



































# MIDDLEWARE: INTERCEPTORS - 2



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	TCP/	UDP	
	ТСР	UDP	
	Reliable	Unreliable	
	Connection-oriented	Connectionless	
	Segment retransmission and flow control through windowing	No windowing or retransmission	
	Segment sequencing	No sequencing	
	Acknowledge segments	No acknowledgement	
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CONNECTIONLESS VS CONNECTION ORIENTED				
	Connectionless (UDP) stateless	Connection-oriented (TCP) stateful		
Advantages				
Disadvantages				
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#### Super peer – Broker node, routes client requests to storage nodes

#### Weakn

weak peer -	Store data	
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## **SEARCHING FOR DATA - 3**

Policy-based search methods

- Incorporate history and knowledge about the adhoc network at the node-level to enhance effectiveness of aueries
- Nodes maintain lists of preferred neighbors which often succeed at resolving queries
- Favor neighbors having highest number of neighbors Can help minimize hops

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### COLLABORATIVE DISTRIBUTED SYSTEM EXAMPLE

BitTorrent Example:

- File sharing system users must contribute as a file host to be eligible to download file resources
- Original implementation features hybrid architecture
- Leverages idle client network capacity in the background
- User joins the system by interacting with a central server
- Client accesses global directory from a tracker server at well known address to access torrent file
- Torrent file tracks nodes having chunks of requested file
  Client begins downloading file chunks and immediately then
- participates to reserve downloaded content or network bandwidth is reduced!!

Chunks can be downloaded in parallel from distributed nodes
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