

## Building Advanced Agentic Systems on AWS

Duration: 1 Day Course Code: GK910037 Delivery Method: Virtual Learning

### Overview:

Implement production-ready multi-agent systems using Amazon Bedrock AgentCore, covering multi-agent patterns, context optimization techniques, security configurations, and monitoring frameworks. You will examine the skills needed to move beyond proof-of-concept to scalable, secure, and observable agentic AI implementations. The course prepares you to design and deploy advanced agentic systems ready for real-world production environment.

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Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

### Target Audience:

- Software developers

### Objectives:

- In this course, you will learn to do the following:
  - Analyze scenarios that require multi-agent architectures.
  - Describe primary multi-agent communication patterns and their use cases.
  - Configure agent-as-tool patterns for production deployments.
  - Implement memory sharing using available platform capabilities.
  - Implement context management strategies for production workloads.
  - Design context compression and optimization mechanisms.
  - Optimize resource usage and cost management across multi-agent systems.
  - Configure policy-based access control using AgentCore Policy Engine.
- Implement VPC integration for secure agent deployments.
- Implement distributed tracing and monitoring across multi-agent systems.
- Establish comprehensive agent evaluation frameworks.
- Configure integration patterns for enterprise observability systems
- Establish comprehensive audit trails and compliance monitoring.
- Integrate agentic systems with production APIs and services.
- Design deployment strategies for production environments.
- Assess production readiness and establish continuous improvement processes.

### Prerequisites:

**We recommend that attendees of this course have knowledge of:**

- Agentic AI Foundations
- Building Agentic AI with Amazon Bedrock AgentCore

### Testing and Certification

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## Follow-on-Courses:

None

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## Content:

### Module 1: Multi-Agent Architecture and Communications Patterns

- Single agent limitations and multi-agent benefits
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore
- Task 1: Building a Personal Budget Assistant with Strands Agents
- Multi-agent communication patterns
- Memory and state management
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore

### Task 2: Building a Multi-Agent System for Complex Financial Analysis

### Module 2: Context Engineering and Performance Optimization

- Context as finite resource
- Context optimization techniques
- Tool design for context efficiency

### Module 3: Security and Compliance Implementation

- Production Identity and Access Management
- VPC integration and network security

### Module 4: Production Monitoring, Observability, and Evaluation

- Monitoring architecture
- AgentCore evaluation
- Enterprise observability integration
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore

### Task 3: Deploying Production-Ready Agents with Amazon Bedrock AgentCore

### Module 5: Well-Architected Agentic AI Systems

- Applying the Well-Architected framework
- Well-Architected deployment
- Production readiness

### Module 6: Course Wrap-up

- Next steps and additional resources
  - Course summary
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## Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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