



# re:Invent 2023 re:cap - Dev, DevOps, Compute & Networking

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AWS RE:INVENT

**RE:CAP**

# re:Invent 2023 Key Stats for Apps and Infra announcements

20 major announcements around Compute,  
Network and Application Developments

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10 / 20 are powered by AI



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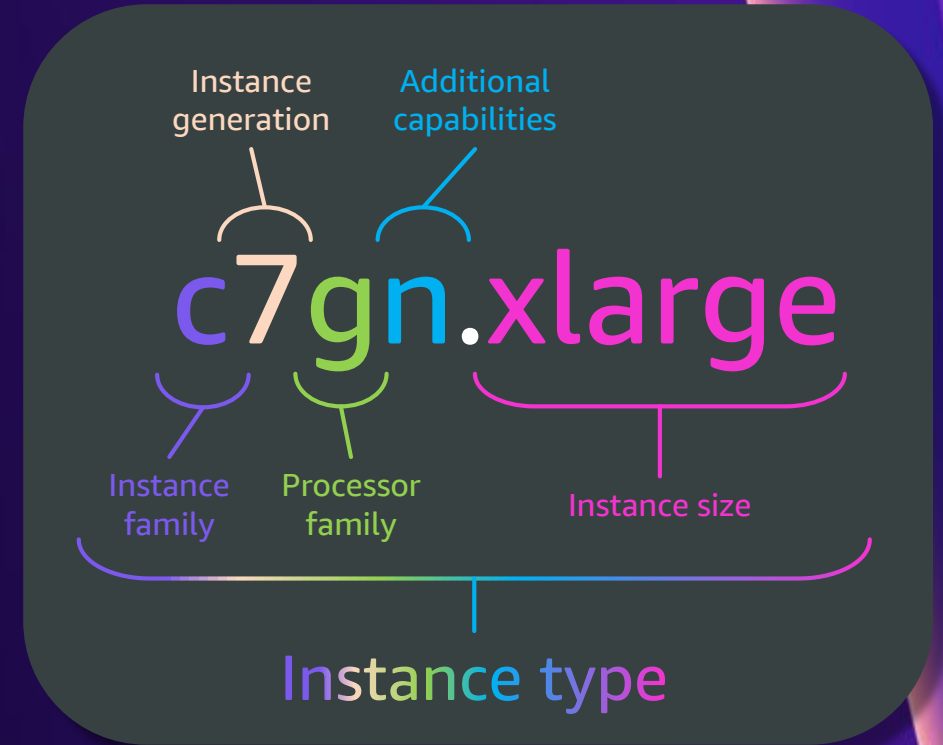


# Compute



# Quick Reminders on EC2 Naming

General Purpose	Compute Optimized	Memory Optimized	Accelerated Computing	Storage Optimized	HPC Optimized
T3	C7i	R8g	P5	I4g	Hpc7a
M7a		X2idn	Trn2	D3en	
Mac		Z1d	F1	H1	



Now over 750 instances

# Amazon EC2 r8g Instance (with Graviton4)

NEXT GENERATION OF STANDARD RAM FOCUSED INSTANCES WITH NEWEST GRAVITON PROCESSOR

Up to 3x more vCPU and memory than R7g  
Dedicated caches for every vCPU

## Generational Performance Gains

30% faster for web apps  
40% better performance for databases  
45% faster for large Java applications

## Security Capabilities

Always-on memory encryption  
Support for pointer authentication  
Support for encrypted Amazon Elastic Block Store



Powered by Graviton4 Processors

Who should use? Anyone using r7g and anyone running databases or caches on EC2

# Amazon EC2 u7i Instance

MAJOR UPGRADE IN HIGH MEMORY INSTANCES FOR EC2 BASED, ULTRA-LOW LATENCY DATABASES

Designed for very high memory use cases

Up to 125% more compute performance and  
120% more memory performance (from u-6/9/12tb1)

2.5x as much EBS bandwidth

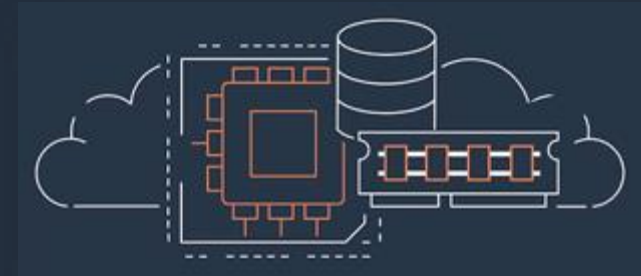
Hydrate in-memory databases at a rate of up to 44 terabytes per hour

Attach up to 128 EBS volumes



io2 Block Express volumes can be up to 64 TiB with 256K IOPS and 32 Gbps, making them a great match for the u7i instance

Available in 16, 24, and 32 TB of DDR5 RAM



8 Sockets, each with a 56 core CPU = 896 vCPU

100Gbps EBS and Network Bandwidth

Who should use it? Anyone running u-6/9/12tb1 instances or running DBs like SAP HANA, Oracle, or SQL Server.

