

Demo: Create and SNS topic with email subscription:

The image shows two screenshots of the AWS Management Console. The top screenshot displays the 'Amazon Simple Notification Service' landing page with a 'Create topic' form. The bottom screenshot shows the 'admin_email' topic details page after successful creation.

Top Screenshot: Amazon Simple Notification Service Landing Page

URL: `us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/homepage`

Page Title: Amazon Simple Notification Service

Subtitle: Pub/sub messaging for microservices and serverless applications.

Description: Amazon SNS is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and event-driven serverless applications. Amazon SNS provides topics for high-throughput, push-based, many-to-many messaging.

Create topic

Topic name
A topic is a message channel. When you publish a message to a topic, it fans out the message to all subscribed endpoints.

[Next step](#)

[Start with an overview](#)

Pricing

Bottom Screenshot: Amazon SNS Topic Details Page

URL: `us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/topic/arn:aws:sns:us-east-1:095372635374:admin_email`

Page Title: Amazon SNS

Breadcrumb: Amazon SNS > Topics > admin_email

Topic Name: admin_email

Buttons: Edit, Delete, Publish message

Details

Name	admin_email	Display name	-
ARN	arn:aws:sns:us-east-1:095372635374:admin_email	Topic owner	095372635374
Type	Standard		

us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/create-subscription

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Create subscription

Details

Topic ARN
arn:aws:sns:us-east-1:095372635374:admin_email

Protocol
The type of endpoint to subscribe
Email

Endpoint
An email address that can receive notifications from Amazon SNS.
shrutika.yewale@capgemini.com

After your subscription is created, you must confirm it. [Info](#)

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us-east-1.console.aws.amazon.com/sns/v3/home?region=us-east-1#/subscription/arn:aws:sns:us-east-1:095372635374:admin_email:91252da6-7b57-44d4-ad3c-a6c52cea8e60

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Amazon SNS

- Dashboard
- Topics
- Subscriptions**
- ▼ Mobile
 - Push notifications
 - Text messaging (SMS)
 - Origination numbers

Subscription to admin_email created successfully.
The ARN of the subscription is arn:aws:sns:us-east-1:095372635374:admin_email:91252da6-7b57-44d4-ad3c-a6c52cea8e60.

Amazon SNS > Topics > admin_email > Subscription: 91252da6-7b57-44d4-ad3c-a6c52cea8e60

Subscription: 91252da6-7b57-44d4-ad3c-a6c52cea8e60

Edit Delete

Details

ARN arn:aws:sns:us-east-1:095372635374:admin_email:91252da6-7b57-44d4-ad3c-a6c52cea8e60	Status ⌚ Pending confirmation
Endpoint shrutika.yewale@capgemini.com	Protocol EMAIL
Topic admin_email	

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sns.us-east-1.amazonaws.com/confirmation.html?TopicArn=arn:aws:sns:us-east-1:095372635374:admin_email&Token=2336412f37fb687f5d51e...



Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:

arn:aws:sns:us-east-1:095372635374:admin_email:91252da6-7b57-44d4-ad3c-a6c52cea8e60

If it was not your intention to subscribe, [click here to unsubscribe](#).

Demo: Create a CloudWatch billing alarm:

Billing alerts are only enabled in North Virginia region.

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us-east-1.console.aws.amazon.com/billing/home?region=us-east-1#/preferences

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Home

Billing

Bills

Orders and invoices

Credits

Purchase orders

Cost & Usage Reports

Cost Categories

Cost allocation tags

Free Tier

Billing Conductor 🔄

Cost Management

Cost Explorer

Budgets

Budgets Reports

Savings Plans 🔄

Preferences

?

Billing Preferences

☐ **Receive PDF Invoice By Email**

Turn on this feature to receive a PDF version of your invoice by email. Invoices are generally available within the first three days of the month.

Cost Management Preferences

☐ **Receive Free Tier Usage Alerts**

Turn on this feature to receive email alerts when your AWS service usage is approaching, or has exceeded, the AWS Free Tier usage limits. If you wish to receive these alerts at an email address that is not the primary email address associated with this account, please specify the email address below.

Email Address:

☒ **Receive Billing Alerts**

Turn on this feature to monitor your AWS usage charges and recurring fees automatically, making it easier to track and manage your spending on AWS. You can set up billing alerts to receive email notifications when your charges reach a specified threshold. Once enabled, this preference cannot be disabled. [Manage Billing Alerts](#) or [try the new budgets feature!](#)

▶ Detailed Billing Reports [Legacy]

Save preferences

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us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'MetricSelection~AlarmType~'MetricAlarm~...

