EC2, MobaXterm, PuTTY, and Salesforce Theory Q&A

EC2 Instance Creation and Authentication

Q1: What is Amazon EC2?

- Web service providing secure, resizable compute capacity in the cloud

- Offers virtual servers (instances) for running applications

- Designed to make web-scale cloud computing easier for developers

- Part of Amazon Web Services infrastructure

Q2: What are the key components of EC2 instance authentication?

- Key pairs (public and private keys)

- Security groups

- IAM roles

- Network ACLs

Q3: What is the purpose of a key pair in EC2 instance access?

- Provides secure SSH access to instances

- Public key stored by AWS, private key stored by user

- Replaces less secure password-based authentication

- Verifies identity without transmitting sensitive information

Q4: What are security groups in EC2?

- Virtual firewalls for EC2 instances

- Control inbound and outbound traffic

- Operate at the instance level

- Allow specification of protocols, ports, and IP ranges

- Multiple security groups can be assigned to a single instance

MobaXterm Theory

Q5: What is MobaXterm?

- Enhanced terminal for Windows

- Includes X11 server and tabbed SSH client

- Offers network tools and multiple remote protocols

- Packaged in a single portable executable file

Q6: What are the key features that make MobaXterm suitable for managing EC2 instances?

- Integrated SSH capabilities

- Session management

- Built-in SFTP browser for file transfers

- X11 forwarding for GUI applications

- Multi-execution for managing multiple servers

- SSH tunneling capabilities

- Macro recording for automation

- Split-terminal functionality

Q7: How does MobaXterm differ from basic SSH clients?

- Provides unified environment with multiple tools

- Offers graphical interface and session management

- Includes built-in utilities (file transfers, terminal multiplexing)

- Supports multiple protocols (SSH, SFTP, RDP, VNC, X11)

- Eliminates need for separate tools

PuTTY and PuTTYgen Theory

Q8: What is PuTTY and what is its purpose?

- Free and open-source terminal emulator

- Functions primarily as SSH and Telnet client

- Allows secure connections to remote servers

- Designed for Windows environments

Q9: What is PuTTYgen and how does it relate to EC2 instance access?

- Key generator tool for creating SSH key pairs

- Converts AWS-generated .pem files to PuTTY's .ppk format

- Essential for using PuTTY with EC2 instances

- Manages key properties and passphrases

Q10: What is the difference between .pem and .ppk key formats?

- .pem: Privacy-Enhanced Mail certificate format used by AWS

- .ppk: PuTTY's proprietary Private Key format

- PuTTY cannot directly use .pem files

- PuTTYgen converts between formats

Salesforce and Apex Theory

Q11: What is Salesforce.com?

- Cloud-based customer relationship management (CRM) platform
- Provides software applications for sales, service, and marketing
- Offers enterprise applications for customer service and analytics
- Supports custom application development

Q12: What is Apex programming language?

- Strongly typed, object-oriented programming language
- Allows execution of flow and transaction control statements
- Runs on Salesforce platform servers
- Similar syntax to Java
- Acts like database stored procedures

Q13: What are the key characteristics of Apex programming language?

- Strongly typed and object-oriented
- Cloud-based execution on Salesforce servers
- Java-like syntax
- Integrated with the database
- Built-in testing support
- Automatic versioning
- Governor limits for resource management
- Transaction control for database operations
- Event-driven architecture

Q14: What are Governor Limits in Apex and why are they important?

- Execution limits imposed by Salesforce
- Ensure code doesn't monopolize shared resources
- Restrict operations like SOQL queries and DML statements
- Limit CPU time and heap size
- Ensure fair platform usage in multi-tenant environment
- Prevent organizations from affecting others negatively

Q15: What is the difference between Visualforce and Lightning components?

- Visualforce: Markup language for custom interfaces
- Lightning: Framework for dynamic web apps with reusable components
- Lightning based on modern web standards (JavaScript/CSS)
- Lightning designed for mobile-first experiences
- Lightning offers better performance for modern applications

Q16: What are Salesforce Clouds and what are the main types?

- Specialized applications for specific business needs
- Sales Cloud (sales automation)
- Service Cloud (customer service)
- Marketing Cloud (marketing automation)
- Commerce Cloud (e-commerce)
- Experience Cloud (external-facing sites)
- Platform Cloud (custom development)
- Analytics Cloud (Einstein Analytics)

Q18: What are the key features of Salesforce?

- Cloud-based architecture (no hardware/software installation)
- Scalability to support businesses of all sizes
- Customizable interface and workflows
- Mobile accessibility
- Real-time analytics and reporting
- AppExchange marketplace for add-ons
- Automated workflow and approval processes
- Multi-tenant architecture
- Regular automatic upgrades
- Robust security features and compliance
- API integration capabilities
- AI-powered insights (Einstein)

Q19: What are the main applications of Salesforce?

- Customer relationship management
- Sales force automation and pipeline management

- Marketing campaign management and automation

- Customer service and support management

- E-commerce platforms and solutions

- Enterprise collaboration tools

- Custom application development

- Business intelligence and analytics

- Partner relationship management

- Field service management

- Customer experience personalization

- Contract and quote management

- Social media monitoring and engagement

Q17: What is a Salesforce Trigger and when would you use one?

- Apex code executing before/after DML events

- Triggers on insert, update, or delete operations

- Used to enforce business rules

- Validate data quality

- Update related records

- Integrate with external systems

- Respond to specific database events