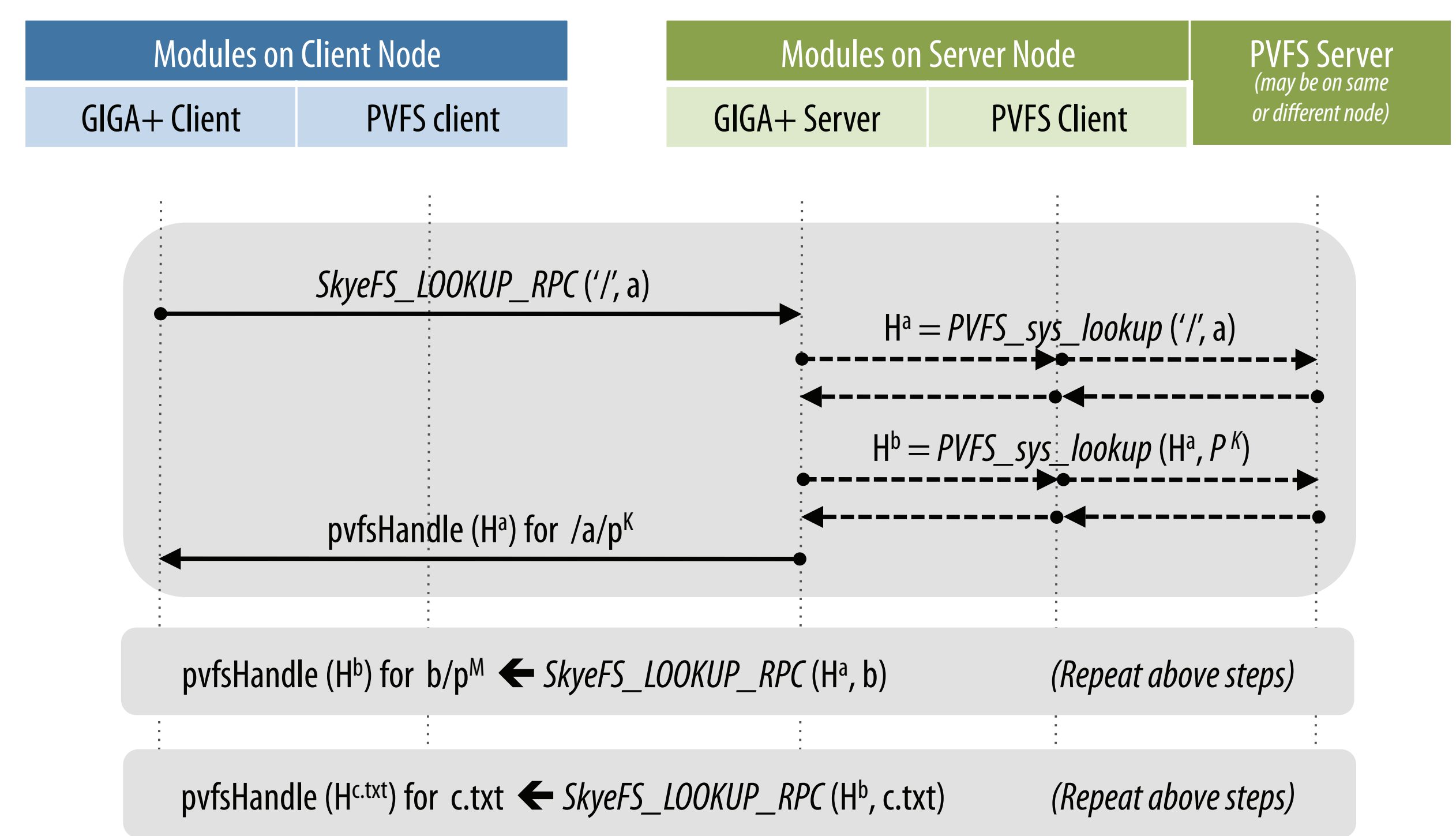
- PVFS stores a directory (and its entries) on one MDS
- SkyeFS simulates distributed metadata by splitting a logical directory into multiple physical directories
- Each GIGA+ partition is mapped to a physical directory

