
AWS
re:Invent
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IOT306

Build a remote asset health monitoring solution with AWS

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Agenda

Challenges with remote industrial assets

Introduction to AWS IoT SiteWise

Builders’ session breakout (40 minutes)

Q&A

Call to action and technical resources

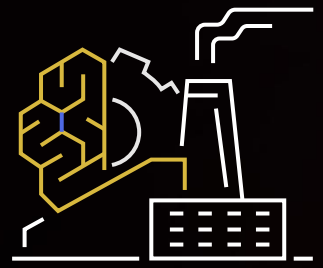
Quick survey

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Smart factory use cases



OEE visualization



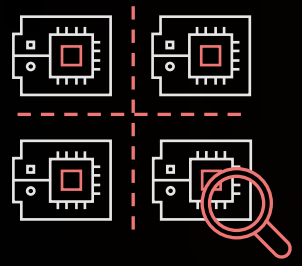
Production/process optimization



Preventive/predictive maintenance for machines



Machine as a service



Computer vision for quality control



Automated material management



Track and trace



Digital twin

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Challenges with monitoring remote assets

- Location and connectivity
- Aging infrastructure
- Asset uniqueness
- Deployment at scale
- Enabling operations



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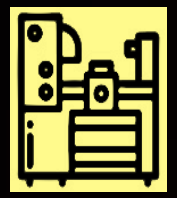
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IoT: AWS IoT SiteWise

AWS IoT SiteWise collects data from the plant floor with a local gateway, structures and labels that data, and generates real-time KPIs and metrics to make better data-driven decisions



Ingest equipment data into AWS in minutes



ASSET MODEL

Property: Attribute

tool_id :

Property: Time-series

pressforce-ch1 :

Property: Formula

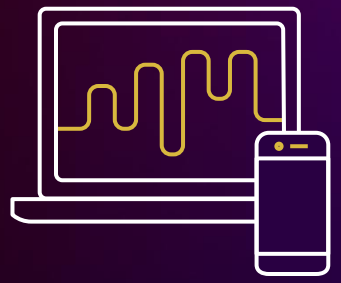
Avg Pressforce : *f*

(pressforce-ch1)

Structure data and specify performance metrics for your equipment and processes



Store data in a time series optimized data store



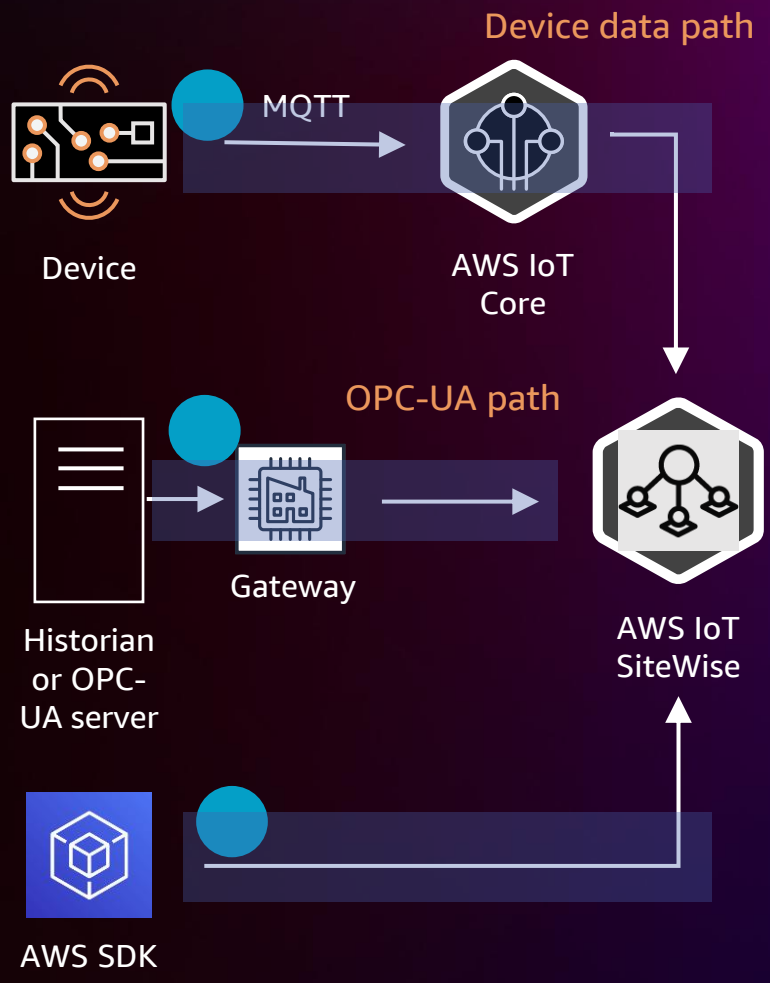
Create and share dashboards to visualize live and historical equipment data

