AWS Certified Solutions Architect: Associate - 8.0 SQS, SWF, and SNS

filename: amazon-acsaa-8-2-simple_workflow_service
Title: Amazon Simple Workflow Service
Subtitle: AWS Certified Solutions Architect: Associate

8.2 Amazon Simple Workflow Service

- Basics
  - Divides a workload into tasks
  - Each task represents a distinct phase in a process
  - Custom applications handle decision logic
  - Workflow has high durability as each decision returns to the workflow (Diagram)
  - An application can crash and resume where it left off.
- Workflows
  - Can process synchronously, asynchronously or both
  - Workflow Domains
    - Define partitions within the workflow environment
    - Workflows in different domains cannot communicate with each other
  - Workflow History
    - Complete detailed record of all events in the workflow
- Actors (3 types)
  - Workflow Starters
    - Any application that can initiate a workflow
  - Workflow Deciders
    - The logic that coordinates the task
    - Schedules tasks
    - Provides input to the tasks
    - Handles any events that occur while the workflow is executing
  - Activity Workers
    - A single process (thread) that performs the work
- Tasks (3 types)
  - Activity Tasks
    - Tells an activity worker to perform its function
    - Contains all the necessary data
  - AWS Lambda Tasks
    - Executes a Lambda function instead of calling an activity worker
  - Decision Tasks
    - Determines the next step in the workflow
- Advanced Functions
  - Task Lists
    - Allow you to view and influence the organization of tasks
  - Long Polling
    - Used by default by activity workers and deciders
  - Workflow Execution Closure
    1. Completed
    2. Canceled
    3. Failed
    4. Timed Out
    5. New Execution
    6. Terminated