# Amazon EC2 Trn2 Instance (Trainium2)

EC2 WITH AN ML-OPTIMIZED PROCESSOR FOR CUSTOMERS WHO BUILD FMS ON AWS HARDWARE

Optimized for training FMs with hundreds of billions to trillions of parameters

4x faster than AWS Trainium

65 exaflops of on-demand supercomputing performance

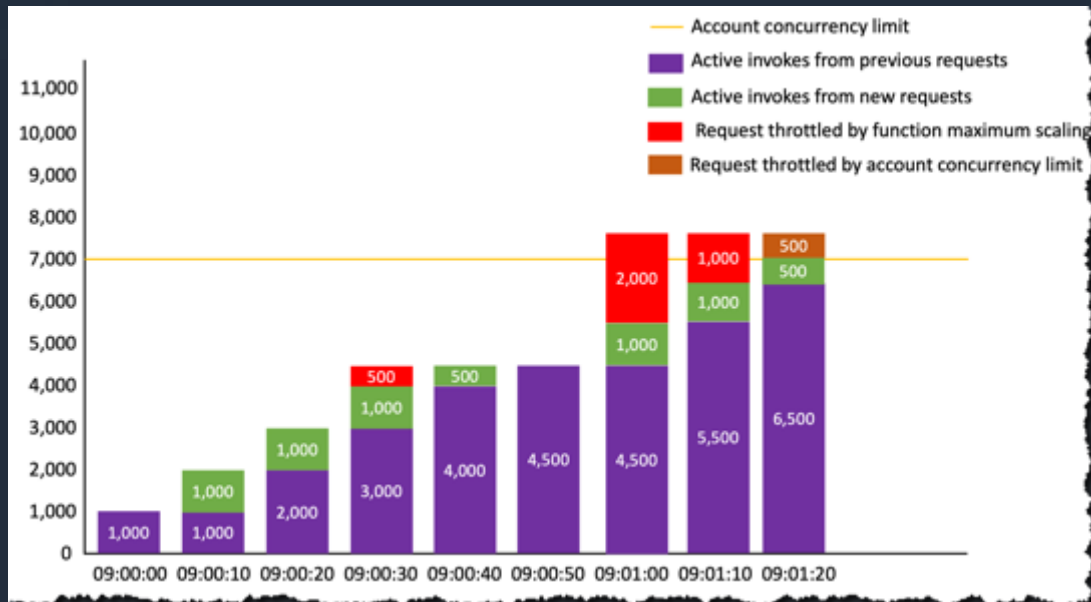
Purpose-built chip for  
Generative AI and ML Training



Who should use it? Anyone running Trn1 instances or if you are selecting hardware for large ML workloads

# Lambda Scaling Improvements

HIGH VOLUME AND RAPID SCALING LAMBDA IS EVEN FASTER AT SCALING YOUR INVOCATIONS



This graph shows a function receiving requests and processing them every 10 seconds with an account concurrency limit set to 7,000 concurrent requests. Each function scaling-up rate is fixed to 1,000 concurrent executions every 10 seconds.



Scale up at a 12x faster rate



Scale up to a rate of 1,000 concurrent executions every 10 seconds (to account concurrency limit)



Available in all commercial AWS Regions



Enabled by default for all functions that are invoked synchronously, at no additional cost.



# EKS Pod Identity

SIMPLIFIED WORKFLOW FOR AUTHENTICATION OF KUBERNETES APPLICATIONS TO AWS RESOURCES

Scope IAM permissions to a service account, and only Pods that use that service account have access to those permissions

---

Eliminate the need for third-party solutions such as kiam or kube2iam

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A container never has access to credentials that are used by other containers in other Pods.

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Simpler method that does not require OIDC identity providers

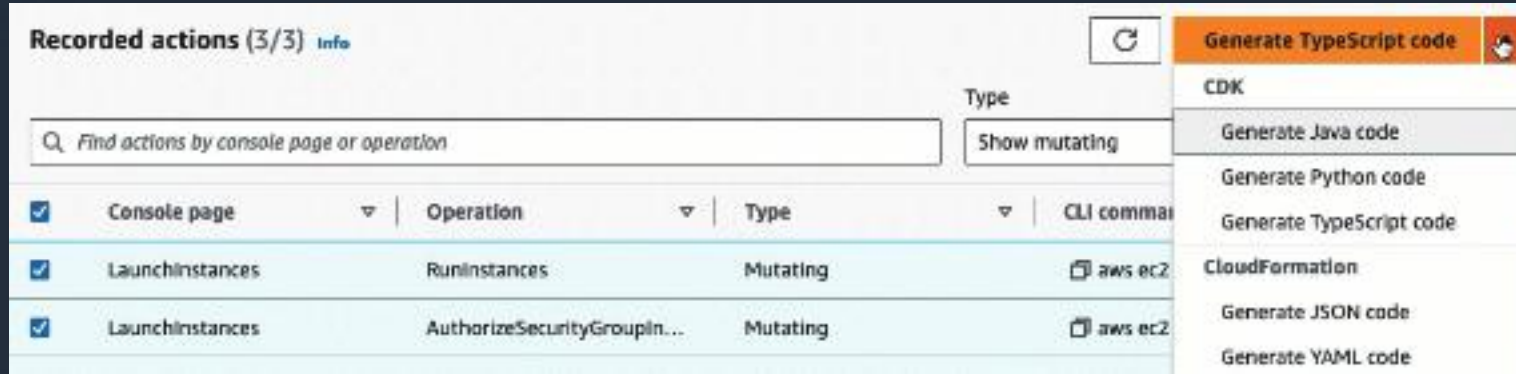
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Uses a single IAM principal instead of the separate principals for each cluster that IAM roles for service accounts use.



