

Grokking the System Design Interview

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Reset

System Design Problems

- System Design Interviews: A step by step guide
- Designing a URL Shortening service like TinyURL
- Designing Pastebin
- Designing Instagram
- Designing Dropbox
- Designing Facebook Messenger
- Designing Twitter
- Designing Youtube or Netflix
- Designing Typeahead Suggestion
- Designing an API Rate Limiter
- Designing Twitter Search
- Designing a Web Crawler
- Designing Facebook's Newsfeed
- Designing Yelp or Nearby Friends
- Designing Uber backend
- Design Ticketmaster (*New*)
- Additional Resources

Glossary of System Design Ba...

- System Design Basics
- Key Characteristics of Distributed Systems
- Load Balancing
- Caching
- Data Partitioning
- Indexes
- Proxies
- Redundancy and Replication
- SQL vs. NoSQL
- CAP Theorem
- Consistent Hashing
- Long-Polling vs WebSockets vs Server-Sent Events

Appendix

- Contact Us
- Other courses

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System Design Basics

Whenever we are designing a large system, we need to consider a few things:

1. What are the different architectural pieces that can be used?
2. How do these pieces work with each other?
3. How can we best utilize these pieces: what are the right tradeoffs?

Investing in scaling before it is needed is generally not a smart business proposition; however, some forethought into the design can save valuable time and resources in the future. In the following chapters, we will try to define some of the core building blocks of scalable systems. Familiarizing these concepts would greatly benefit in understanding distributed system concepts. In the next section, we will go through Consistent Hashing, CAP Theorem, Load Balancing, Caching, Data Partitioning, Indexes, Proxies, Queues, Replication, and choosing between SQL vs. NoSQL.

Let's start with the Key Characteristics of Distributed Systems.

Have questions?

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Key Characteristics of ...