

# AWS re:Invent

NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

# Predictive analytics using Amazon Timestream

Renuka Uttarala (She/Her)

Mgr. NoSQL DB Specialist SA  
Amazon Timestream, AWS

Norbert Funke (He/Him)

Sr. Timestream Specialist SA  
Amazon Timestream, AWS

Sreenath Gotur (He/Him)

Mgr. PSA, Partner Solutions  
Amazon Timestream, AWS

Piotr Westfalewicz (He/Him)

Sr. Data Architect, NoSQL  
Amazon Timestream, AWS

Sam Selvan (He/Him)

Principal Analytics SA  
Amazon Timestream, AWS



# Amazon Timestream

**A purpose-built  
time series  
database that  
is fast, scalable,  
and serverless**



# Let's build a predictive model with Timestream

# Getting started with this workshop

- You will have access to an AWS account with the 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 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

# Step 1: Sign in via your preferred method

<https://catalog.workshops.aws/join>



aws workshop studio

Workshop Studio > Sign in

### Sign in

Choose a preferred sign-in method

**Email one-time password (OTP)**

Enter your personal or corporate email to receive a one-time password

**Login with Amazon**

Login with your Amazon.com retail account

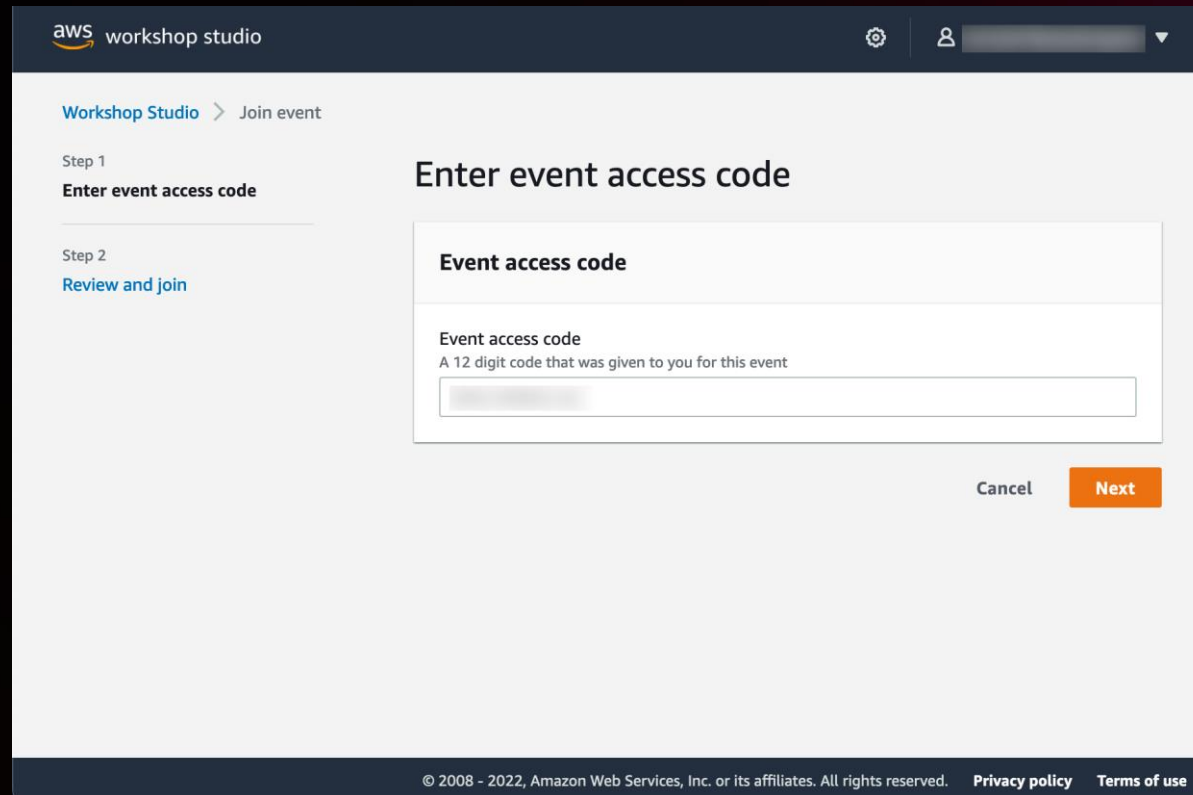
**Amazon employee**

Login with your Amazon Corporate account. Only for Amazon Employees.

