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Definition

Fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution

The software architecture of a program or computing system is a depiction of the system that aids in the understanding of how the system will behave

Perspectives

- Architecture views are representations of the overall architecture that are meaningful to one or more stakeholders in the system
- The architect chooses and develops a set of views that will enable to architecture to be communication and understood by all the stakeholders and enable them to verify that the system will address their concerns

Design

All architecture is design but not all design is architecture. Architecture represents that significant design decisions that shape the system.

- Cost of change

- Security
- Scalability
- Availability
- Privacy

Security

- Encryption
 - Do transactions need to be encrypted?
 - What's the legal minimum required?
- User identification
 - Cookies
 - Certificates
 - Bio-metrics

Availability

- How much downtime is acceptable?
- How much data loss is acceptable?
- In a crisis, what is the target time for resuming service?

Scalability

- How much additional traffic can the system handle?
- How easy is it to add capacity?
- Deployment
 - How many servers will be required?
 - Are these servers geographically separated?
 - Is the infrastructure owned by the company? Leased?

Tradeoffs

- Balancing concerns
 - Each stakeholder prioritises his/her concerns
 - The architect needs to balance all of them
 - Never be a purist; mix-n-match styles to achieve goals

Attributes