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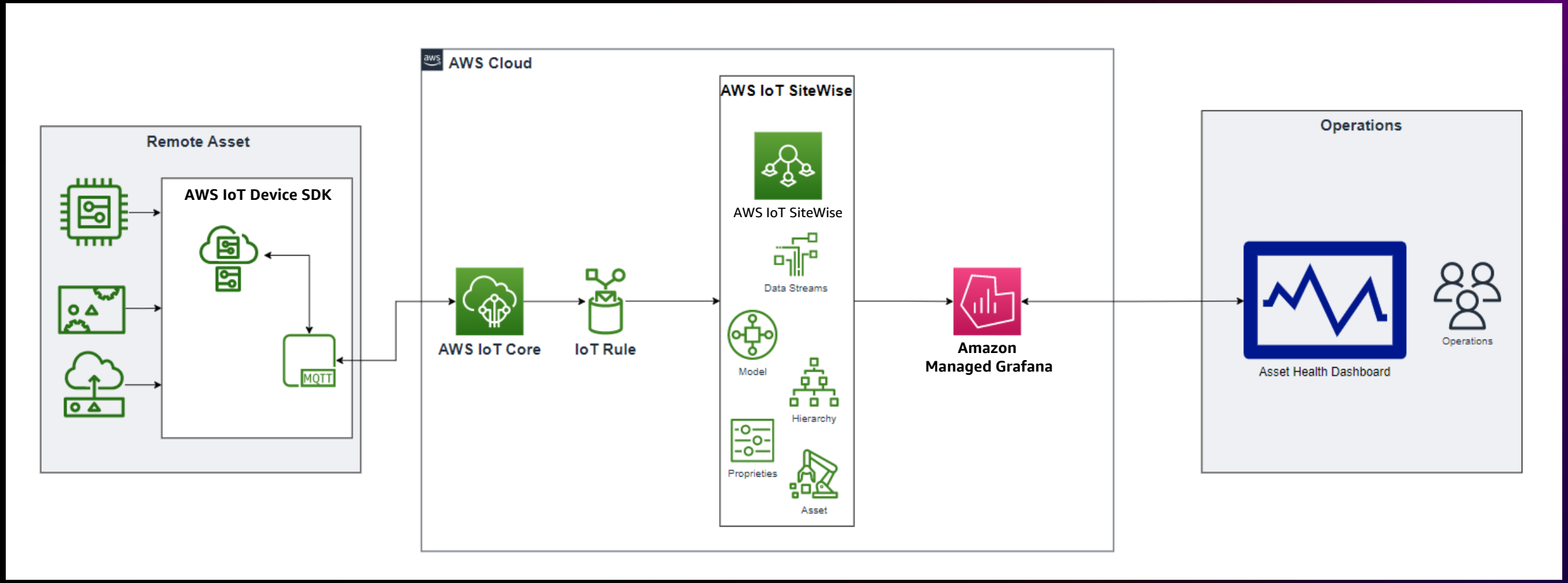
AWS IoT SiteWise: Ingest data

