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# Solution Architect

Solution Architect (role)	
Title	Solution Architect
Description	Responsible for the design of one or more applications or services within an organization

### What is a Solution Architect?

A Solution Architect is a senior-level IT professional responsible for designing and implementing complex technology solutions that meet the needs of an organization. The Solution Architect works closely with business stakeholders, developers, and other IT professionals to understand the organization's business goals and requirements and develop a technical solution that meets those needs.

The Solution Architect is responsible for developing the overall technical strategy for a solution, including identifying the appropriate hardware, software, and services required to support the solution. They are also responsible for ensuring that the solution is scalable, reliable, and secure, and that it can be implemented within the organization's existing technology infrastructure.

The Solution Architect is also responsible for communicating the technical solution to other stakeholders within the organization, including business executives, developers, and IT operations teams. They may also be involved in the project management of the solution, ensuring that it is completed on time, within budget, and to the required quality standards.

### Areas of Interest:

- [Solution Architecture](#)
- [Requirements management](#)
- [Solution Architecture Document \(SAD\)](#)
- [Non-functional requirement \(NFR\)](#)
- Technology Trends and Emerging Technologies
- Business Requirements and Processes
- Technical Architecture and Design
- Project Management
- Communication and Collaboration
- Security and Compliance
- Performance and Scalability
- DevOps and Agile methodologies
- Cloud computing
- Data Analytics and Business Intelligence
- Change Management
- API and Integration Design
- Infrastructure and Network Design
- Application Lifecycle Management



## Video

Source: [YouTube](#)

### Solution Architect (Roadmap):

- [Requirements management](#)
  - Business requirements
  - Functional requirements
  - [Non-functional requirement \(NFR\)](#)
- Patterns
  - OOP
  - CQRS
  - MVP
  - MVVM
  - DDD
  - Coupling and Cohesion
  - MVC
  - SOLID
  - MVVM
  - KISS
  - DRY
  - SOA
  - Flux/Redux & Amber
  - Decorator
  - Strategy
  - Observer
  - Builder
  - Facade
  - Mediator
  - ACID, CAP Theorem
- Architectures
  - SOA
  - Distributed systems
  - Client server
  - Microservices
  - Layered
  - Serverless
- Scripting & Automation
- Database design
  - PostgreSQL
  - MongoDB

- MySQL
  - Apache Cassandra
  - Sphinx Search
  - Hadoop
  - Spark
  - MapReduce
- Frameworks
  - IAF
  - BABOK
  - TOGAF
  - UML
- CI/CD
  - Jenkins
  - Travis
  - Teamcity
- Cloud
  - AWS
  - Azure
  - Digital Ocean
  - Google Cloud
  - Serverless
  - Public, Private and Hybrid clouds
- Monitoring
  - Nagios
  - Icinga
  - Datadog
  - Zabbix
- Operating Systems
- Programming
  - Python
  - .NET
  - Java
  - Kotlin
  - Scala
  - Go
  - PHP
  - Javascript/typescript
- Web Development
  - Reactive & functional programming
  - SPA
  - React
  - Angular
  - Vue
  - PWA
  - W3C & WHATWG standards (HTML)
  - Design thinking, UI, UX, CX
- Networking
  - DNS
  - HTTP/HTTPS
  - SSL/TLS
  - ISO OSI layers & protocols

- firewalls
- proxies
- OAuth2
- Open ID connect
- OWASP
- PKI
- Software Suites
  - MS Dynamics
  - MS 365
  - EMC DMS
  - IBM BPM
  - SAP EPR
  - HANA
  - Business objects
- Individual performance
  - Scope
  - Self-Reliance
  - Self-management
  - Decision-making in uncertain environment
  - Managing expectations
  - Self-development
- Communication and Collaboration
  - Feedback
  - Written communication
  - Verbal communication
  - Foreign language skills
  - Presentations
  - Speaking at conferences and publications
  - Team work
  - Argumentation
  - Conflict resolution
  - Networking and building relationships
  - Knowledge sharing
- Product Ownership
  - Product knowledge
  - Product impact
  - Market knowledge
  - Product team

## Benefits of Solution architects

Solution architects are critical in helping organizations design and implement effective solutions to complex business problems. Here are some of the benefits of having a solution architect on your team:

- **Improved alignment between business and technology:** Solution architects work closely with stakeholders from both the business and technology sides of the organization to ensure that solutions are aligned with business goals and objectives.

- **Reduced risk:** Solution architects help identify potential risks and challenges and develop mitigation strategies to minimize their impact.
- **Improved scalability:** Solution architects design solutions that are scalable, allowing organizations to easily adapt to changing business needs.
- **Increased efficiency:** Solution architects design solutions that are optimized for performance, reducing the time and effort required to complete tasks and improving overall efficiency.
- **Reduced costs:** Solution architects help organizations design cost-effective solutions that meet their needs, reducing overall costs and improving return on investment.
- **Improved communication:** Solution architects act as a bridge between technical and non-technical stakeholders, ensuring that everyone understands the solution and its benefits.
- **Improved innovation:** Solution architects are often responsible for identifying new and innovative solutions that can help organizations stay ahead of the competition.

#### External links:

- <https://www.altexsoft.com/blog/engineering/solution-architect-role/>
- <https://www.careerexplorer.com/careers/solution-architect/>
- <https://www.scaledagileframework.com/system-and-solution-architect-engineering/>

[role](#), [architecture](#), [roadmap](#)

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