🔷 Level 4 – Technical Architect Role (L4)

- **What are the key responsibilities of a ServiceNow Technical Architect?**

  A Technical Architect defines the architecture, designs scalable solutions, ensures adherence to best practices, manages data modeling, oversees integration strategies, and aligns platform capabilities with business objectives.

- **How do you approach designing a multi-departmental ServiceNow implementation?**

  Begin with requirement gathering from each department, define scoped applications, use domain separation if needed, and identify common/shared data. Use modular architecture and enforce governance through data policies and ACLs.

- **Explain ATF (Automated Test Framework) and its value in enterprise ServiceNow deployments.**

  ATF enables automated regression testing of ServiceNow apps. It reduces human error, increases confidence during upgrades, and ensures business-critical processes are not disrupted.

- **What are best practices for integrating external systems with ServiceNow?**
  - Use IntegrationHub or Scripted REST APIs.
  - Implement error logging and retry mechanisms.
  - Secure credentials using Connection & Credential Aliases.
  - Use Data Stream Actions for large datasets.
- **What is an Update Set and what challenges can arise with them?**

  Update Sets capture customizations for migration between instances. Issues can include collisions, missing dependencies, or overwriting updates. Always test in sub-prod before deploying to prod.

- **What are ServiceNow's performance optimization strategies?**
  - Use indexes on queried fields.

  - Limit GlideRecord loops and avoid nested queries.
  - Use lazy loading for related lists.
  - Minimize synchronous scripts.
  - Monitor with Performance Analytics and Instance Scan.

- **How do you enforce governance and security in large ServiceNow environments?**

  Implement strict ACLs, role-based access controls, scoping, code review workflows, scheduled audits, and separation of duties across development and administration.

- **How would you handle high availability and disaster recovery in ServiceNow?**

  ServiceNow is hosted on the Now Platform with built-in redundancy and DR. As an architect, focus on ensuring configurations and integrations follow best practices and document critical dependencies.

- **What are some ServiceNow architectural patterns you follow?**
  - MVC (Model-View-Controller) for UI Apps
  - Event-driven architecture for scalable workflows
  - Microservice-style integrations with REST APIs
  - Scoped applications for encapsulation and modularity

- **How do you manage version control in multi-developer environments?**

  Use Application Repository or Source Control Integration (Git) for scoped apps. Enforce code branching strategies, code reviews, and continuous integration where possible.

- **What considerations do you make when scaling ServiceNow for enterprise use?**

  Scale through modular apps, delegate admin controls, manage CMDB relationships efficiently, implement indexing, and optimize scripts. Also manage access controls and avoid unnecessary global customizations.

- **How do you ensure data integrity during integrations?**

  Validate data formats, use transform maps with data policies, implement pre-processing scripts, and handle exceptions gracefully. Avoid overwriting good data with stale or invalid data.

- **Describe your approach to designing a custom application in ServiceNow.**
- Gather business requirements
- Define data model and relationships
- Design UI and UX components
- Plan workflows and automation
- Define ACLs and roles
- Implement versioning and update sets
- **What is MID Server and how do you secure it?**

  MID Server enables ServiceNow to interact with external systems within a network. Secure it using IP whitelisting, certificates, encrypted credentials, and keep it updated.

- **How do you perform instance comparison and cloning impact analysis?**

  Use the Instance Comparison tool to identify differences. Before cloning, ensure backup of critical configurations and note post-clone tasks like restoring email configurations or integrations.

- **How do you architect a ServiceNow mobile solution?**

  Use Mobile Studio, define data tables, roles, and UI policies specific for mobile. Optimize performance and usability. Consider offline capabilities and real-time updates.

- **What tools do you use for monitoring and logging in ServiceNow?**

  Use system logs, event logs, email logs, IntegrationHub logs, and Performance Analytics. Set alerts for critical thresholds and errors.

- **What is the best practice for managing Custom Tables?**

  Name them with clear prefixes, avoid excessive field counts, relate them to existing tables via references, and avoid duplicating OOTB functionality.

- **How would you manage cross-instance data sync?**

  Use IntegrationHub, MID Servers, or Scripted REST APIs with scheduled jobs. Ensure data consistency through conflict resolution logic and versioning.

- **What is the CMDB Data Model and how would you enforce it?**

  Use CI classes appropriately. Enforce relationship rules, data integrity via Discovery and Integration, and ensure reconciliation rules are in place.

- **How do you secure integration credentials in ServiceNow?**

  Store credentials in Credential Records or use Credential Aliases. Avoid hardcoding in scripts. Restrict access using roles.

- **How do you plan a ServiceNow upgrade project?**

  Review release notes, test ATFs, clone prod to sub-prod, test integrations, identify deprecated features, and train users on changes. Freeze development during upgrade window.

- **What is Instance Scan and how do you use it?**

  Instance Scan checks the instance for patterns that may impact performance, security, or upgrades. Schedule regular scans and fix flagged issues proactively.

- **How do you manage technical debt in ServiceNow?**

  Track customizations vs OOTB, maintain documentation, review unused scripts/workflows, and refactor legacy code. Use update sets wisely and minimize over-customization.

- **Describe your governance model for a ServiceNow COE (Center of Excellence).**

  Define roles and responsibilities, enforce SDLC processes, establish design standards, review boards for architecture changes, and continuous improvement strategies.