

Enhancements Report for Project 1

Distributed Systems (SDIS)

BACKUP

Our backup enhancement consists of telling a Peer that he should only store a Chunk if the Chunk's desired replication degree has not been met yet.

This is achieved by storing the real degree of replication of a Chunk in every Peer and by checking if it is lower than the degree that is specified on the PUTCHUNK message. If the degree is lower, the Chunk is stored. If it is not, the Chunk is not stored.

The enhancement allows the Peers to save disk space and not flood the multicast channels with STORED messages.

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RESTORE

For the restore function, we decided to enhance it by making a Peer which receives a GETCHUNK message to send a Chunk directly the Peer asking for it, instead of making it go to the multicast channel.

We did this by creating a DatagramSocket for each Peer, that makes use of the vanilla restore functions, but instead of sending the packet containing the chunk through the Restore multicast, it sends it to the address and port of the GETCHUNK packet received through control.

This way, information that is useless to other peers does not circulate in the Multicast channel.