

# INFOSOFT IT SOLUTIONS

**Training | Projects | Placements**

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## **AWS STEP FUNCTIONS**

### **Introduction to AWS Step Functions**

- Overview of serverless orchestration and AWS Step Functions
- Key concepts: state machines, tasks, and transitions
- Benefits and use cases of AWS Step Functions

### **Basic Concepts and Setup**

- Creating and configuring a state machine in AWS Step Functions
- Defining states: Task, Choice, Parallel, and Wait states
- State input and output processing

### **Advanced State Machine Design**

- Error handling and retries in AWS Step Functions
- Timeout management and state execution limits
- Lambda integration with Step Functions

## **Step Functions Workflow Automation**

- Creating workflows for business processes
- Integration with other AWS services (e.g., S3, DynamoDB)
- Implementing complex workflows using Map and Pass states

## **Step Functions State Machine Deployment and Management**

- Versioning and deploying state machines
- Using AWS CloudFormation for infrastructure as code
- Monitoring and logging with AWS CloudWatch

## **Step Functions Data Management**

- Managing state machine input and output data
- Data transformation and manipulation using AWS Step Functions
- State machine execution history and data visualization

## **Security Best Practices**

- IAM roles and permissions for Step Functions
- Encrypting state machine data at rest and in transit
- Compliance and regulatory considerations

## **Step Functions Integration Patterns**

- Orchestrating microservices with Step Functions
- Integration with AWS Lambda for serverless workflows
- Event-driven architecture with Step Functions and Amazon EventBridge

## **Advanced Topics**

- Step Functions and containerized applications (AWS Fargate, ECS)
- State machine execution metrics and performance optimization
- Implementing Step Functions in multi-region architectures