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CloudWatch > Alarms > Create alarm

Step 1
Specify metric and conditions

Step 2
Configure actions

Step 3
Add name and description

Step 4
Preview and create

Specify metric and conditions

Metric

Graph

Preview of the metric or metric expression and the alarm threshold.

Select metric

Cancel

Next

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us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'MetricSelection~AlarmType~'MetricAlarm~...

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Select metric

07:00 07:15 07:30 07:45 08:00 08:15 08:30 08:45 09:00 09:15 09:30 09:45 10:00

Browse Query Graphed metrics (1) Options Source Add math Add query

Metrics (1) Graph with SQL Graph search

All > Billing > Total Estimated Charge Search for any metric, dimension or resource id

☒ Currency (1) Metric name

☒ USD EstimatedCharges

Cancel Select metric

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us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'Actions~AlarmType~'MetricAlarm~AlarmD...

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Notification

Step 2 Configure actions

Step 3 Add name and description

Step 4 Preview and create

Alarm state trigger

Define the alarm state that will trigger this action.

☒ In alarm The metric or expression is outside of the defined threshold.

☐ OK The metric or expression is within the defined threshold.

☐ Insufficient data The alarm has just started or not enough data is available.

Remove

Send a notification to the following SNS topic

Define the SNS (Simple Notification Service) topic that will receive the notification.

☒ Select an existing SNS topic

☐ Create new topic

☐ Use topic ARN to notify other accounts

Send a notification to...

admin_email

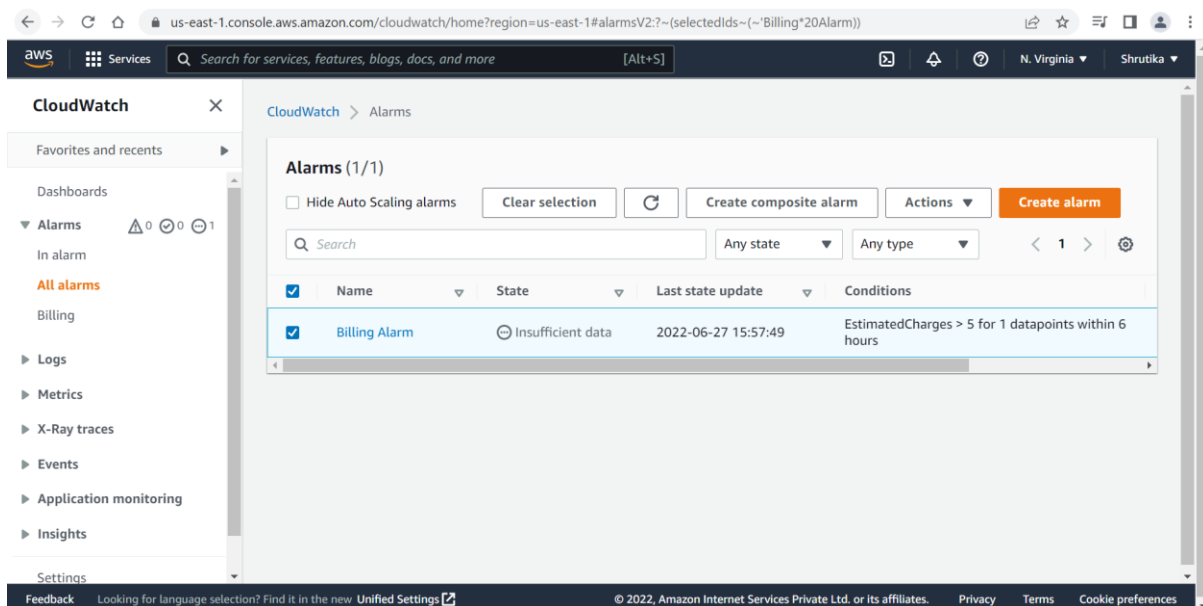
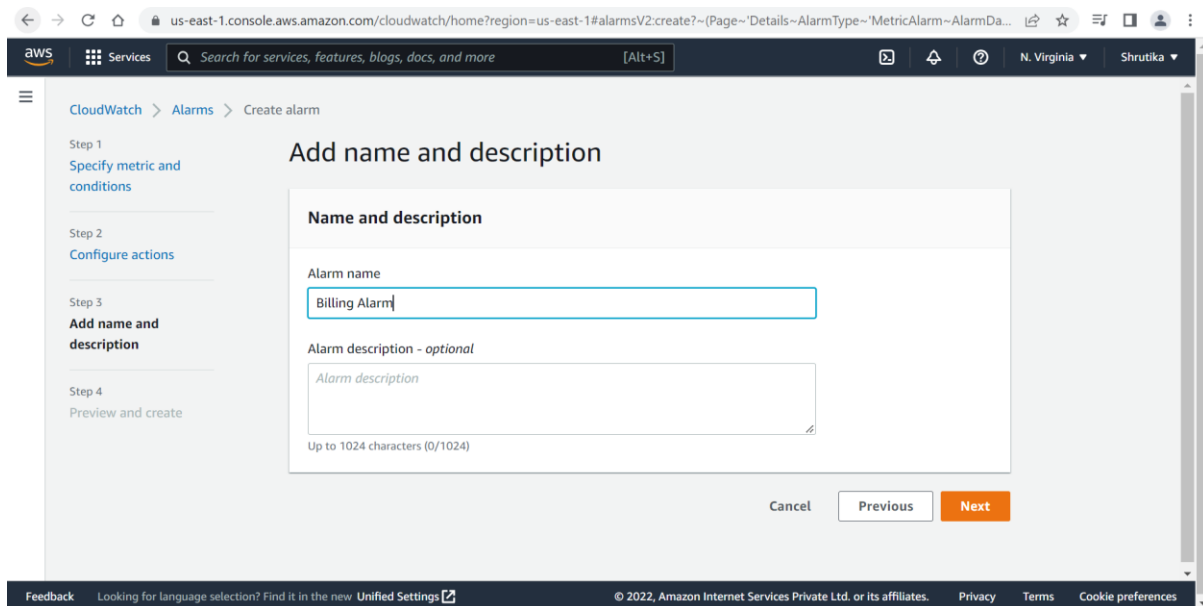
admin_email