- Collect data from devices, equipment, and historians across all sites
- Send data to AWS IoT SiteWise from AWS IoT Core and through PUT APIs
- Supports MQTT, OPC-UA, EtherNet/IP, and Modbus protocols
- Centrally manage edge gateways



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Workshop architecture



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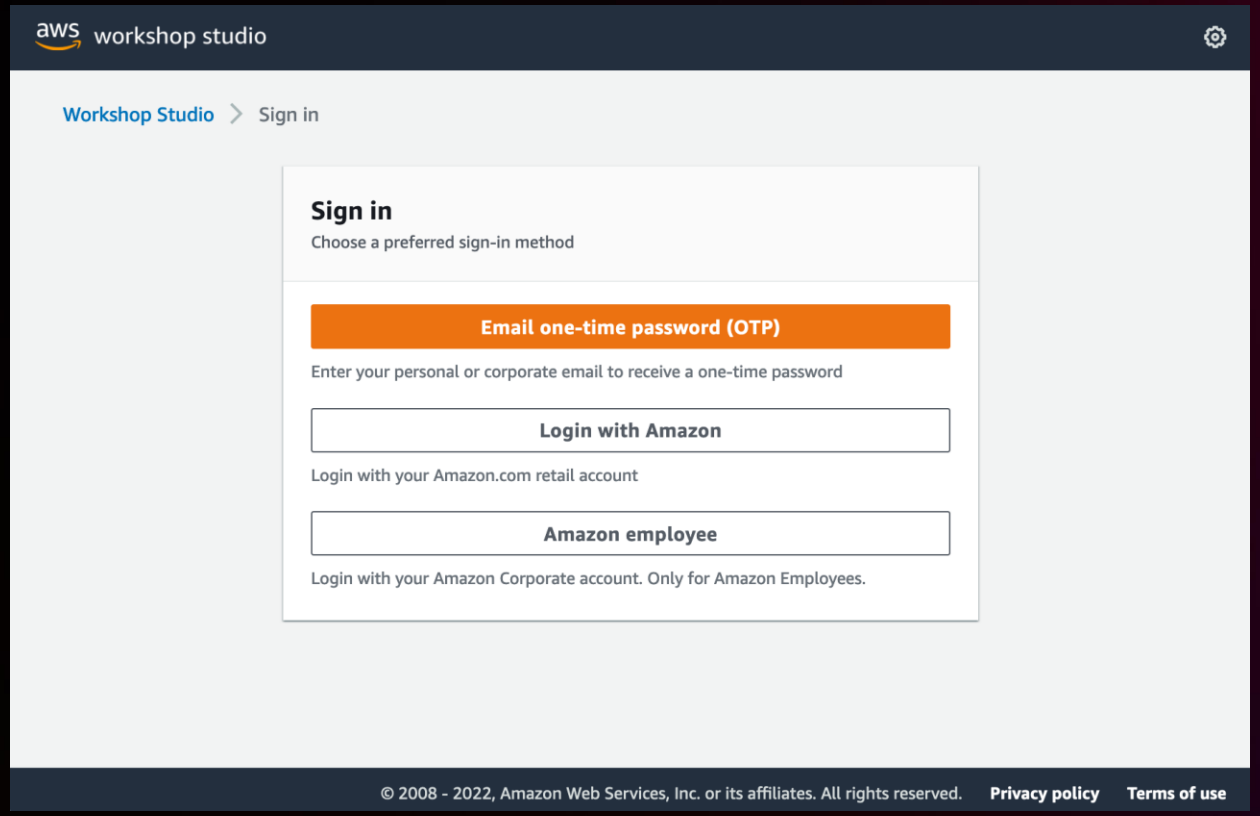
Getting started with this workshop

- As a participant, you will have access to an AWS account with any optional pre-provisioned infrastructure and IAM policies needed to complete this workshop
- The AWS account will only be available for the duration of this workshop; you will lose access to the account thereafter
- The optional pre-provisioned infrastructure will be deployed to a specific Region. Check your workshop content to determine whether other Regions will be used
- Be sure to review the terms and conditions of the event. Do not upload any personal or confidential information in the account