# AWS Console-to-Code (Preview)

A PROMISING PREVIEW OF CONVERTING CONSOLE ACTIONS INTO REUSABLE IAC CODE



Actions taken for EC2 instances will be shown in the Recorded Actions Pane of “Console-to-Code”

Select the actions you want to script

Generate Code in your preferred language



CDK



CFT

Convert actions performed in the console to reusable code, currently Java CDK, Python CDK, TypeScript CDK, or CloudFormation (JSON or YAML)



Suggested code uses GenAI capabilities following AWS guided best practices to help improve deployment and create reliable production workloads

Customers no longer have to make a choice between Console or Infrastructure-as-Code (IaC)



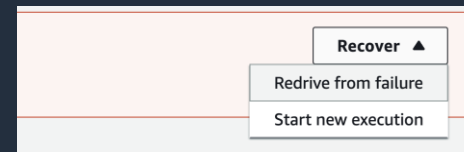
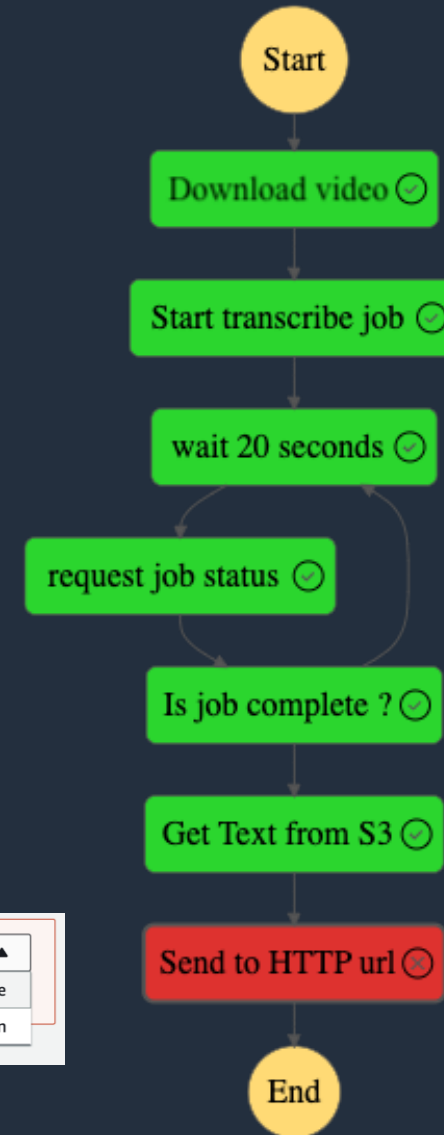
# AWS Step Functions - redrive

**NEW Feature**

**GA**

# Step Functions – Cost Optimisation

- AWS charge for number of state transitions
- Each state transition is a step of your workflow runs
- Some steps are costly
- Redrive help save cost and simplify your workflow error handling





# Amazon Q for Developers

Amazon Q to get started building applications on AWS, research best practices, resolve errors, and get assistance in coding new features for your applications

**NEW Service**

**PREVIEW**

# Overview of Q Offerings and Features

Q FALLS INTO TWO PERSONA-BASED OFFERINGS AND IS BEING LAUNCHED FOR INDIVIDUAL SERVICES



Amazon Q

Each feature falls under the corresponding service's features

Customers should primarily look for a LLM-powered chat interface, integrated RAG data connections, and process automation from Amazon Q

Some features will have additional costs after Preview.

See [aws.amazon.com/q/pricing](https://aws.amazon.com/q/pricing) for up-to-date details!