admin_email

shrutika.yewale@capgemini.com - View in SNS Console

Add notification

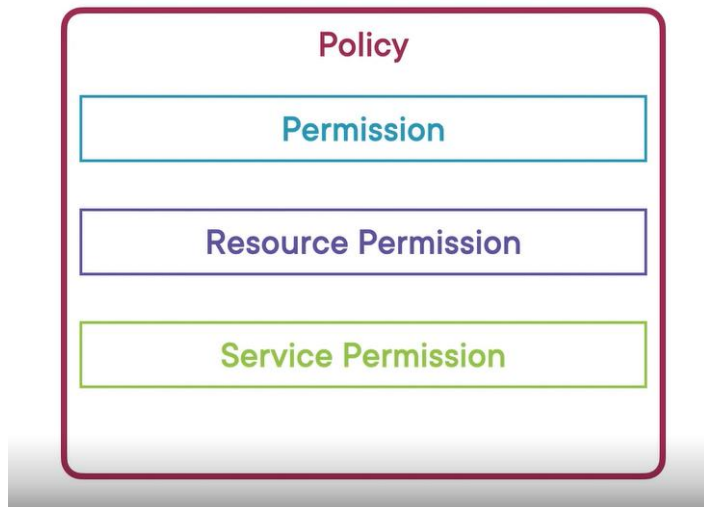
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Identity and Access Management (IAM):

- Service to configure authentication and access for user accounts
- IAM user management aspects:
 1. Passwords
 2. Multi-factor authentication
 3. Access keys
 4. SSH keys

IAM Policy



Root account permissions:

1. Administer all services
2. Modify billing information
3. Manage users

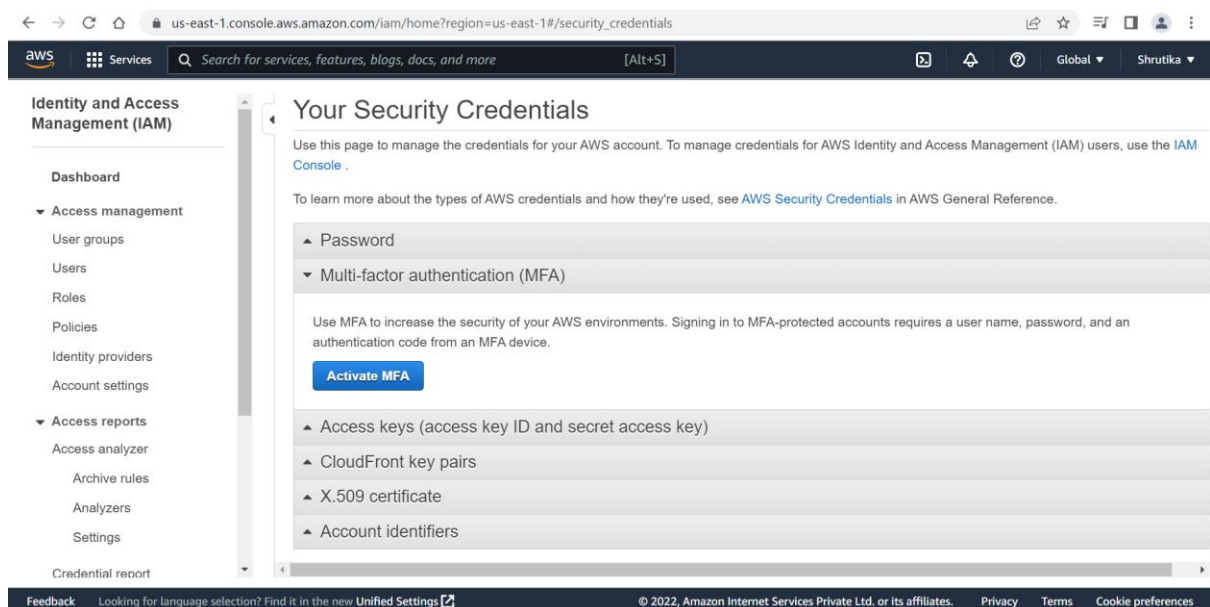
Multi-factor authentication:

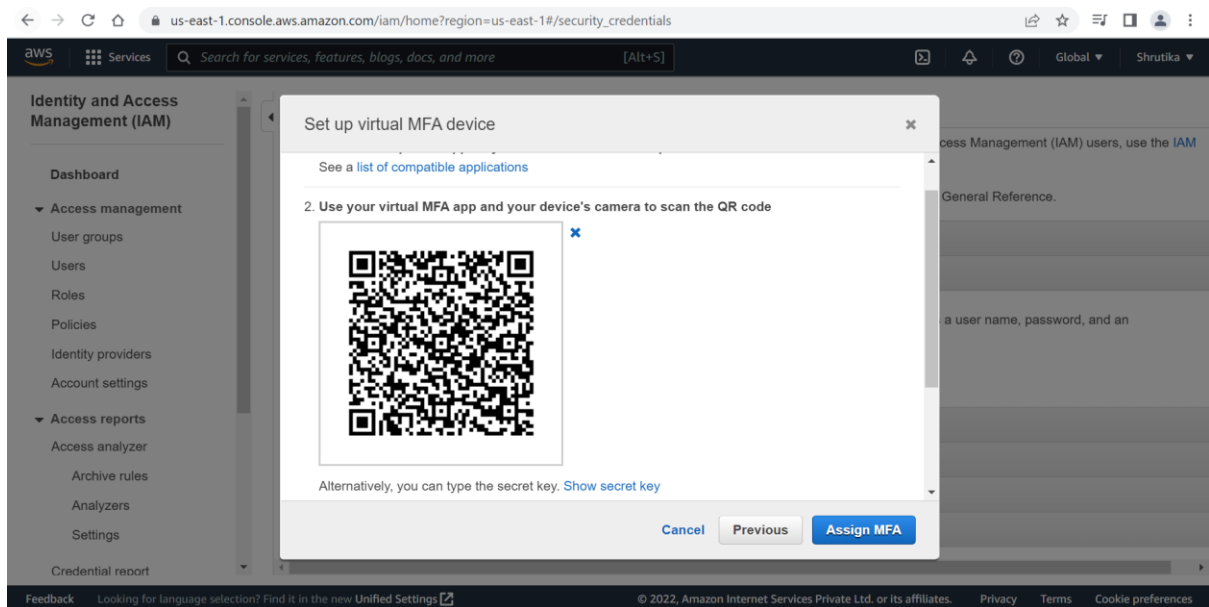
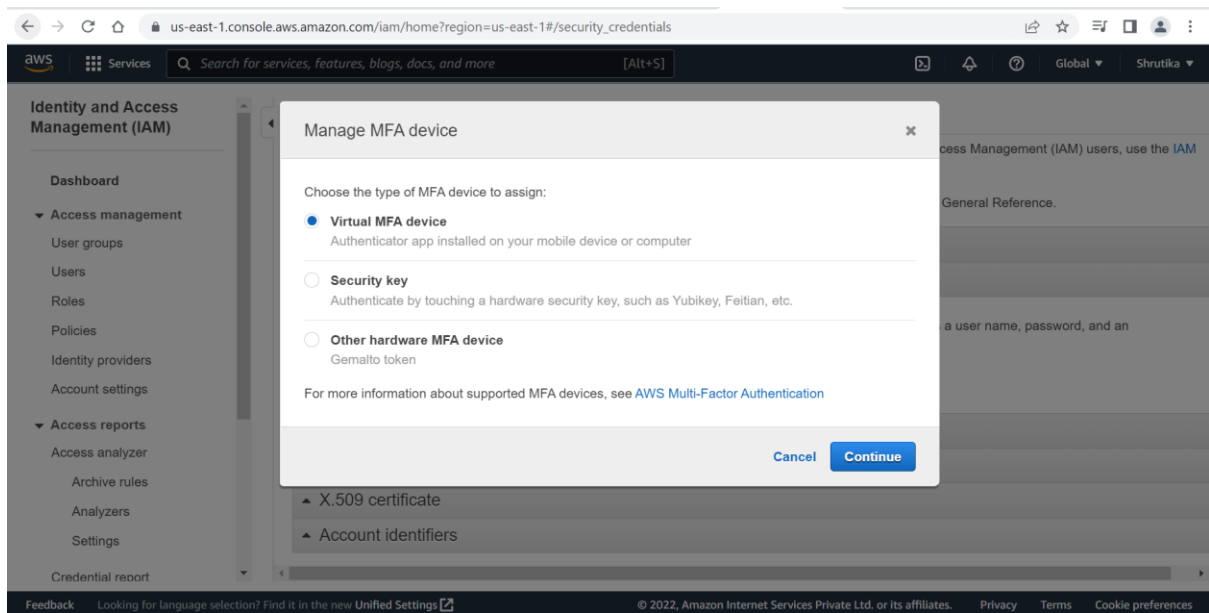
Authentication that requires more than one factor to authenticate