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Step 1: Sign in via your preferred method

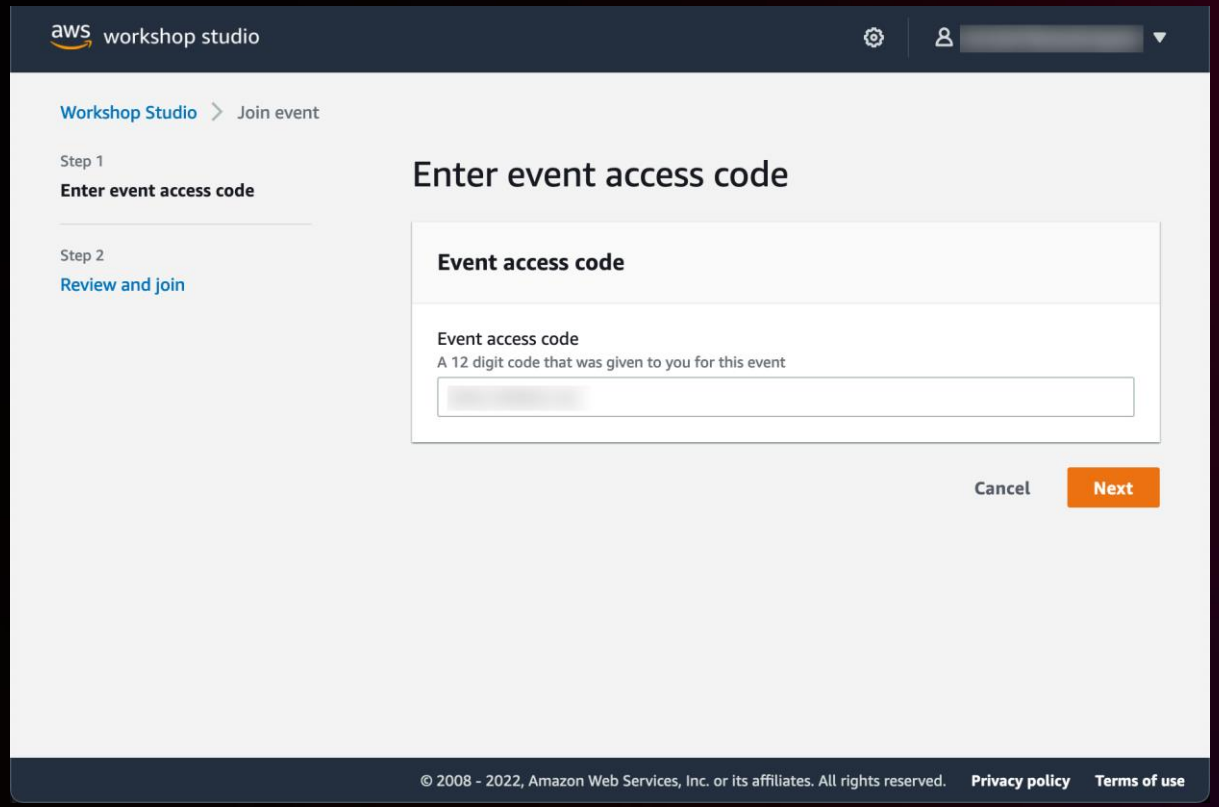
https://catalog.us-east-1.prod.workshops.aws/join