## Amazon Q Offerings for Individual Services

NEW

Amazon Q for  
Amazon Connect

NEW

Amazon Q in  
AWS Supply Chain



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## Amazon Q Business

NEW

Amazon Q Your Business Expert Interface

NEW

Amazon Q for QuickSight

## Amazon Q Builder

Includes Amazon Q Business

NEW

Amazon Q – AWS Expert Interface

NEW

Amazon CodeWhisperer with Q  
Includes Professional License for CodeWhisperer

NEW

Amazon Q Code Transformations

NEW

Amazon Q Network Troubleshooting

NEW

Amazon Q Feature Development in CodeCatalyst

NEW

Amazon Q Generative SQL  
for Amazon Redshift Query Editor

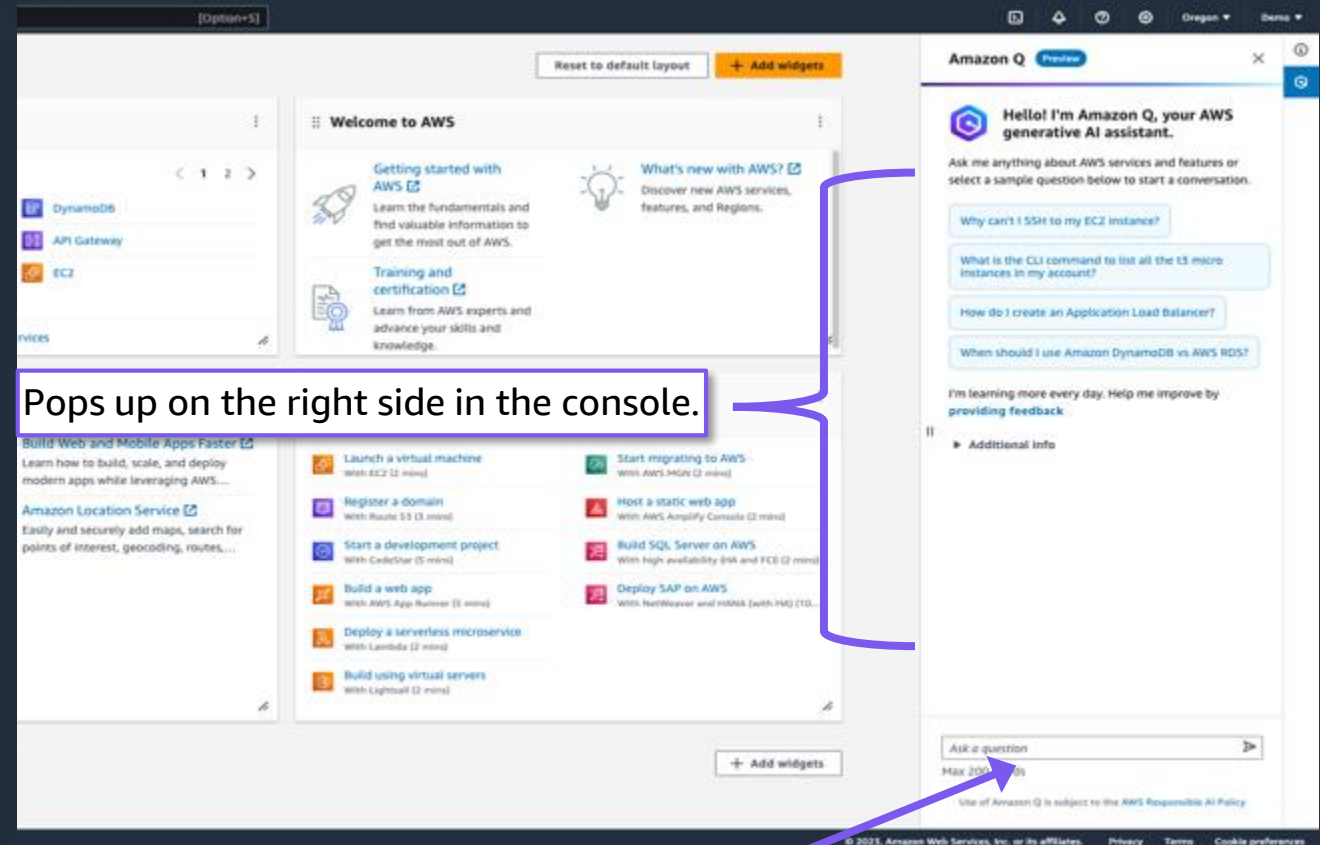


# Builder: Amazon Q AWS Expert Interface

AWS FOCUSED EXPERT INTERFACE WITH GENAI CONVERSATIONAL Q&A TRAINED ON AWS SOURCES

- Trained on 17 years of AWS knowledge
- Assists you everywhere you work with AWS
- Converses with you to explore new AWS capabilities, learn unfamiliar technologies, and architect solutions
- Works with you to troubleshoot, build new features, and upgrade languages on AWS

Also present in AWS Documentation, IDE (via CodeWhisperer), and Slack/Teams



Chat interface for Q&A

GENERALLY AVAILABLE

# Amazon CodeWhisperer

Build apps faster and more  
securely with an AI coding  
companion



Generate code suggestions  
in real-time



Scan code for hard-to-find  
vulnerabilities



Flag code that resembles open-  
source training data or filter by  
default

**FREE FOR INDIVIDUAL TIER**





NEW

# Amazon Code Whisperer



IaC Support such as Cloud Formation, CDK and Terraform



Generates organization-specific code recommendations  
(Preview)



Expanded support(TypeScript, C#) for security scanning (GA)

