Part 3 - Blueprint For Success -

Table of Contents

About This Guide

Principles Of Software Architecture

Modularity

Loose Coupling/Decoupling

Separation of Concerns

Decoupling Using Asynchronous Flows

Favour Stateless over Stateful

Technical Topics to Master (Or, At Least, Become Very Familiar With)

Event Driven Architecture (EDA), Event Streaming, and Event Sourcing

Request Management

Throttling

Rate Limiting

Load Shedding

Back Pressure

Circuit Breaker

Distributed Systems and the Eight Fallacies of Distributed Computing

Big Data, Data Lakes, ETL/ELT

Data Science, AI and ML

Message Brokers, Service Buses, and Event Streaming Platforms

Domain Driven Design

Networking

Databases - Relational vs NoSQL

Caching

Partitioning and Sharding

12-Factor Applications

Zero Trust, Shift Left Security, and Security-First

APIs and System Integration

Cloud Environment

Architectural Styles and Patterns

Tools of the Software Architect

Architecture Decision Records (ADR)

cloudwaydigital.com

Sample ADR

Status

Context

Decision

Consequences

Architectural Diagrams

Example - Good vs Not-So-Good Architectural Diagram

Non Functional Requirements (NFR) and Architectural Characteristics Analysis

Decision Trees

Current State VS Target State Analysis

Current State vs Target State

Challenges of the Software Architect

Balancing Technical and Business Requirements

Keeping Current With Developments in the Industry

Identifying and Managing Trade-Offs

Aligning Teams and Stakeholders

Managing Internal Company Politics

Dealing with Personal Agendas

Bureaucracy and Organizational Red Tape

Balancing Different Types of Work and Constant Context Switching

Conveying Technical Information to Non-Technical Audiences

- ✓ More Strategies for Success
- X Software Architect Anti Patterns

The "Ivory Tower Architect"

The "Seagull Architect"

The "Glorified Developer Architect"

The "My-Way" Architect

One Last Word on Antipatterns

Wrapping Up

Top 3 Mistakes Made By Software Architects

Mistake #1 - Thinking Too Far Ahead Or Not Far Ahead Enough

Mistake #2 - Not Considering The Tradeoffs

Mistake #3 - Mixing Project Management With Architecture

Top Techniques that Help Software Architects Thrive

- Leading the Way
- Mentoring
- Knowing How To Dive Deep But Not Too Deep
- Being Constantly Aware of Cost

cloudwaydigital.com

✓ Most Problems are People Problems

Parting Thoughts ...