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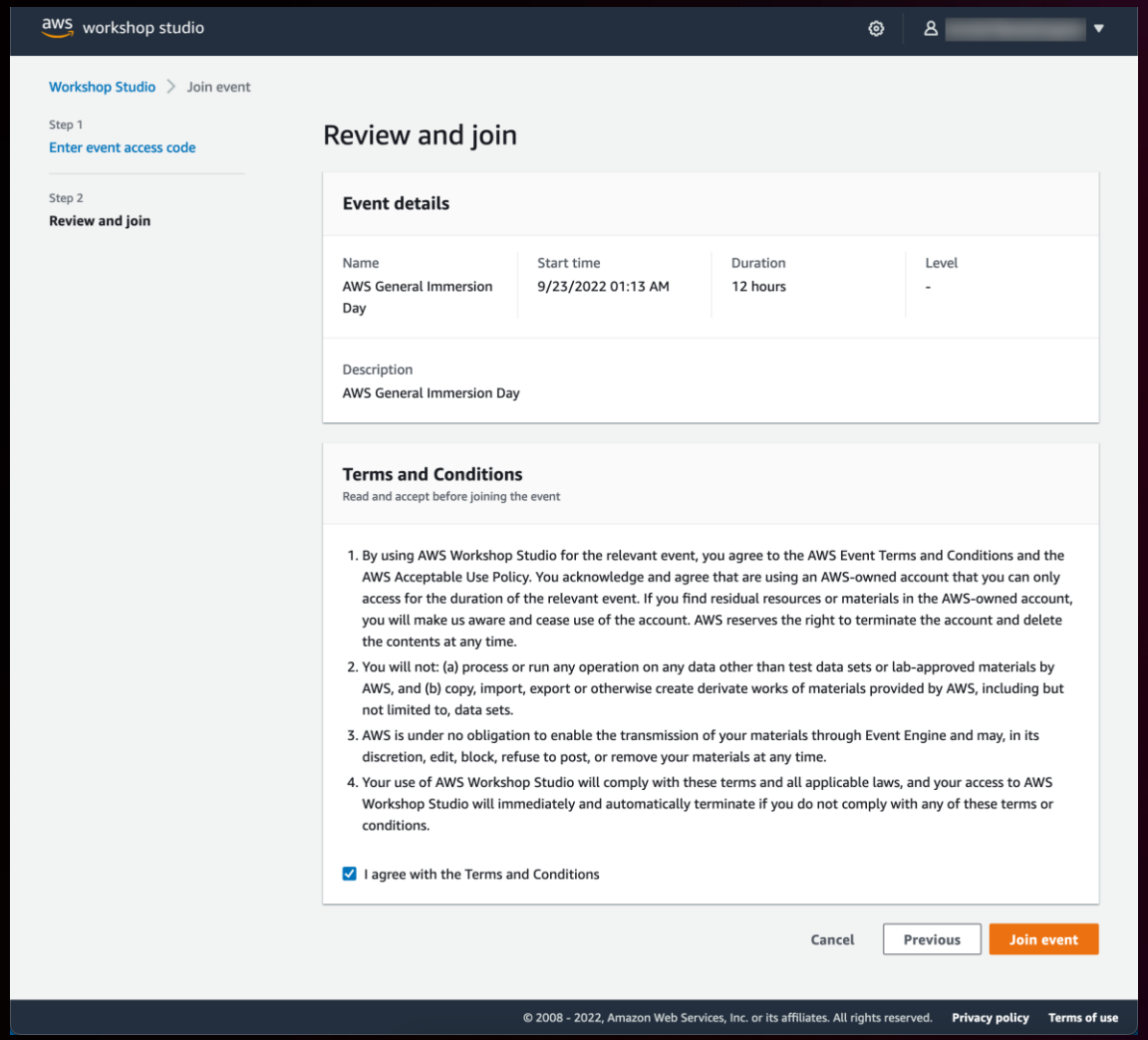
Step 2: Enter event access code