# Builder: CodeWhisperer with Amazon Q

A GENAI INTERFACE WITHIN YOUR IDE CONSOLE THAT CAN PERFORM Q&A AND GENERATE CODE

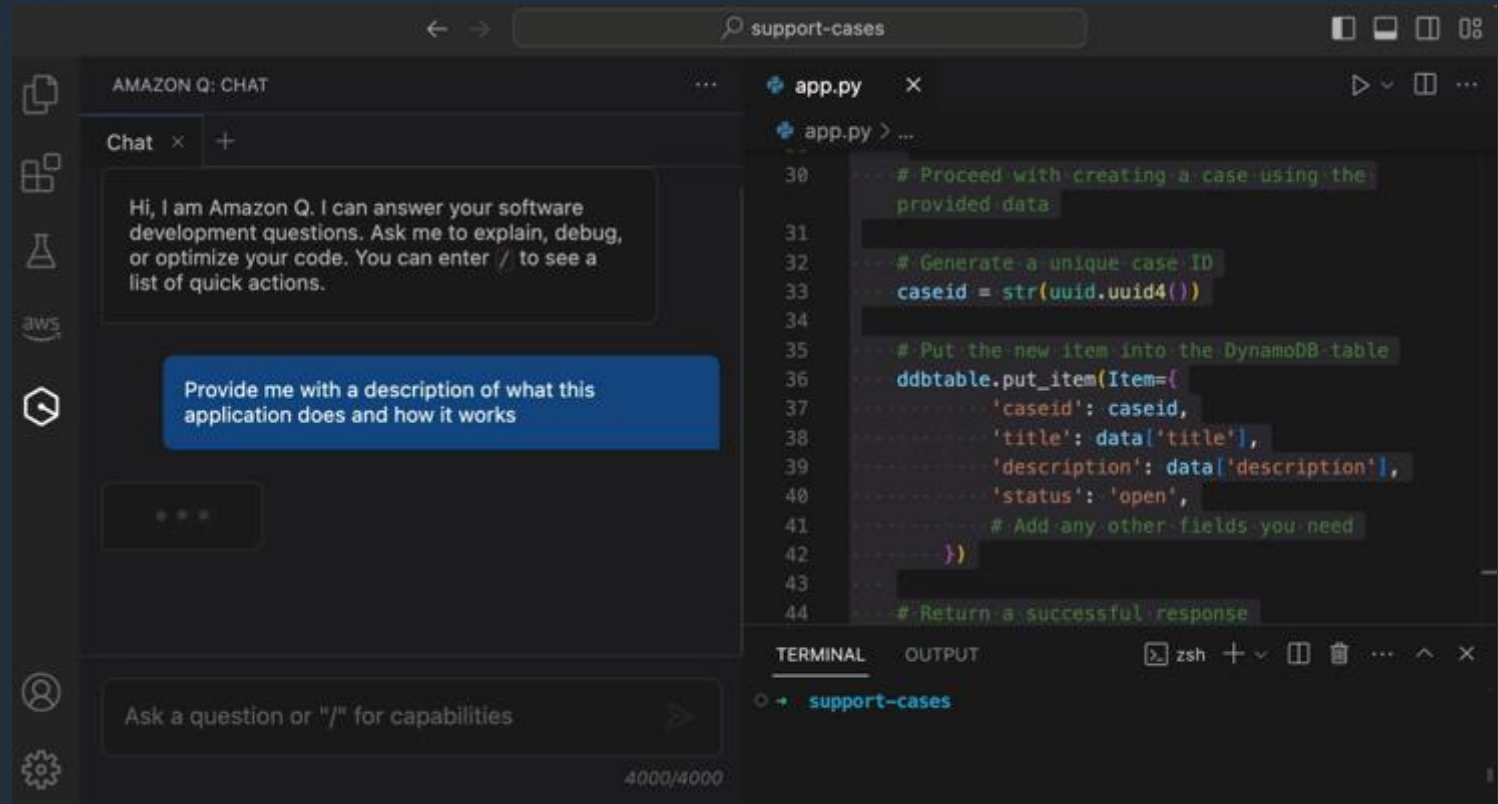
## CodeWhisperer Capabilities with Q

Your code is used, contextually, to enhance the Q&A conversational interface

Summarize code, explain functions, and provide deeper insights

Assists with debugging, testing, and optimizing your code

Q can generate tests and add them to code with a click



At this time (DURING PREVIEW): Amazon Q in IDE is part of Amazon Q Builder subscriptions and require Amazon CodeWhisperer

The current documented plan after GA is that when a user has paid for Amazon Q Builder seat, they also get CodeWhisperer Professional included



# Builder: Amazon Q Code Transformations

AMAZON Q AND CODE WHISPERER ACCELERATE LANGUAGE VERSION UPGRADES AND OTHER MODERNIZATIONS

## Amazon Q Code Transform Support

- **Current:** Java language upgrades from Java 8 to Java 17
  - Tests internally moved 1000 apps in 2 days, about 10 minutes per app (versus typical days per app)
- **Coming Soon:** .NET Framework to cross-platform .NET upgrades
- **Coming Soon:** Accelerate the migration from Windows to Linux (coming soon)



### Code Transformation plan by Amazon Q

Amazon Q reviewed your Java 8 application word-cloud-generator and generated a transformation plan. If Q has to change any code in your application, it will do so in the sandbox, so as not to interfere with your working repository. Once the transformation job is complete, Q will share the new code, which you can review before accepting.

#### Proposed transformation changes

##### Step 1 - Update dependencies and code

Q will update mandatory package dependencies and frameworks. Also, where required for compatibility with Java...

##### Step 2 - Build in Java 17 and fix any issues

Q will build the upgraded code in Java 17 and iteratively fix any build errors encountered.

##### Step 3 - Finalize code changes and generate transformation summary

Q will generate code changes for you to review and accept. It will also summarize the changes made, and will copy...

At this time: Amazon Q Code Transforms are part of Amazon Q Builder subscriptions and require Amazon CodeWhisperer

# Builder: Amazon Q Network Troubleshooting

AWS VPC REACHABILITY ANALYZER WORKS WITH AMAZON Q TO HELP TROUBLESHOOT YOUR NETWORK

Identify and resolve connectivity issues via natural language

Ask network troubleshooting questions in a conversational format

- Why can't I SSH into my Linux instance?
- Why can't I access the internet from vpc-1a2b3c4d?
- Are any of my instances publicly accessible?
- Do I have any egress from my VPC to the internet?
- Which of my security groups are preventing access to my RDS database?

Provides a simple, concise explanation and recommendation, as well as a map of the path details.

Amazon Q network troubleshooting - preview [Info](#)

**Why can't I SSH into my web server in AZ1?**

It sounds like you are unable to connect via SSH to your web server instance located in the first Availability Zone (AZ1) of the VPC. Attempting analysis for connectivity between the internet and i-093546eb043368d2c...

**Explanations**

ENI\_SG\_RULES\_MISMATCH: None of the ingress rules in the following security groups apply: sg-05dd91f84b336474a. See sg-05dd91f84b336474a.