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# Step 2: Enter event access code

Enter the 12-digit event access code (**b350-0a4334-cb**)



The screenshot shows the AWS Workshop Studio interface. At the top, there's a header with the AWS logo and 'workshop studio' text. Below the header, a breadcrumb trail shows 'Workshop Studio > Join event'. The main content area is titled 'Enter event access code'. On the left, there's a sidebar with 'Step 1 Enter event access code' (highlighted) and 'Step 2 Review and join'. The main area contains a form titled 'Event access code' with a description: 'Event access code A 12 digit code that was given to you for this event'. Below the description is a text input field. At the bottom right of the form, there are 'Cancel' and 'Next' buttons. The footer contains copyright information: '© 2008 - 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.' and links to 'Privacy policy' and 'Terms of use'.

aws workshop studio

Workshop Studio > Join event

Step 1  
Enter event access code

Step 2  
Review and join

## Enter event access code

**Event access code**



Event access code  
A 12 digit code that was given to you for this event

Cancel Next

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# Step 3: Review terms and join event

aws workshop studio



Workshop Studio > Join event

Step 1

[Enter event access code](#)

Step 2

**Review and join**

## Review and join

### Event details

Name	Start time	Duration	Level
AWS General Immersion Day	9/23/2022 01:13 AM	12 hours	-

Description

AWS General Immersion Day

### Terms and Conditions

Read and accept before joining the event

1. By using AWS Workshop Studio for the relevant event, you agree to the AWS Event Terms and Conditions and the AWS Acceptable Use Policy. You acknowledge and agree that are using an AWS-owned account that you can only access for the duration of the relevant event. If you find residual resources or materials in the AWS-owned account, you will make us aware and cease use of the account. AWS reserves the right to terminate the account and delete the contents at any time.

2. You will not: (a) process or run any operation on any data other than test data sets or lab-approved materials by AWS, and (b) copy, import, export or otherwise create derivate works of materials provided by AWS, including but not limited to, data sets.

3. AWS is under no obligation to enable the transmission of your materials through Event Engine and may, in its discretion, edit, block, refuse to post, or remove your materials at any time.

4. Your use of AWS Workshop Studio will comply with these terms and all applicable laws, and your access to AWS Workshop Studio will immediately and automatically terminate if you do not comply with any of these terms or conditions.

