

AWS CERTIFIED

CLOUD

PRACTITIONER



Billing and Pricing



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Course Outline

Course
Introduction

Cloud Concepts

Security and
Compliance

Cloud
Technology and
Services

Billing, Pricing
and Support

Preparing for
the Exam

EC2 Instance Pricing Models

	ON-DEMAND	SPOT	RESERVED	SAVINGS PLAN
WHAT IS IT?	<ul style="list-style-type: none">• Pay as you use it• No up-front commitment	<ul style="list-style-type: none">• Bid on AWS's spare capacity	<ul style="list-style-type: none">• Commitment of 1-3 years	<ul style="list-style-type: none">• Commitment of 1-3 years• Savings on the commitment; on-demand pricing after that
COST	<ul style="list-style-type: none">• Most expensive option	<ul style="list-style-type: none">• Least expensive option• Up to 90% savings over on-demand	<ul style="list-style-type: none">• 30%-60% savings over on-demand	<ul style="list-style-type: none">• Less expensive than on-demand
BEST USED FOR	<ul style="list-style-type: none">• General use• Trying things out	<ul style="list-style-type: none">• Interruptible workloads	<ul style="list-style-type: none">• Steady, known workloads	<ul style="list-style-type: none">• Steady, known workloads, but with more flexibility than RI
IMPORTANT POINTS	<ul style="list-style-type: none">• Flexible and easy to work with	<ul style="list-style-type: none">• Instance can be terminated at any time	<ul style="list-style-type: none">• Pay for capacity regardless of usage	<ul style="list-style-type: none">• Introduced 2019• Flexible and easy to work with



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Password

Confirm password

AWS account name

Choose a name for your account. You can change this name in your account settings after you sign up.

Continue (step 1 of 5)

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ORGANIZATION

Root

OU

A policy attached at this OU level will apply to the Legal and HR accounts



IT Dept Account



Finance Dept Account



Legal Dept Account



HR Dept Account



Benefits of AWS Organizations

Centrally manage multiple accounts,
including permissions

Consolidated billing

- Receive a single bill for all accounts in the organization
- Track combined costs, but can itemize by account
- Can share discount pricing (Reserved Instances, Savings Plans) across accounts



DEMO

Working with Organizations, Accounts and
AWS Control Tower





DEMO

Working with the Billing Dashboard



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Working with AWS Cost Explorer



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Working with AWS Pricing Calculator

AWS Budgets vs. CloudWatch Billing Alerts/Alarms

AWS BUDGETS

Used to create and track budgets and send alerts

Can receive alerts based on actual spend AND forecasted spend

Can filter alarms by region and service

Create budgets for cost, usage, Savings Plans and Reservations

Newer service

CLOUDWATCH BILLING ALERTS

More limited than Budgets; only used to send alerts

Can receive alerts based on actual spend only

Filtering by region is not possible



DEMO

Setting up AWS Budgets and
CloudWatch Billing Alerts/Alarms



DEMO

IMPORTANT:

Deleting Resources Used in the Course

Resource Types to Query

AWS::EC2::Instance
AWS::EC2::Volume
AWS::Lambda::Function
AWS::S3::Bucket
AWS::CloudFront::Distribution
AWS::RDS::DBInstance
AWS::DynamoDB::Table
AWS::CloudFormation::Stack
AWS::CloudTrail::Trail
AWS::SNS::Topic
AWS::SQS::Queue
AWS::CodeCommit::Repository
AWS::CodePipeline::Pipeline
AWS::Cloud9::Environment
AWS::CloudWatch::Alarm

Billing and Pricing: Important Points to Remember

PRICING PLANS FOR EC2

- On-demand is the easiest, but most expensive
- Spot instances allow you to bid on excess capacity (up to 90% savings), but instances can be terminated at any time
- Reserved offers 30-60% savings for reservations of 1-3 years
- Savings Plans combine on-demand and reserved; you receive savings on the commitment of 1-3 years and then get on-demand pricing after that

ACCOUNTS AND ORGANIZATIONS

- Organizations are a collection of accounts
- Enable consolidated billing (costs for all accounts roll up into a single bill)
- Can share discounted pricing across accounts

COST ALLOCATION TAGS

- Once activated, can be used to group and filter charges (such as “createdBy”)

Billing and Pricing: Important Points to Remember

BILLING DASHBOARD

- Provides a snapshot of costs by service, forecasted costs, etc.

COST EXPLORER

- Provides a way to drill into specific charges and group/filter by service, region, tags, etc.
- Can provide a forecast of charges based on existing usage

AWS PRICING CALCULATOR

- Prior iterations were called the “Total Cost of Ownership” (TCO) Calculator and the “Simple Monthly Calculator”
- Publicly available at calculator.aws
- Provides an estimate of costs based on the services chosen (useful for existing customers, as well as those who are evaluating AWS)

Billing and Pricing: Important Points to Remember

AWS BUDGETS

- Create and track budgets and send alerts
- Alerts can be based on actual AND forecasted spend
- Can filter alarms by region and service
- Budgets can be created for cost, usage, Savings Plans and Reservations

CLOUDWATCH BILLING ALERTS/ALARMS

- Activated through Billing (not through CloudWatch)
- More limited than Budgets; only used to send alerts
- Alerts can only be based on actual spend (NOT forecasted)
- Filtering by region is not possible