

# AWS re:Invent Re:Wind 2021

AWS  
User Groups  
Doha | Qatar



# Agenda



re:Invent 2021



Announcement



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Glance

# Speaker



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# re:Invent 2021

# What is AWS re:Invent?

- Okay, first things first: AWS re:Invent is a massive learning conference organized every year by Amazon Web Services.
- Packed with keynote announcements, training opportunities, and thousands of technical sessions,
- re:Invent is a chance for the global cloud computing community to find out the latest news from AWS HQ,
- Brush up on their skills, and take valuable insight back to their teams and businesses.



# re:Invent 2021

- This year AWS held re:invent in-person and virtual which is a change from 2020 that was a fully virtual event.
- Which means this was the first major learning conference held in-person in two years.
- AWS had over 25,000 attendees for the 5 day event, a significantly scaled down from 2019 that had over 60,000 and multiple hotels to host it.
- re:Invent 2021 -
  - 50 content tracks
  - 1,500 sessions
  - 25000 attendees



# Leadership Keynote

AWS Global Partner Summit keynote included more than 10 news announcements on our offerings for AWS Partners—companies that use Amazon Web Services to build solutions and services for other businesses and organizations. A couple of highlights

- New AWS Gameday Partner benefits to help build cloud skills
- A new AWS Energy Competency Program to support the global energy industry
- AWS Graviton Ready Program
- AWS Marketplace Offering for Kubernetes

## Global Partner Summit Keynote



Join us for the Global Partner Summit keynote, presented by Doug Yeum, Head of AWS Partner Organization, Sandy Carter, Vice President, Worldwide Public Sector Partners and Programs, and Stephen Orban, General Manager of AWS Marketplace and Control Services. You'll learn about cloud-powered innovation and the opportunity it creates for AWS Partners, as well as how AWS Partners use the AWS Cloud to build innovative solutions and services, differentiate their businesses, and enable customers in virtually every industry to transform their businesses.

# Leadership Keynote

Adam Selipsky gave his first keynote as the new CEO of AWS after Andy Jassy transition as CEO of Amazon.

With the overarching theme of “Pathfinders”, Adam brought forward many great examples of Pathfinders in our history that were constantly in search of ways to do things better, decided to look where others hadn’t yet, or gave those who came after the tools to forge their own path forward. A couple of highlights

- New Amazon EC2 C7g Instance Powered by AWS Graviton3 (Preview)
- Setting up a private 5G network in just a few clicks
- AWS IoT - AWS IoT TwinMaker & AWS IoT Device Management Fleet Indexing
- Serverless and On-demand Analytics - Amazon Redshift Serverless, Amazon EMR Serverless, Amazon MSK Serverless, and Amazon Kinesis On-Demand
- Amazon Sagemaker Canvas
- Row and cell-level security and Transactions for Governed tables in Lake Formation
- 

## Adam Selipsky Keynote



Adam Selipsky, AWS CEO, takes the stage to share his insights and the latest news about AWS customers, products, and services.

[Watch on demand](#)

# Leadership Keynote

Swami stated that despite 1.5 million AWS customers using databases, analytics, or machine learning services, just 80% of businesses use data for decision-making processes. By modernising, unify and innovating, a data-driven organisation is imperative for the future. A couple of highlights

- Amazon DevOps Guru for RDS
- Amazon RDS Custom
- Amazon DB Standard-Infrequent Access table class
- Amazon Sagemaker Ground Truth Plus
- Amazon SageMaker Training Compiler
- Amazon SageMaker Inference Recommender
- Amazon SageMaker Studio Lab (preview)
- Amazon SageMaker Serverless Inference (preview)

**Swami  
Sivasubramanian**  
Keynote



Join Swami Sivasubramanian, Vice President, Amazon Machine Learning, on an exploration of what it takes to put data in action with an end to end data strategy including the latest news on databases, analytics, and machine learning.

[Watch on demand](#)

# Leadership Keynote

Peter DeSantis continues to blow me away with his deep-dive technical keynotes giving insight into how AWS services are built behind the scenes using legacy IT hardware, software and techniques. A couple of highlights

- AWS Customer Carbon Footprint Tool

## Peter DeSantis Keynote

Join Peter DeSantis, Senior Vice President, AWS Utility Computing, to learn how AWS has optimized its cloud infrastructure to run some of the world's most demanding workloads and give your business a competitive edge.



# Leadership Keynote

Vogels began by reminding the audience how the launch of AWS 15 years ago unleashed a wave of innovation, and why AWS continues to push the boundaries of technological possibility. After announcing a few back to back services and feature releases, at one point Werner said “You have asked for this, it is basically your fault” referring to AWS and their Leadership Principle called “Customer Obsessed” about listening to their customer needs.

- Amazon EC2 M1 Mac Instances
- AWS Local Zones
- AWS Cloud WAN (preview)
- AWS Amplify Studio
- AWS Cloud Control API
- Shared sustainability Model
- AWS Well-Architected Framework Sustainability Pillar

## Werner Vogels Keynote



Jeff Barr (@jeffbarr) · Dec 2

Perhaps the best line of #reinvent2021 - "You have asked for this, it is basically your fault!" -- @Werner on why there are more than 200 AWS Services.