☒ I agree with the Terms and Conditions

Cancel

Previous

Join event

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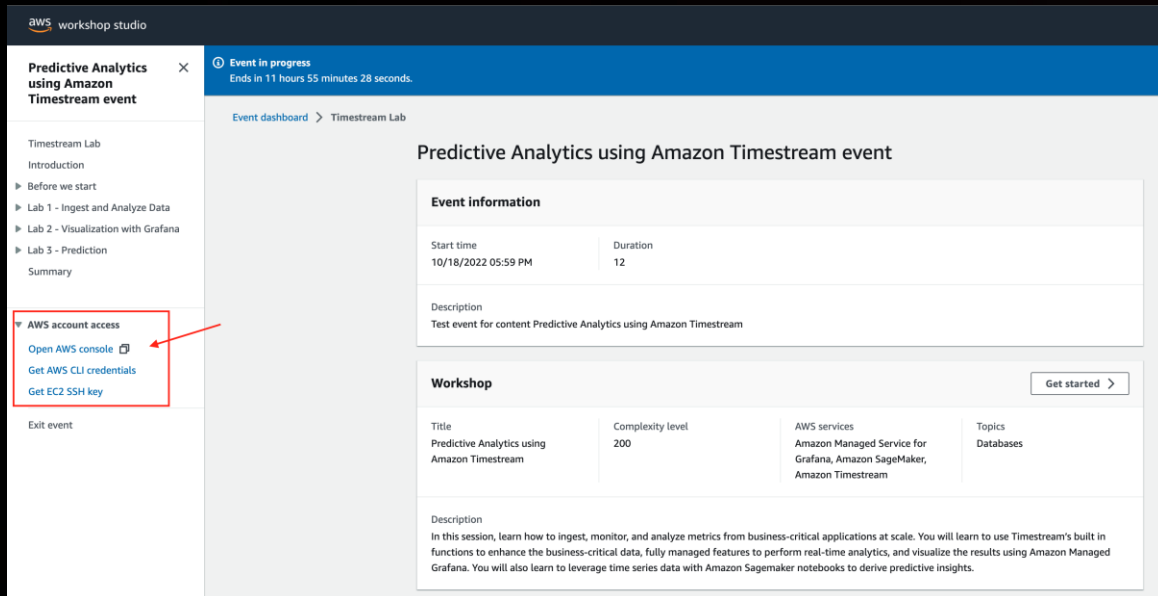
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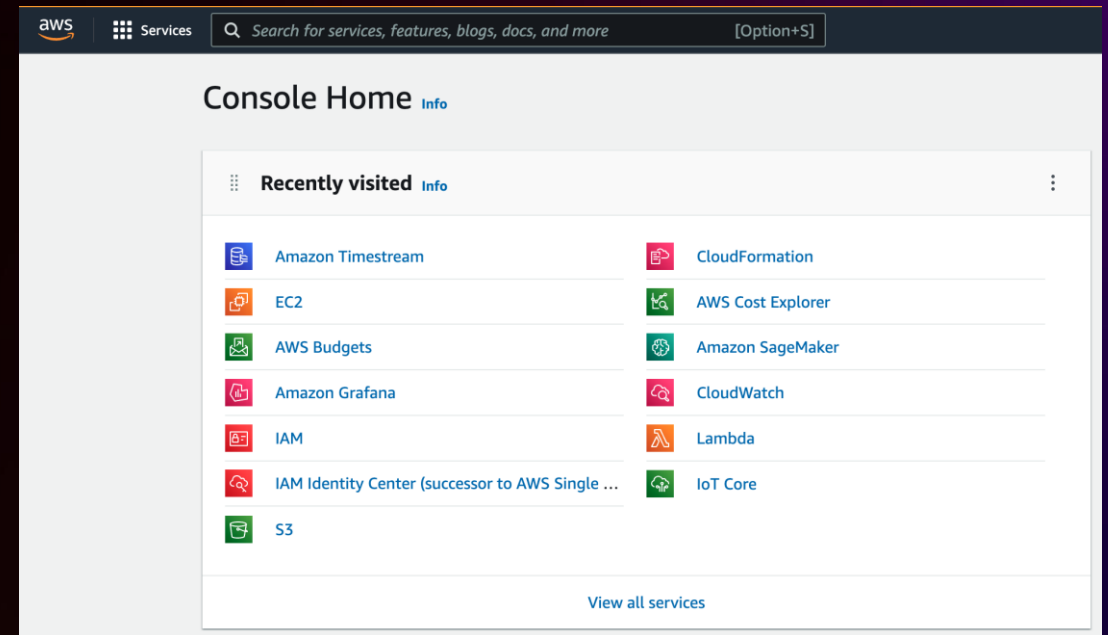
# Step 4: Access AWS account

## Access the AWS Console



The screenshot shows the AWS Workshop Studio interface. On the left, a sidebar lists the event's components: Introduction, Before we start, Lab 1 - Ingest and Analyze Data, Lab 2 - Visualization with Grafana, Lab 3 - Prediction, and Summary. Below these is a section titled 'AWS account access' which contains three links: 'Open AWS console', 'Get AWS CLI credentials', and 'Get EC2 SSH key'. A red box highlights this section, and a red arrow points to the 'Open AWS console' link. The main content area displays the 'Predictive Analytics using Amazon Timestream event' page, which includes event information (start time, duration, description) and a workshop overview table.

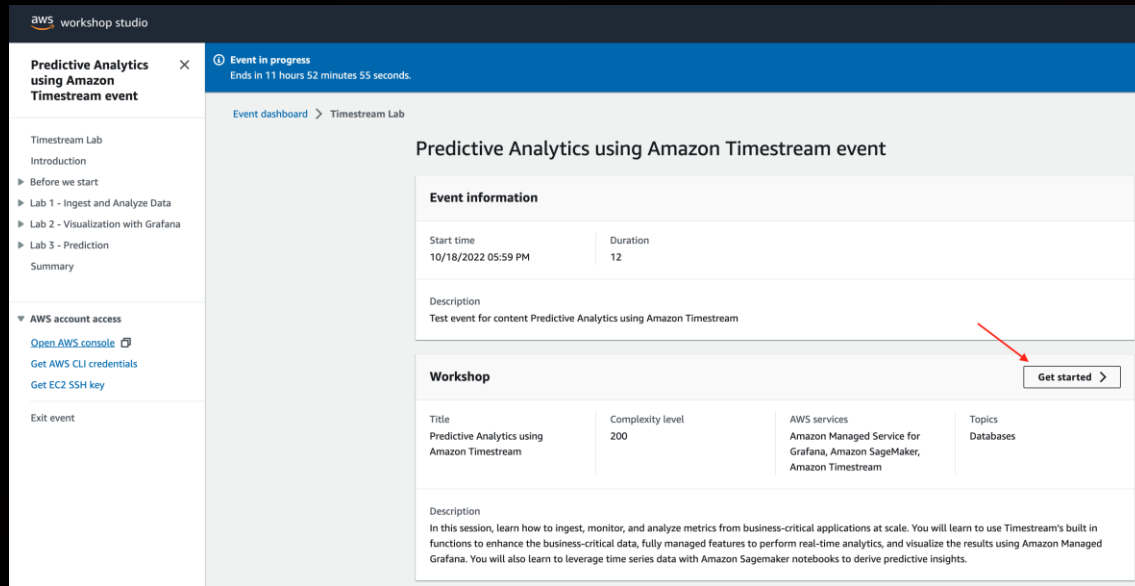
Workshop			
Title	Complexity level	AWS services	Topics
Predictive Analytics using Amazon Timestream	200	Amazon Managed Service for Grafana, Amazon SageMaker, Amazon Timestream	Databases



