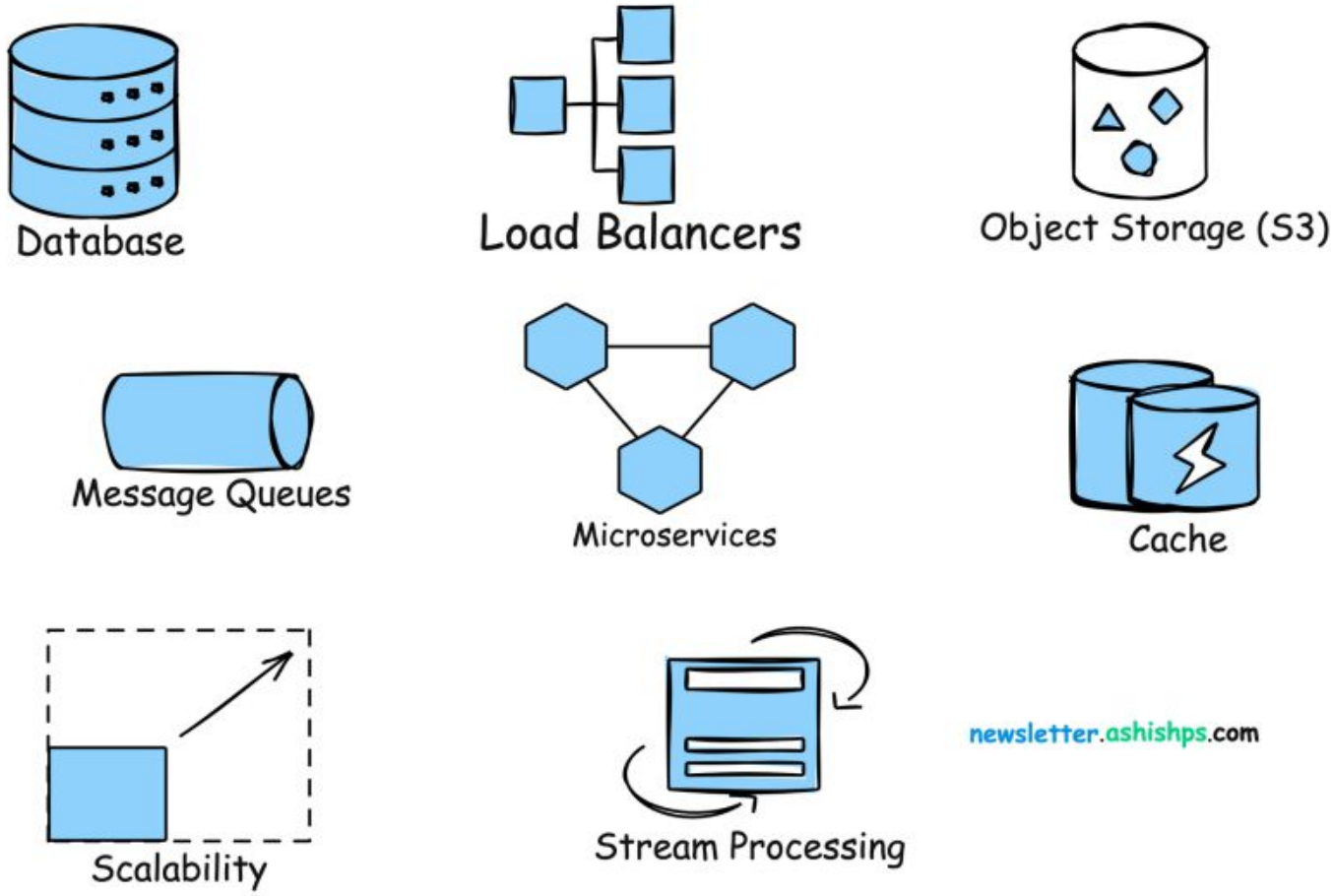
System Design Fundamentals



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- Scalability: https://lnkd.in/gpge_z76
- Latency vs Throughput: https://lnkd.in/g_amhAtN
- CAP Theorem: https://lnkd.in/g3hmVamx
- ACID Transactions: https://lnkd.in/gMe2JqaF
- Consistent Hashing: https://lnkd.in/gd3eAQKA
- Rate Limiting: https://lnkd.in/gWsTDR3m
- API Design: https://lnkd.in/ghYzrr8q
- Strong vs Eventual Consistency: https://lnkd.in/gJ-uXQXZ
- Synchronous vs. asynchronous communications: https://lnkd.in/gC3F2nvr
- REST vs RPC: https://lnkd.in/gN__zcAB
- Batch Processing vs Stream Processing: https://lnkd.in/g4_MzM4s
- Fault Tolerance: https://lnkd.in/dVJ6n3wA
- Consensus Algorithms: https://lnkd.in/ggc3tFbr

- Gossip Protocol: https://lnkd.in/gfPMtrJZ
- Service Discovery: https://lnkd.in/gjnrYkyF
- Disaster Recovery: https://lnkd.in/g8rnr3V3
- Distributed Tracing: https://lnkd.in/d6r5RdXG
- Top 15 Tradeoffs: https://lnkd.in/gnM8QC-z

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- Horizontal vs Vertical Scaling: https://lnkd.in/gAH2e9du
- Databases: https://lnkd.in/gti8gjpz
- Content Delivery Network (CDN): https://lnkd.in/gjJrEJeH
- Domain Name System (DNS): https://lnkd.in/gkMcZW8V
- Caching: https://lnkd.in/gC9piQbJ
- Distributed Caching: https://lnkd.in/g7WKydNg
- Load Balancing: https://lnkd.in/gQaa8sXK
- SQL vs NoSQL: https://lnkd.in/g3WC_yxn
- Database Indexs: https://lnkd.in/gCeshYVt
- HeartBeat: https://lnkd.in/g4x7sMrF
- Circuit Breaker: https://lnkd.in/gCxyFzKm
- Idempotency: https://lnkd.in/gPm6EtKJ
- Database Scaling: https://lnkd.in/gAXpSyWQ
- Data Replication: https://lnkd.in/gVAJxTpS
- Data Redundancy: https://lnkd.in/gNN7TF7n
- Database Sharding: https://lnkd.in/gMqqc6x9
- Failover: https://lnkd.in/dihZ-cEG
- Proxy Server: https://lnkd.in/gi8KnKS6
- Message Queues: https://lnkd.in/gTzY6uk8
- WebSockets: https://lnkd.in/g76Gv2KQ
- Bloom Filters: https://lnkd.in/dt4QbSUz
- API Gateway: https://lnkd.in/gnsJGJaM
- Distributed Locking: https://lnkd.in/gRxNJwWE
- Checksum: https://lnkd.in/ghNc5pfn

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- Client-Server Architecture: https://lnkd.in/dAARQYzq
- Microservices Architecture: https://lnkd.in/gFXUrz_T
- Serverless Architecture: https://lnkd.in/gQNAXKkb

- Event-Driven Architecture: https://lnkd.in/dp8CPvey
- Peer-to-Peer (P2P) Architecture: https://lnkd.in/di32HDu3

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