# Announcements

# Analytics

- [Amazon Redshift Serverless – Run Analytics At Any Scale Without Having to Manage Data Warehouse Infrastructure](#)
  - New capability makes it super easy to run analytics in the cloud with high performance at any scale. Just load your data and start querying with no need to set up and manage clusters.
- [Amazon Kinesis Data Streams On-Demand – Stream Data at Scale Without Managing Capacity](#)
  - This new capacity mode eliminates the need for provisioning and managing the capacity for streaming data. Using Kinesis Data Streams On-demand automatically scales the capacity in response to varying data traffic.
- [AWS Lake Formation – General Availability of Cell-Level Security and Governed Tables with Automatic Compaction](#)
  - AWS Lake Formation makes it easy to set up a secure data lake in days instead of weeks or months; newly released features further simplify loading data, optimizing storage, and managing access to a data lake.
- [AWS Data Exchange for APIs: Find, Subscribe to, and Use Third-party APIs with Consistent Authentication](#)
  - New capability simplifies the lives of developers and IT administrators who have to integrate and secure the access to multiple third-party APIs.

# Artificial Intelligence / Machine Learning

- [Amazon SageMaker Studio Lab, a Free Service to Learn and Experiment with ML](#)
  - Launching a free service that enables anyone to learn and experiment with ML without needing an AWS account, credit card, or cloud configuration knowledge.
- [Amazon SageMaker Inference Recommender](#)
  - Amazon SageMaker Studio capability automates load testing and optimizes model performance across machine learning (ML) instances.
- [New – Introducing SageMaker Training Compiler](#)
  - New capability automatically compiles your Python training code and generates GPU kernels specifically for your model. The result? The training code will use less memory and compute, and train faster.
- [New – Create and Manage EMR Clusters and Spark Jobs with Amazon SageMaker Studio](#)
  - With the ability to connect to and manage EMR clusters from within SageMaker Studio, data scientists no longer have to leave their familiar environment to create, configure and provision the EMR clusters where they run their workloads.

# Artificial Intelligence / Machine Learning

- [Announcing Amazon SageMaker Ground Truth Plus](#)
  - Ground Truth Plus is a turn-key service that uses an expert workforce to deliver high-quality training datasets fast, and reduces costs by up to 40 percent.
- [Amazon SageMaker Canvas – a Visual, No Code Machine Learning Capability for Business Analysts](#)
  - Now business analysts can build machine learning models and generate accurate business predictions without writing code or requiring ML expertise.

# Database

- [New DynamoDB Table Class – Save Up To 60% in Your DynamoDB Costs](#)
  - DynamoDB Standard-IA table class is designed for customers who want a cost-optimized solution for storing infrequently accessed data in DynamoDB without changing any application code.
- [New – Amazon RDS Custom for SQL Server Is Generally Available](#)
  - This launch supports applications that have dependencies on specific configurations and third-party applications that require customizations in corporate, e-commerce, and content management systems, such as Microsoft SharePoint.
- [New – Amazon DevOps Guru for RDS to Detect, Diagnose, and Resolve Amazon Aurora-Related Issues using ML](#)
  - Now developers will have enough information to determine the exact cause for a database performance issue in Amazon Aurora, saving many hours of work trying to uncover and remediate the problems.

# Compute

- [Join the Preview – Amazon EC2 C7g Instances Powered by New AWS Graviton3 Processors](#)
  - These instances are going to be a great match for your compute-intensive workloads: HPC, batch processing, electronic design automation (EDA), media encoding, scientific modeling, ad serving, distributed analytics, and CPU-based machine learning inferencing.
- [Announcing Pull Through Cache Repositories for Amazon Elastic Container Registry](#)
  - Pull through cache repositories offer developers the improved performance, security, and availability of Amazon Elastic Container Registry for container images that they source from public registries.
- [Introducing Karpenter – An Open-Source High-Performance Kubernetes Cluster Autoscaler](#)
  - New open-source project helps improve your application availability and cluster efficiency by rapidly launching right-sized compute resources in response to changing application loads.

# Developer Tools

- [AWS re:Post – A Reimagined Q&A Experience for the AWS Community](#)
  - AWS re:Post is an AWS-managed Q&A service offering crowd-sourced, expert-reviewed answers to your technical questions about AWS that replaces the original AWS Forums.
- [Announcing General Availability of Construct Hub and AWS Cloud Development Kit Version 2](#)
  - The AWS CDK is an open-source framework that simplifies working with cloud resources using familiar programming languages: C#, TypeScript, Java, Python, and Go (in developer preview).