The screenshot shows the AWS Console Home page. At the top, there is a search bar with the text 'Search for services, features, blogs, docs, and more' and a placeholder '[Option+S]'. Below the search bar, the page is titled 'Console Home'. A section titled 'Recently visited' displays a grid of service tiles. The tiles include: Amazon Timestream, EC2, AWS Budgets, Amazon Grafana, IAM, IAM Identity Center (successor to AWS Single ...), S3, CloudFormation, AWS Cost Explorer, Amazon SageMaker, CloudWatch, Lambda, and IoT Core. At the bottom of the grid, there is a link that says 'View all services'.



# Step 5: Get started with the workshop

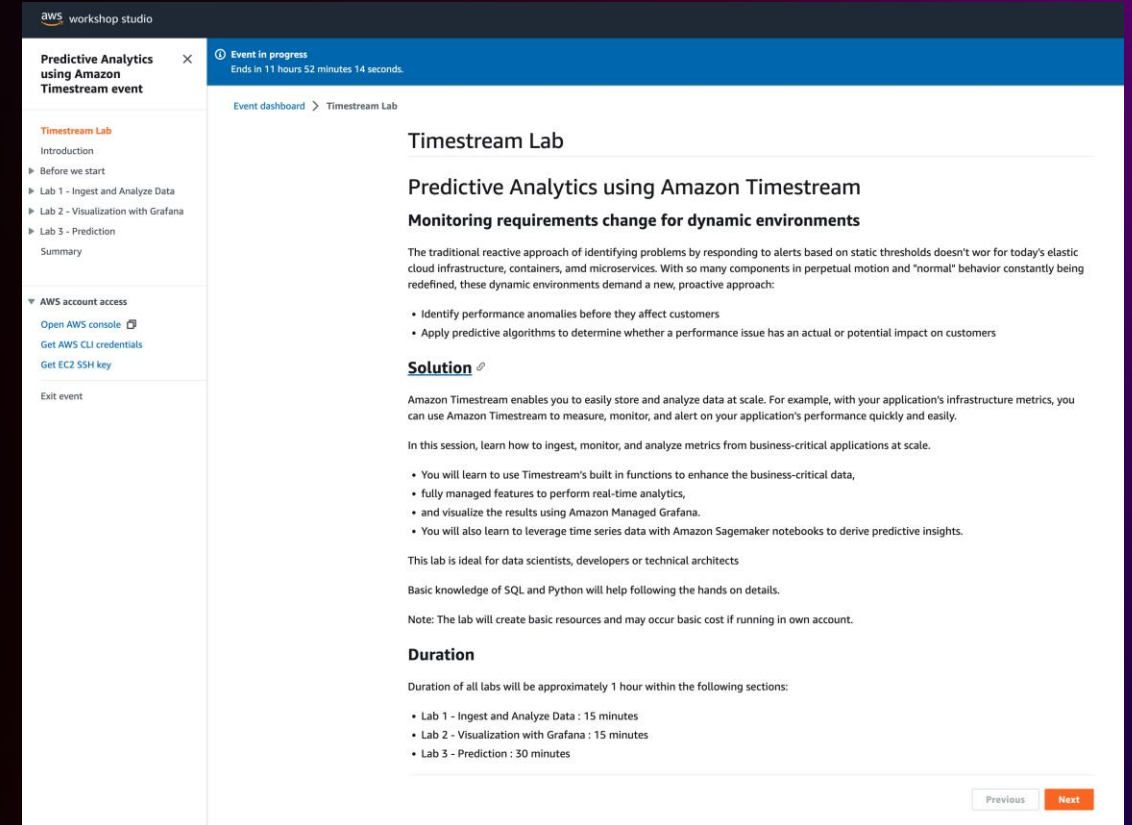


The screenshot shows the AWS Workshop Studio interface. On the left, there's a sidebar with a table of contents including 'Timestream Lab', 'Introduction', 'Before we start', 'Lab 1 - Ingest and Analyze Data', 'Lab 2 - Visualization with Grafana', 'Lab 3 - Prediction', and 'Summary'. Below this is a section for 'AWS account access' with links to 'Open AWS console', 'Get AWS CLI credentials', and 'Get EC2 SSH key'. The main content area is titled 'Predictive Analytics using Amazon Timestream event'. It includes an 'Event information' section with a table showing 'Start time' as '10/18/2022 05:59 PM' and 'Duration' as '12'. Below this is a 'Workshop' section with a table containing details about the workshop, including 'Title', 'Complexity level', 'AWS services', and 'Topics'. A red arrow points to the 'Get started' button in the 'Workshop' section.

Event information			
Start time	Duration		
10/18/2022 05:59 PM	12		
Description Test event for content Predictive Analytics using Amazon Timestream			

Workshop			
Title Predictive Analytics using Amazon Timestream	Complexity level 200	AWS services Amazon Managed Service for Grafana, Amazon SageMaker, Amazon Timestream	Topics Databases
Description In this session, learn how to ingest, monitor, and analyze metrics from business-critical applications at scale. You will learn to use Timestream's built-in functions to enhance the business-critical data, fully managed features to perform real-time analytics, and visualize the results using Amazon Managed Grafana. You will also learn to leverage time series data with Amazon SageMaker notebooks to derive predictive insights.			