## Results

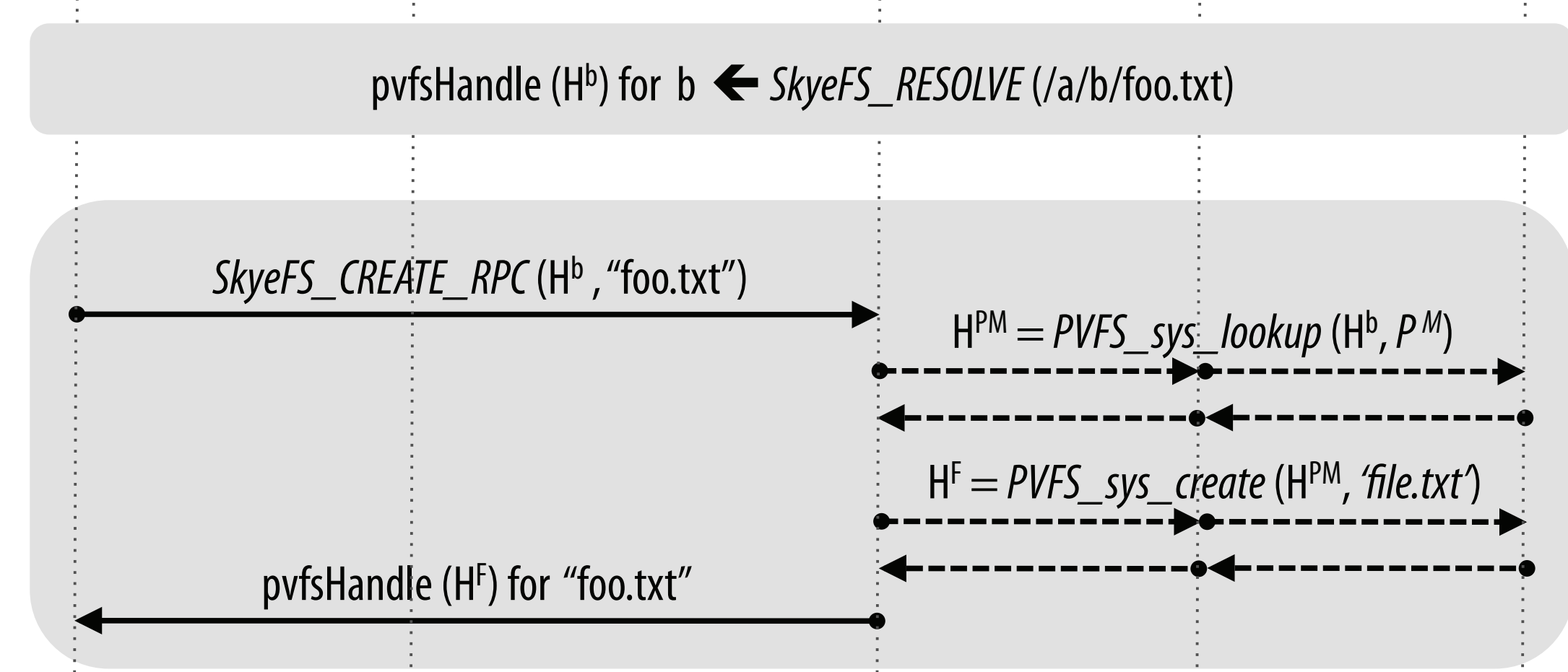


## Operations in SkyeFS

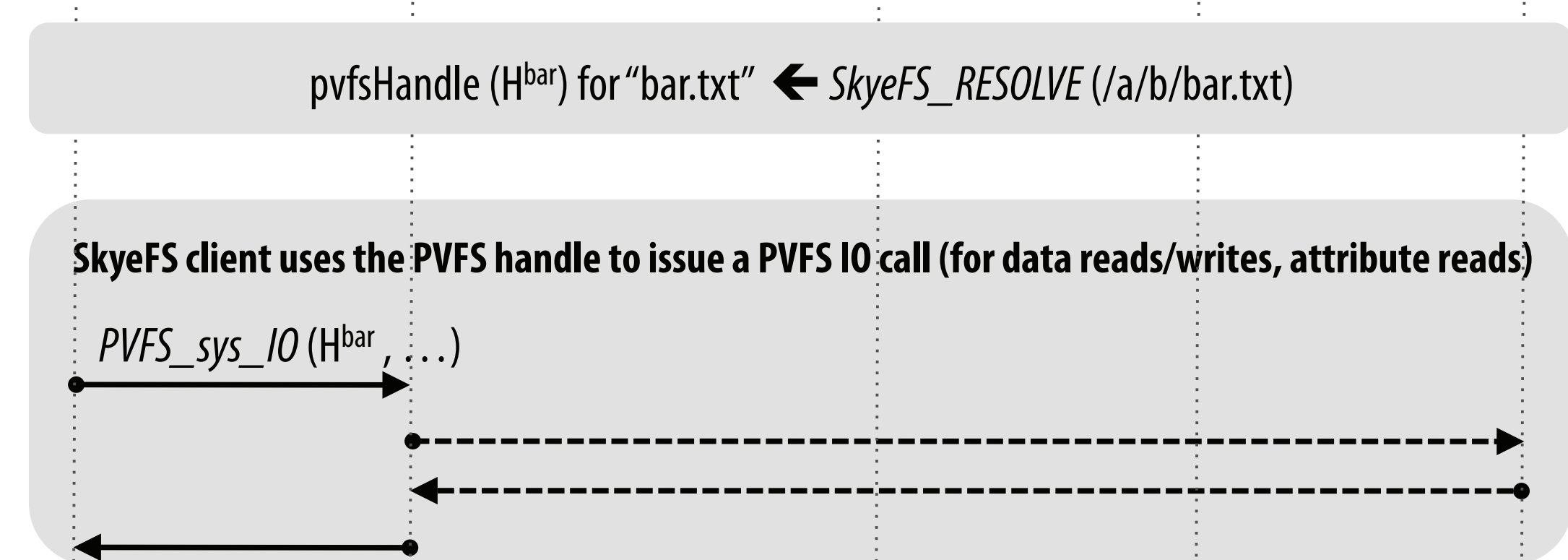
**SkyeFS\_RESOLVE (/a/b/c.txt)** returns PVFS Handle  $H^{c.txt}$



### File Creation - SkyeFS\_CREATE (/a/b/foo.txt)



### File I/O operations – read, write, getattr, etc.



### Directory scans – SkyeFS\_READDIR (/a/b/)

