

## **MODERN APPROACH TO TRAINING SOFTWARE ARCHITECTS**

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A contemporary approach to designing the architecture of software systems includes several key principles and methodologies aimed at creating flexible, scalable, and resilient solutions. Here are some main aspects of this approach:

1. **Microservices architecture.** A noticeable trend is the shift from monolithic applications to a microservices architecture. This involves creating small, autonomous services, each performing a specific function. Such an approach facilitates scalability, updates, and system maintenance.

2. **Cloud Services and distributed computing.** The use of cloud services and distributed computing becomes a standard. This allows efficient resource utilization, ensures fault tolerance, and improves system performance.

3. **DevOps, ArchOps and continuous delivery.** The DevOps and ArchOps approaches integrate desing, development and operations processes, reducing the time from idea to deployment. Continuous Delivery and automated testing accelerate the development cycle and enhance system reliability.

4. **Scalability and resource management.** Architecture should be easily scalable to adapt to growing workloads. The use of containerization (e.g., Docker) and orchestration (e.g., Kubernetes) helps manage resources and provides flexibility.

5. **Security.** Information protection becomes a priority, and modern systems are designed with security principles in mind, including data encryption, access control, and security monitoring.

6. **Use of architectural patterns.** Designing with proven architectural patterns, such as MVC (Model-View-Controller), REST (Representational State Transfer), and GraphQL, allows the creation of structured and easily maintainable systems.

7. **Specialized technologies and programming languages.** Choosing specialized technologies and programming languages according to project requirements helps optimize performance and align with system goals.

When training software architects, it is essential to consider that the modern approach to designing the architecture of software systems emphasizes flexibility, scalability, security, and the automation of development and deployment processes, meeting the requirements of the rapidly changing world of information technology. Training a software architect is a comprehensive process that includes both technical aspects and skills in project management and communication. The following key aspects of training should be noted.