The screenshot shows the AWS Workshop Studio interface. On the left, there's a sidebar with a table of contents including 'Timestream Lab', 'Introduction', 'Before we start', 'Lab 1 - Ingest and Analyze Data', 'Lab 2 - Visualization with Grafana', 'Lab 3 - Prediction', and 'Summary'. Below this is a section for 'AWS account access' with links to 'Open AWS console', 'Get AWS CLI credentials', and 'Get EC2 SSH key'. The main content area is titled 'Timestream Lab'. It includes a section for 'Predictive Analytics using Amazon Timestream' with the heading 'Monitoring requirements change for dynamic environments'. Below this is a 'Solution' section with a list of bullet points. The 'Duration' section lists the duration for each lab. At the bottom, there are 'Previous' and 'Next' buttons.

## Timestream Lab

### Predictive Analytics using Amazon Timestream

#### Monitoring requirements change for dynamic environments

The traditional reactive approach of identifying problems by responding to alerts based on static thresholds doesn't work for today's elastic cloud infrastructure, containers, and microservices. With so many components in perpetual motion and "normal" behavior constantly being redefined, these dynamic environments demand a new, proactive approach:

- Identify performance anomalies before they affect customers
- Apply predictive algorithms to determine whether a performance issue has an actual or potential impact on customers

#### Solution

Amazon Timestream enables you to easily store and analyze data at scale. For example, with your application's infrastructure metrics, you can use Amazon Timestream to measure, monitor, and alert on your application's performance quickly and easily.

In this session, learn how to ingest, monitor, and analyze metrics from business-critical applications at scale.

- You will learn to use Timestream's built-in functions to enhance the business-critical data,
- fully managed features to perform real-time analytics,
- and visualize the results using Amazon Managed Grafana.
- You will also learn to leverage time series data with Amazon SageMaker notebooks to derive predictive insights.

This lab is ideal for data scientists, developers or technical architects

Basic knowledge of SQL and Python will help following the hands-on details.

Note: The lab will create basic resources and may incur basic cost if running in your own account.

#### Duration

Duration of all labs will be approximately 1 hour within the following sections:

- Lab 1 - Ingest and Analyze Data : 15 minutes
- Lab 2 - Visualization with Grafana : 15 minutes
- Lab 3 - Prediction : 30 minutes

Previous Next

# Lab specific details

Both Lab 1 and Lab 2 contain optional activities, which can be omitted and are not required

## Lab 2

Grafana login:

admin/reinvent2022



# Thank you!

Renuka Uttarala  
urenuka@amazon.com

Norbert Funke  
funknor@amazon.com

Sreenath Gotur  
goturs@amazon.com

Piotr Westfalewicz  
westpiot@amazon.com

Sam Selvan  
saselvan@amazon.com



Please complete the session  
survey in the **mobile app**