f779-027b4a-fd



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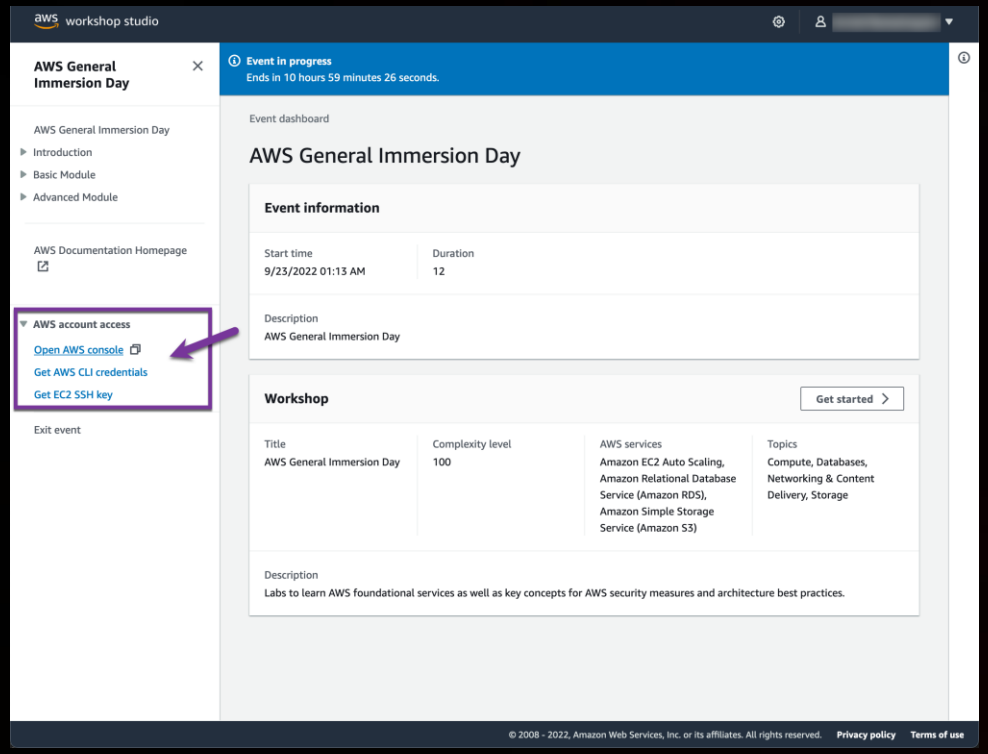
Step 3: Review terms and join event