# Security

- [AWS Shield Advanced Update – Automatic Application Layer DDoS Mitigation](#)
  - New feature automatically creates, tests, and deploys AWS WAF rules to mitigate layer 7 DDoS events on behalf of customers.
- [Amazon CodeGuru Reviewer Introduces Secrets Detector to Identify Hard Coded Secrets and Secure Them with AWS Secrets Manager](#)
  - The new Amazon CodeGuru Reviewer Secrets Detector is an automated tool that helps developers detect secrets in source code or configuration files, such as passwords, API keys, SSH keys, and access tokens.
- [Improved, Automated Vulnerability Management for Cloud Workloads with a New Amazon Inspector](#)
  - Amazon Inspector is a service used by organizations of all sizes to automate security assessment and management at scale. This new launch enables frictionless deployment at scale, support for an expanded set of resource types needing assessment, and a critical need to detect and remediate at speed.

# Management Tools

- New for AWS Control Tower – Region Deny and Guardrails to Help You Meet Data Residency Requirements
  - Preventive and detective controls will prevent provisioning resources in unwanted AWS Regions by restricting access to AWS APIs through service control policies (SCPs) built and managed by AWS Control Tower.
- New – AWS Control Tower Account Factory for Terraform
  - AFT is a new Terraform module maintained by the AWS Control Tower team that allows you to provision and customize AWS accounts through Terraform using a deployment pipeline.
- New – Real-User Monitoring for Amazon CloudWatch
  - Amazon CloudWatch helps you to build web applications that are highly scalable and highly available. The big challenge we are addressing today is monitoring those applications with the goal of understanding performance and providing an optimal experience for your end users.
- New – Amazon CloudWatch Evidently – Experiments and Feature Management
  - This new Amazon CloudWatch capability makes it easy for developers to introduce experiments and feature management in their application code. CloudWatch Evidently may be used for two similar but distinct use-cases: implementing dark launches, also known as feature flags, and A/B testing.

# Messaging & Event driven

- Machine Learning-Powered Amazon Connect, Now With Call Summarization
  - Amazon Connect adds a new capability that helps you improve customer experience and agent and supervisor productivity by automatically summarizing the important aspects of each customer call.
- New – Enhanced Dead-letter Queue Management Experience for Amazon SQS Standard Queues
  - New functionality helps you focus on the important phase of your error handling workflow, which consists of identifying and resolving processing errors.
- New – Use Amazon S3 Event Notifications with Amazon EventBridge
  - Today we are making it even easier for you to use EventBridge to build applications that react quickly and efficiently to changes in your S3 objects. This is a new, “directly wired” model that is faster, more reliable, and more developer-friendly than ever.

# Networking & Content Delivery

- New – Site-to-Site Connectivity with AWS Direct Connect SiteLink
  - You no longer need to connect through the closest AWS Region and manage and configure an AWS Transit Gateway for site-to-site network connectivity.
- Network Address Management and Auditing at Scale with Amazon VPC IP Address Manager
  - New feature provides an automated IP management workflow making it easier to organize, assign, monitor, and audit IP addresses in at-scale networks.
- New – Amazon VPC Network Access Analyzer
  - In contrast to manual checking of network configurations, which is error-prone and hard to scale, this tool lets you analyze your AWS networks of any size and complexity.

# Storage

- [Enhanced Amazon S3 Integration for Amazon FSx for Lustre](#)
  - New capabilities feature a full bi-directional synchronization of your file systems with Amazon S3 and the ability to synchronize your file systems with multiple S3 buckets or prefixes.
- [New – Offline Tape Migration Using AWS Snowball Edge](#)
  - Now you can get rid of your large and expensive storage facility, send your tape robots out to pasture, and eliminate all of the time and effort involved in moving archived data to new formats and mediums every few years.
- [Preview – AWS Backup Adds Support for Amazon S3](#)
  - New capability lets you centrally manage your applications backups, easily restore your data, and improves backup compliance.
- [Amazon S3 Glacier is the Best Place to Archive Your Data – Introducing the S3 Glacier Instant Retrieval Storage Class](#)
  - This new archive storage class delivers the lowest cost storage for long-lived data that is rarely accessed and requires millisecond retrieval.

# Storage

- [AWS Nitro SSD – High Performance Storage for your I/O-Intensive Applications](#)
  - The second generation of AWS Nitro SSDs were designed to avoid latency spikes and deliver great I/O performance on real-world workloads.
- [New – Recycle Bin for EBS Snapshots](#)
  - It's easy to create EBS Snapshots, and just as easy to delete them – sometimes too easy. In order to give you more control, we are launching a Recycle Bin that lets you set up rules to retain deleted snapshots so that you can recover them after an accidental deletion.
- [New – Amazon EBS Snapshots Archive](#)
  - EBS is an easy-to-use high-performance block storage service for your Amazon EC2 instances. An EBS volume mounted to your EC2 instances lets you boot an operating system and store data for your most performance-demanding workloads.

# Well-Architected Framework

- [New – Sustainability Pillar for AWS Well-Architected Framework](#)
  - The Sustainability Pillar contains questions aimed at evaluating the design, architecture, and implementation of your workloads to reduce their energy consumption and improve their efficiency.
- [Announcing AWS Well-Architected Custom Lenses: Extend the Well-Architected Framework with Your Internal Best Practices](#)
  - Custom Lenses provide a consolidated view and a consistent way to measure and improve your workloads on AWS without relying on external spreadsheets or third-party systems.

# re:Invent 2021 - Glance



# Thank you!

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