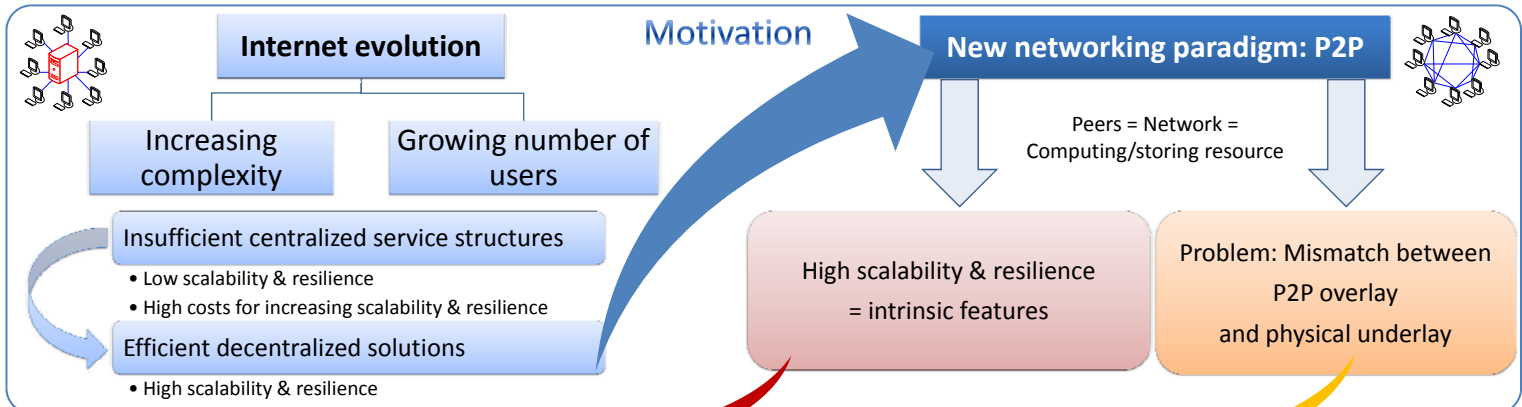


Use of P2P Technology in Internet Access Networks and its Impacts



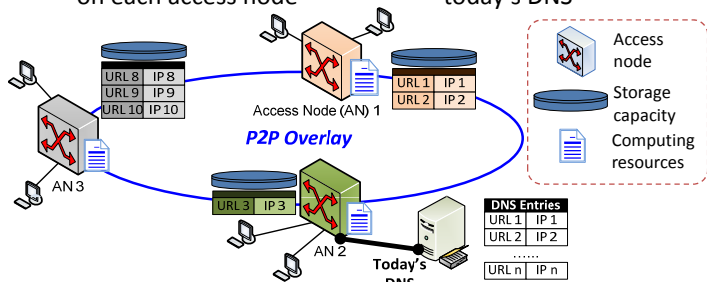
P2P-based Communication Infrastructure

Connect access nodes of access networks with P2P technology

Use **available** storage capacity and computing resources of access nodes

P-DONAS: A P2P-based Domain Name System

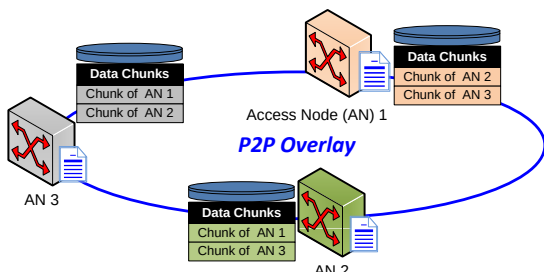
- DNS data storage & functionality on each access node
- Compatibility with today's DNS



- Supersedes additional DNS server farms

A P2P-based Store&Compute Platform

- Logfiles and statistics storage in RAM of each access node
- Statistics computing on each access node

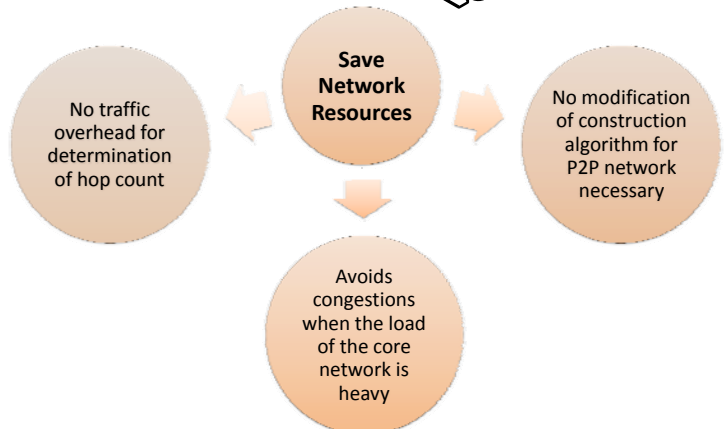
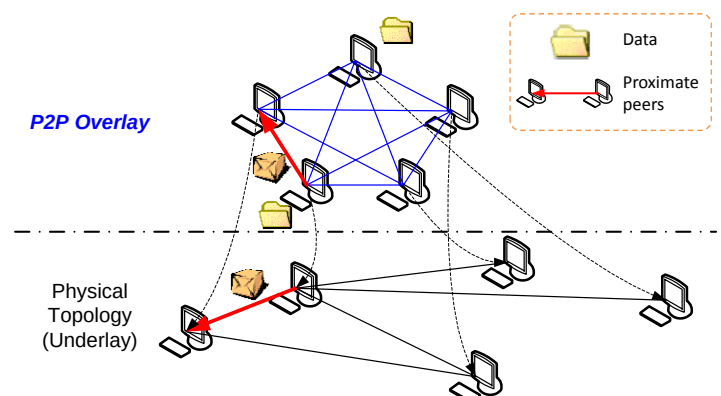


- Supersedes the use of expensive and rarely available flash memory
- Avoids bottleneck for computing tasks

Improved Peer Selection

New peer selection algorithm for P2P filesharing protocols, e.g., BitTorrent

- Insert initial Time-To-Live value of a packet into P2P payload
- Calculate hop count at the packet's destination
- Use hop count to select proximate peers for data exchange



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