**Path details**

[View reverse path](#) [Learn more](#) [View full path](#)

**Source**

igw-01447ce607c3d414c (vpc01-demo-prod-us-east-1-igw)

VPC

vpc-07a9ab9d04409410d

**Inbound header**

**Outbound header**

acl-02a4e1c783e70b535

Rule	Direction	ACL rule action	CIDR	Protocol
100	Inbound	allow	0.0.0.0/0	all

eni-0f3d25c19fec20ac5

Attached To

VPC	Subnet
i-093546eb043368d2c	vpc-07a9ab9d04409410d
	subnet-05f4d911ecdc623d4

ENI\_SG\_RULES\_MISMATCH:

None of the ingress rules in the following security groups apply: sg-05dd91f84b336474a. See sg-05dd91f84b336474a.

**Destination**

i-093546eb043368d2c (web server AZ1)

**Inbound header**

UNIDIRECTIONAL\_PATH\_ANALYSIS\_ONLY

The results include forward path analysis from the source to the destination. There might be a blocking configuration in the reverse path, which could not be...

This path was chosen because i-093546eb043368d2c is the instance named "web server AZ1", which matches the question about not being able to SSH into the v port 22 would check if it is publicly accessible via SSH.

[Ask a question](#)

Use of Amazon Q is subject to the [AWS Responsible AI Policy](#) [Provide feedback](#)



# AWS Config generative AI-powered NLP

**NEW Service**

**PREVIEW**

# AWS Config

ASSESS, AUDIT, AND EVALUATE



Assess, audit,  
and evaluate

  
**Configuration  
change occurs in  
your AWS resources**



## AWS Config

Records and  
normalizes the  
changes into a  
consistent format



Rules and  
conformance packs  
evaluate compliance



Sample conformance  
packs to get started:  
CIS, CMMC,  
FedRAMP, NIST, PCI,  
HIPAA, and more



**AWS Config APIs  
and console**



**Amazon SNS**



**Amazon  
CloudWatch**



**Amazon S3**

Access change history and  
compliance results using the  
console or APIs; Amazon  
CloudWatch Events or Amazon  
SNS alert you when changes  
occur; deliver change history  
and snapshot files to your  
Amazon S3 bucket for analysis

