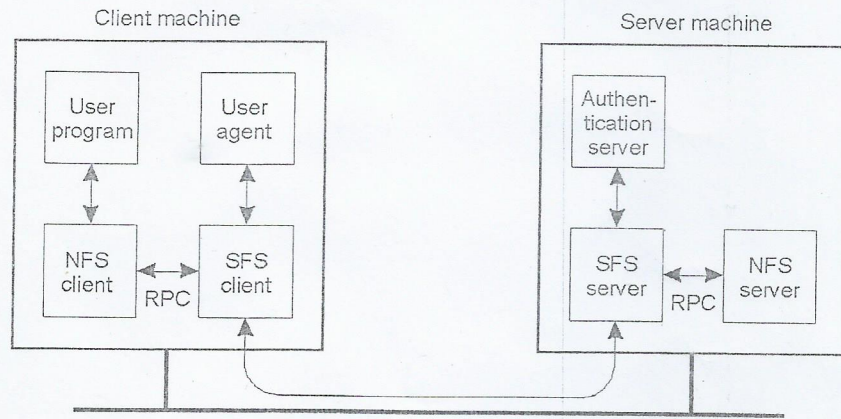


Overview of SFS

- The Secure File System uses keys for file system security.
- Clients cannot access a file without having a secret key.



The organization of SFS.

Summary

Issue	NFS	Coda	Plan 9	xFS	SFS
Design goals	Access transparency	High availability	Uniformity	Serverless system	Scalable security
Access model	Remote	Up/Download	Remote	Log-based	Remote
Communication	RPC	RPC	Special	Active msgs	RPC
Client process	Thin/Fat	Fat	Thin	Fat	Medium
Server groups	No	Yes	No	Yes	No
Mount granularity	Directory	File system	File system	File system	Directory
Name space	Per client	Global	Per process	Global	Global
File ID scope	File server	Global	Server	Global	File system
Sharing sem.	Session	Transactional	UNIX	UNIX	N/S
Cache consist.	write-back	write-back	write-through	write-back	write-back
Replication	Minimal	ROWA	None	Striping	None
Fault tolerance	Reliable comm.	Replication and caching	Reliable comm.	Striping	Reliable comm.
Recovery	Client-based	Reintegration	N/S	Checkpoint & write logs	N/S
Secure channels	Existing mechanisms	Needham-Schroeder	Needham-Schroeder	No pathnames	Self-cert.
Access control	Many operations	Directory operations	UNIX based	UNIX based	NFS BASED

A comparison between NFS, Coda, Plan 9, xFS. N/S indicates that nothing has been specified.