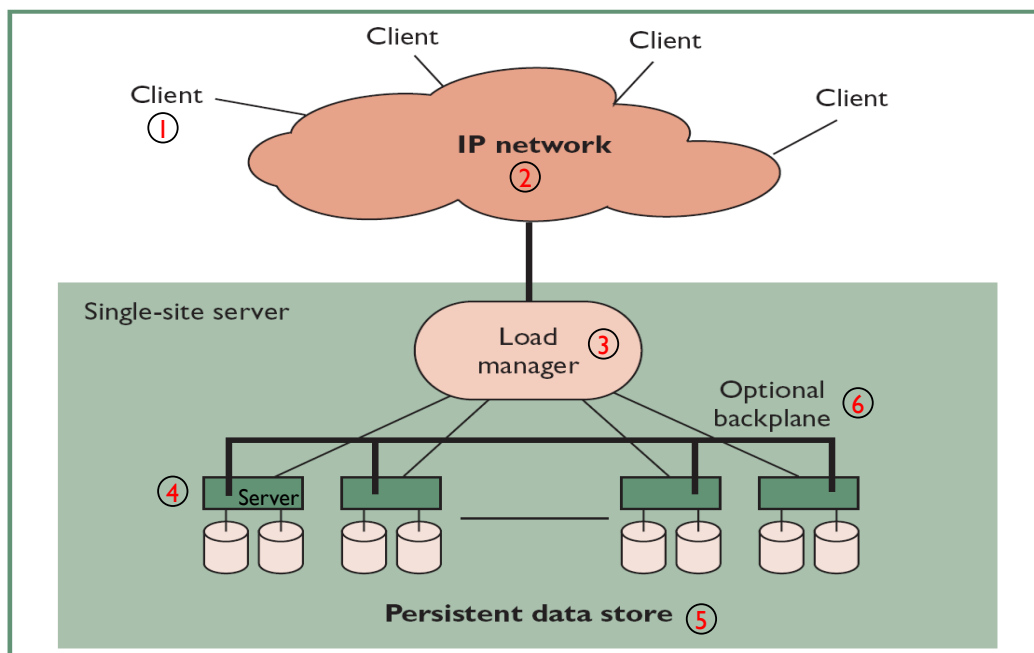


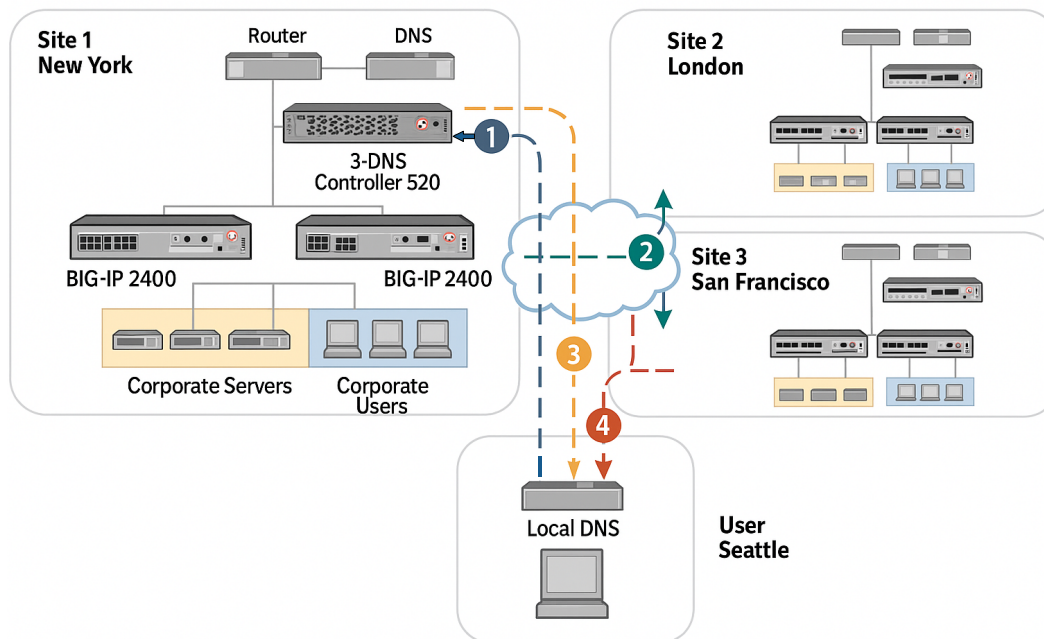
Giant-Scale Services



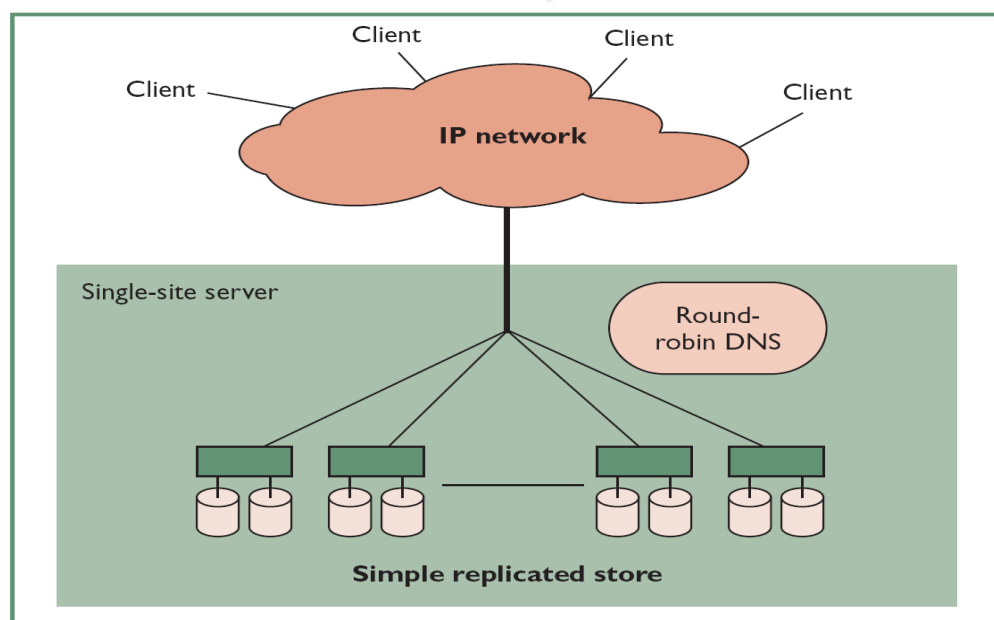
Basic Service Architecture



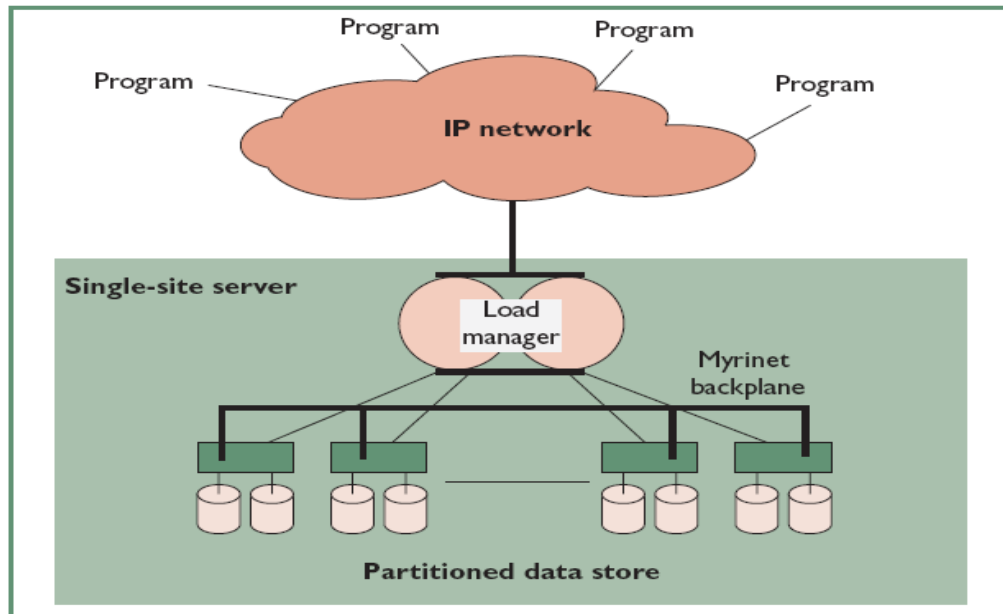
DNS Load Balancing Example



Load Management: Replication



Load Management: Partitioning



Measuring Availability

Uptime ('nines')

Mean time between failures (MTBF)

Mean time to repair (MTTR)

Availability = $(\text{MTBF} - \text{MTTR}) / \text{MTBF}$

NETFLIX



Yield, Harvest, and DQ Principle

yield = queries completed / queries offered

harvest = data available / complete data

data per query * queries per second = **DQ constant**