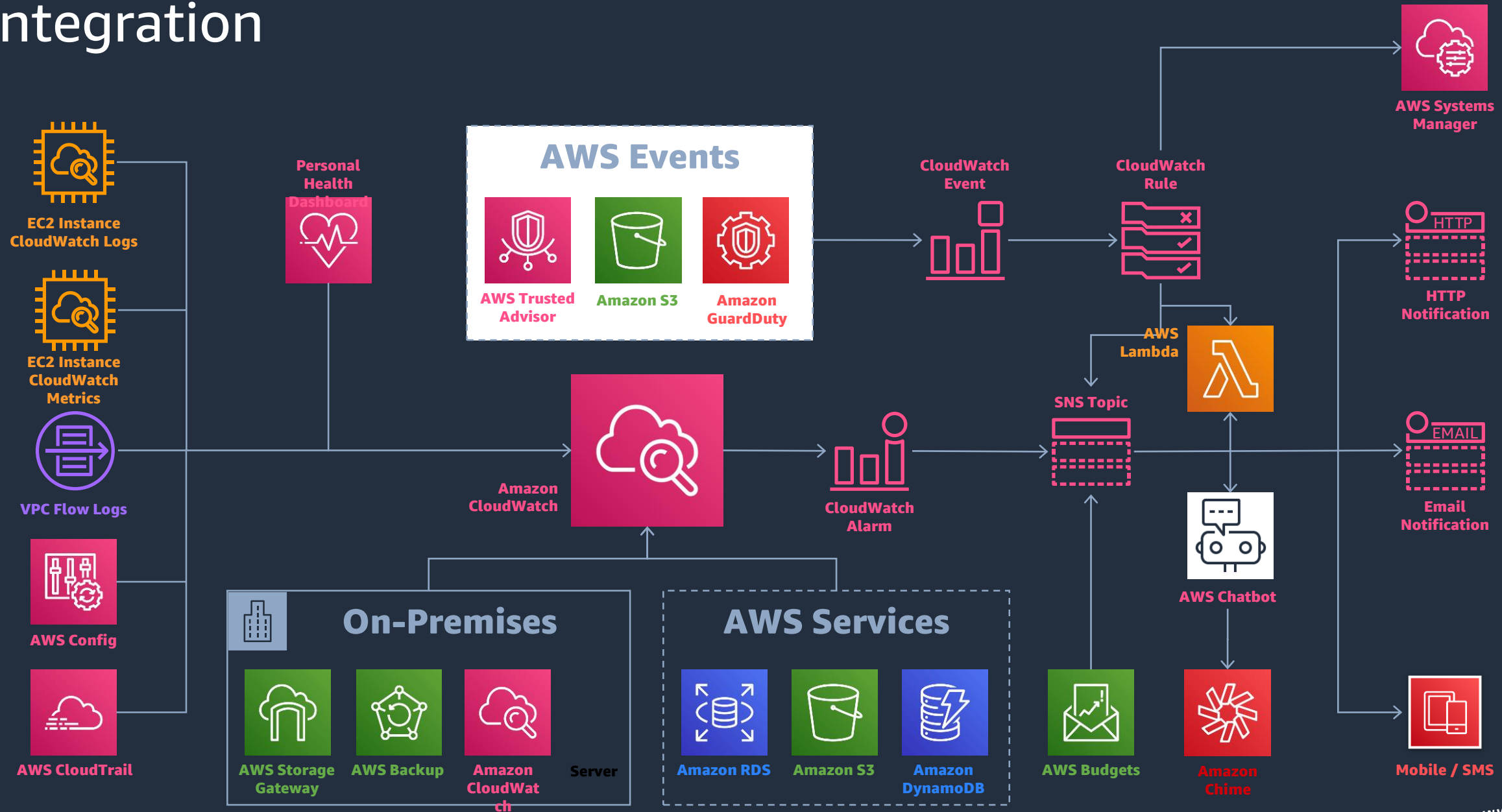


# Amazon CloudWatch Generative AI-powered NLP

**NEW Service**

**PREVIEW**

# Integration







# AWS Security Hub

**NEW Feature**

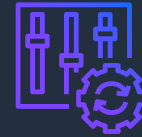
**GA**

NEW

# AWS Security Hub



New Finding Enrichment



Major Dashboard Enhancements



Central Configuration Capabilities



Customize Security Controls in  
AWS Security Hub



# Amazon Inspector agentless vulnerability assessment

**NEW Service**

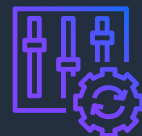
**PREVIEW**

NEW

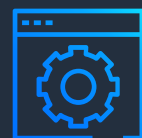
# Amazon Inspector Agentless vulnerability scanning



Agentless Scanning



Vulnerability Assessments from  
EBS volumes snapshot



Automatic Discovery



Hybrid scanning

# DEMO



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# Questions?





# Thank you!



<https://pulse.aws/survey/QQT4M40A>

AWS RE:INVENT

RE:CAP



Please complete the session  
survey via received **email**

# re:Invent 2023 Launch Summary Slides

## Analytics

[Redshift provisioned concurrency scaling and serverless autoscaling now supports Create Table As Select \(CTAS\)](#)

[Amazon Redshift now supports multi-data warehouse writes through data sharing \(preview\)](#)

[AWS announces support for large language models in Amazon Redshift ML \(Preview\)](#)

[Announcing the Cost and Usage Dashboard powered by Amazon QuickSight](#)

[AWS Glue Data Quality announces anomaly detection and dynamic rules](#)

[Amazon MSK now supports Graviton3-based M7g instances for new provisioned clusters](#)

[Amazon Redshift announces Multidimensional Data Layouts to optimize your query performance \(preview\)](#)

[Amazon Redshift adds support for incremental refresh for materialized views on data lake tables \(preview\)](#)

[AWS Glue Data Catalog supports multi engine views with AWS Analytics Engines](#)

[Accelerate data processing and analysis with Amazon EMR and Amazon S3 Express One Zone](#)

[Accelerate data lake queries with Amazon Athena and Amazon S3 Express One Zone](#)

[AWS Clean Rooms Differential Privacy is now available in preview](#)

[Vector engine for Amazon OpenSearch Serverless now generally available](#)

[Amazon Redshift announces general availability of support for Apache Iceberg](#)

## Analytics (cont'd)

[Amazon OpenSearch Service zero-ETL integration with Amazon S3 preview now available](#)

[AWS announces OR1 for Amazon OpenSearch Service](#)

[Announcing enhanced manageability and usability features for Amazon Redshift Serverless](#)

[Amazon Redshift announces general availability of row-level security enhancements](#)

[Amazon Redshift now supports metadata security to simplify multi-tenant applications](#)

## Application Integration

[AWS Step Functions launches support for HTTPS endpoints and a new TestState API](#)

[AWS Step Functions launches optimized integration for Amazon Bedrock](#)

[Amazon EventBridge now supports partner integrations with Adobe and Stripe](#)

[Amazon SQS announces support for FIFO dead-letter queue redrive](#)

[Announcing AWS B2B Data Interchange](#)

[Amazon SQS announces increased throughput quota for FIFO High Throughput mode](#)

## Blockchain

[Announcing preview of AMB Access Polygon, serverless access to Polygon blockchain](#)

## Business Applications

[Introducing Amazon One Enterprise \(Preview\)](#)

[Amazon Connect now supports two-way SMS](#)

[Amazon Connect provides Zero-ETL analytics data lake to access contact center data \(preview\)](#)

[Amazon Connect Contact Lens now provides real-time conversational analytics for chat](#)

[Amazon Connect now offers in-app, web, and video calling](#)

[Amazon Connect launches no-code UI builder to configure step-by-step guides](#)

## Cloud Financial Management

[AWS Free Tier usage is now available through the GetFreeTierUsage API](#)

[Amazon Web Services announces Unified Billing and Cost Management console](#)

[Introducing Cost Optimization Hub](#)

[Announcing Data Exports for AWS Billing and Cost Management](#)

## Cloud Operations

[Amazon Managed Service for Prometheus launches an agentless collector for Prometheus metrics from Amazon EKS](#)

[CloudWatch now supports hybrid and multicloud metrics querying and alarming](#)





# re:Invent 2023 Launch Summary Slides

## Cloud Operations (cont'd)

[AWS Config now supports periodic recording: Efficiently scale your change tracking](#)

[AWS Systems Manager Automation makes it easier to author runbooks with new low-code visual design experience](#)