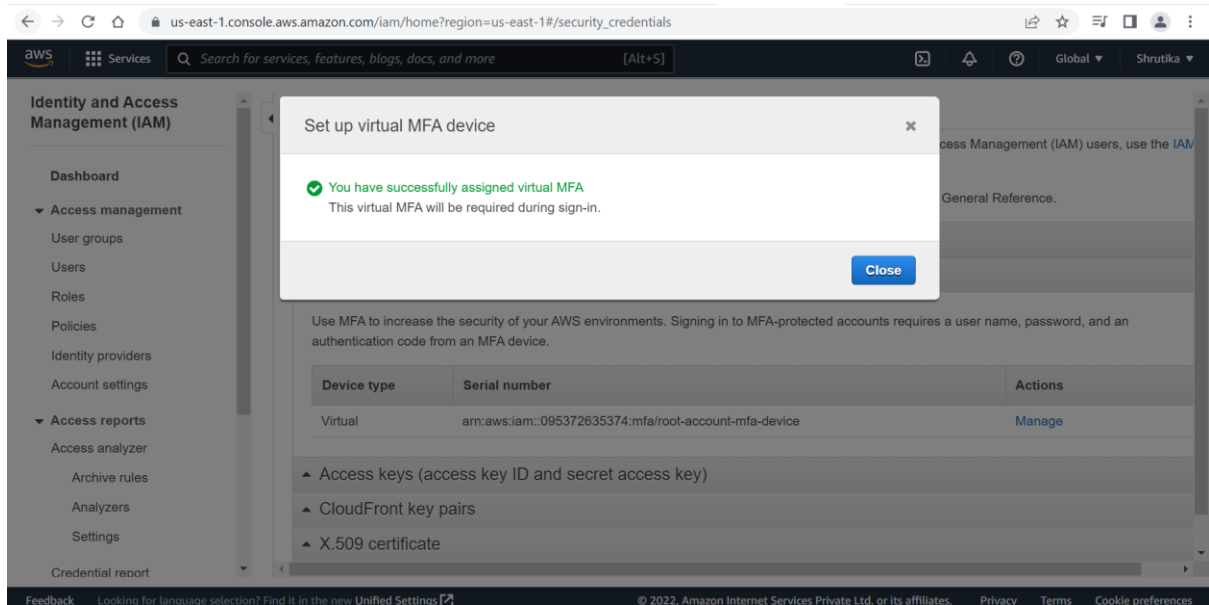
MFA Process:

1. Enter username and password
2. Enter MFA authentication code

Demo: Setup MFA on your root AWS account:







MFA increases the security of AWS account.

Understanding policies:

- Users have no permissions by default
- Effect – Allow/Deny
- Action – Operation user can perform on services
- Resource – Specific resources user can perform action on

IAM policy types:

1. AWS managed policies
2. Customer managed policy