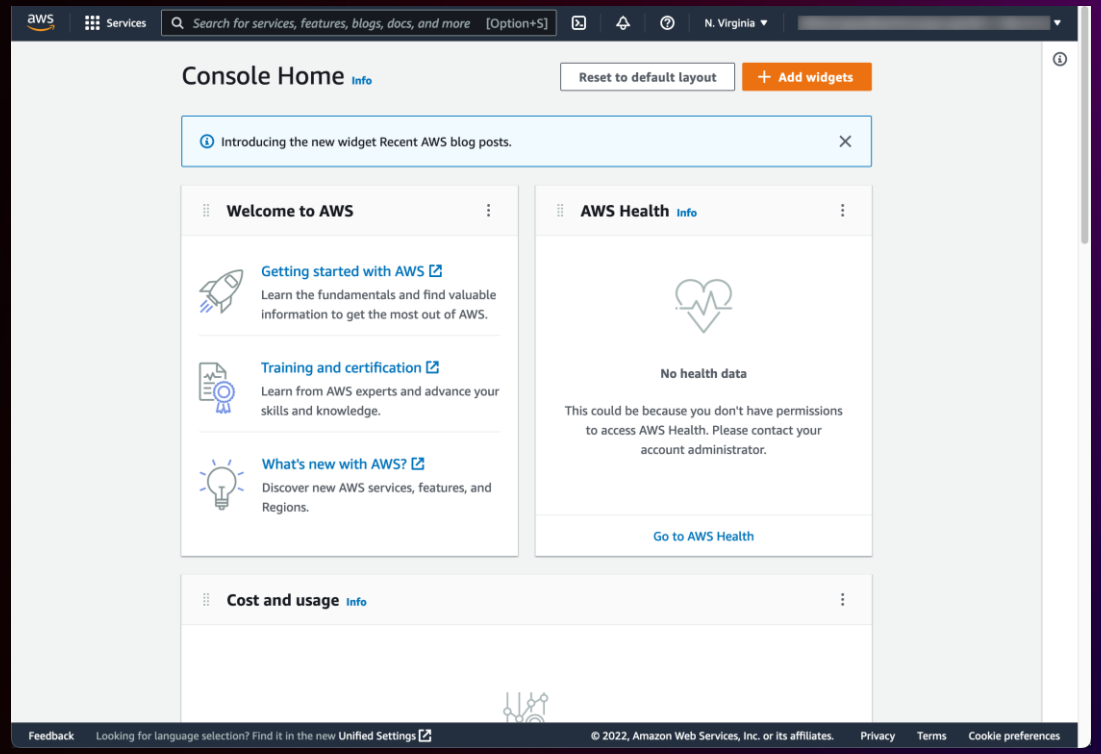


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Step 4: Access AWS account

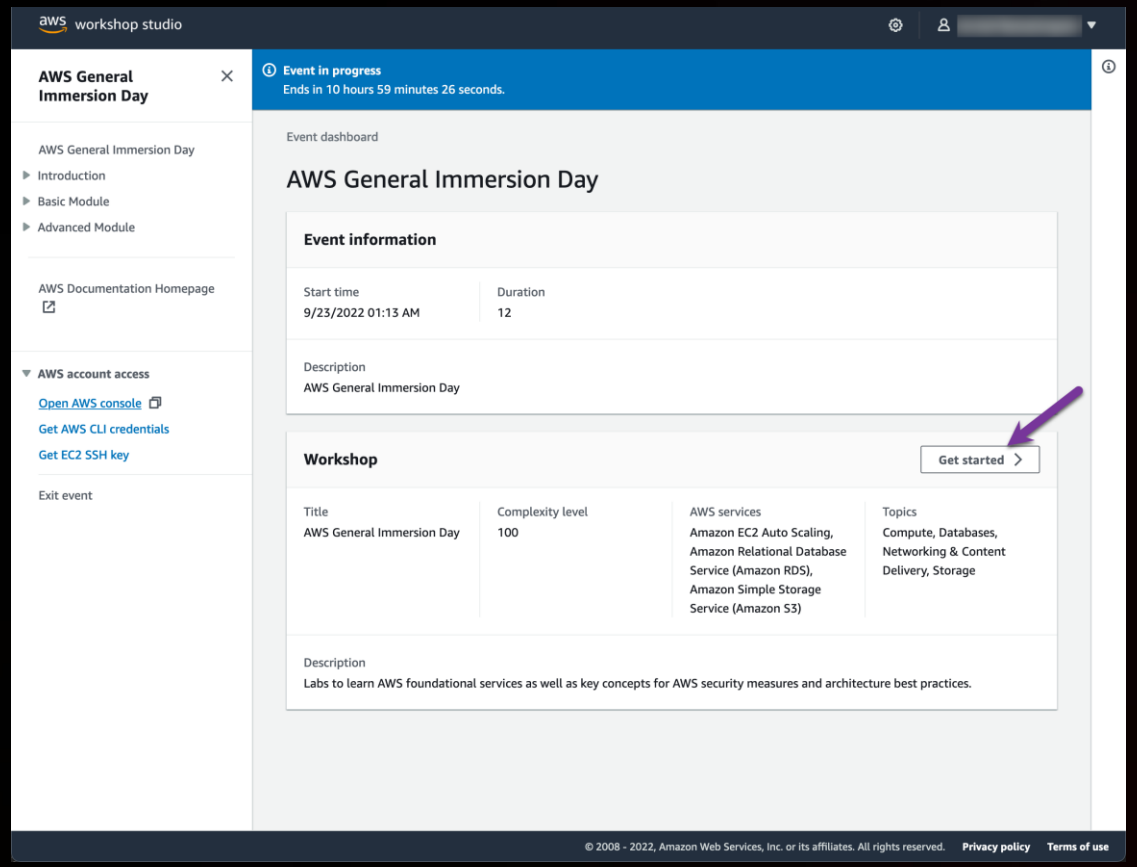
Access the AWS console, or generate AWS CLI credentials as needed

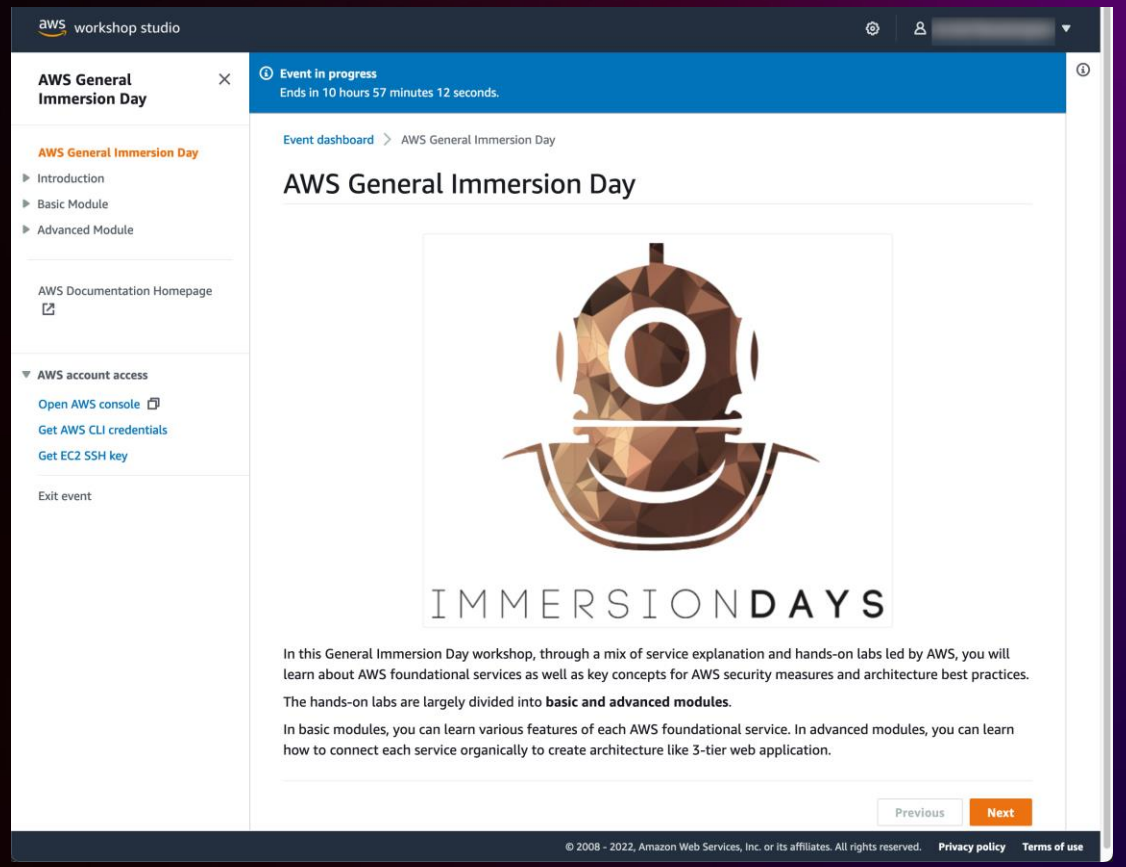




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Step 5: Get started with the workshop





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Technical resources

AWS IoT SiteWise

- Developer user guide
  go.aws/3EFmM82
- AWS IoT SiteWise service console demo
  go.aws/3GR4yCl
- AWS IoT SiteWise Workshop
  iot-sitewise.workshop.aws/en/

AWS IoT Greengrass

- Building Lambda components
  go.aws/3CLFHNT
- Stream manager
  go.aws/3ELWm4M

AWS AI/ML services

- Amazon Lookout for Equipment
  go.aws/3q4Kgzx
- Amazon Lookout for Metrics
  go.aws/3q3Djid
- Amazon SageMaker
  go.aws/3BXkmA9

AWS Partner offerings

- AWS Partner solution offerings
  go.aws/3mK3icj
- AWS Partner Device Catalog
  devices.amazonaws.com/

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Thank you!

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