[AWS Compute Optimizer introduces customizable rightsizing recommendations for EC2 Instances](#)

[Automate AWS Control Tower landing zone operations using APIs](#)

[AWS CloudTrail Lake data now available for zero-ETL analysis in Amazon Athena](#)

[Amazon CloudWatch Logs announces Infrequent Access log class](#)

[AWS Control Tower announces 65 new controls to help meet digital sovereignty requirements](#)

[Observe your applications with Amazon CloudWatch Application Signals \(Preview\)](#)

[myApplications: One place to view and manage your applications on AWS](#)

## Compute

[Announcing Amazon EC2 High Memory U7i instances \(Preview\)](#)

[ENA Express supports 58 new instances with sizes as small as 16 vCPUs](#)

[Announcing new Amazon EC2 R8g instances powered by AWS Graviton4 processors \(Preview\)](#)

## Containers

[Amazon EKS introduces EKS Pod Identity](#)

## Customer Enablement

[Announcing the general availability of AWS re:Post Private](#)

## Databases

[Announcing the general availability of Amazon RDS for Db2](#)

[Announcing Amazon Aurora Limitless Database](#)

[AWS announces Amazon ElastiCache Serverless](#)

[AWS announces Amazon Aurora PostgreSQL zero-ETL integration with Amazon Redshift \(Public Preview\)](#)

[AWS announces Amazon RDS for MySQL zero-ETL integration with Amazon Redshift \(Public Preview\)](#)

[AWS announces Amazon DynamoDB zero-ETL integration with Amazon Redshift](#)

[AWS announces Amazon DynamoDB zero-ETL integration with Amazon OpenSearch Service](#)

[Amazon Neptune Analytics is now generally available](#)

[AWS announces vector search for Amazon MemoryDB for Redis \(Preview\)](#)

[AWS announces vector search for Amazon DocumentDB](#)

## Developer Tools

[AWS CloudFormation introduces Git management of stacks](#)

[Announcing Multi-Account Experiments for AWS Fault Injection Service](#)

[AWS SDK for Kotlin is now generally available](#)

[AWS SDK for Rust is now generally available](#)

[Introducing the Amazon CodeCatalyst Enterprise Tier](#)

[Announcing custom blueprints for Amazon CodeCatalyst](#)

[AWS Application Composer announces AWS Step Functions Workflow Studio integration](#)

[AWS SDK for Kotlin is now generally available](#)

[AWS Fault Injection Service launches two highly requested scenarios](#)

[Amazon Inspector enhances container image security by integrating with developer tools](#)

[Introducing an Integrated Development Environment \(IDE\) extension for AWS Application Composer](#)

## End User Computing

[Amazon WorkSpaces Multi-Region Resilience launches one-way data replication](#)

[Amazon WorkSpaces Thin Client is now generally available](#)

## Front-End Web & Mobile

[AWS AppSync improves support for Amazon Aurora clusters configured with the RDS Data API](#)



# re:Invent 2023 Launch Summary Slides

## Generative AI

[AWS Config launches generative AI-powered natural language querying \(Preview\)](#)

[Amazon Inspector expands AWS Lambda code scanning with generative AI powered remediation](#)

[Amazon CloudWatch announces AI-powered natural language query generation \(in preview\)](#)

[Amazon Personalize now creates themes for recommendations using generative AI](#)

[Amazon Transcribe Call Analytics now offers generative call summarization \(preview\)](#)

[New Discover Apps page for PartyRock, an Amazon Bedrock Playground](#)

[Announcing new enhancements to Amazon CodeWhisperer](#)

[Announcing Conversational FAQ with generative AI for Amazon Lex \(Preview\)](#)

[Announcing AWS Console-to-Code \(Preview\) to generate code for console actions](#)

[Amazon Detective introduces finding group summaries using generative AI](#)

[Descriptive Bot Builder with Generative AI](#)

[Announcing utterance generation for Amazon Lex](#)

[Assisted Slot Resolution with Generative AI](#)

[AWS AppFabric's new generative AI feature helps build cross-app experiences \(Preview\)](#)

[AWS Healthscribe is now generally available](#)

## Generative AI (cont'd)

[Announcing Amazon Q expert capabilities for AWS \(Preview\)](#)

[Boost generative AI application development with Agents for Amazon Bedrock](#)

[Amazon Q offers help to optimize EC2 instance type selection \(preview\)](#)

[Amazon Connect announces generative AI powered customer data mapping](#)

[AWS Chatbot now supports Amazon Q conversations in Microsoft Teams and Slack](#)

[Amazon Connect Contact Lens provides generative AI powered contact summarization \(preview\)](#)

[AWS announces Amazon Q \(Preview\)](#)

[Amazon Q in QuickSight simplifies data exploration with Generative BI capabilities \(Preview\)](#)

[Announcing feature development capability of Amazon Q \(Preview\) in Amazon CodeCatalyst](#)

[AWS Announces Amazon Q is available in preview on the AWS Console Mobile App](#)

[Amazon Q in Connect offers generative AI powered agent assistance in real-time](#)

[AI recommendations for descriptions in Amazon DataZone \(Preview\)](#)

[Meta Llama 2, Cohere Command Light, and Amazon Titan FMs can now be fine-tuned in Amazon Bedrock](#)

[Safeguard generative AI applications with Guardrails for Amazon Bedrock \(Preview\)](#)

[Knowledge Bases for Amazon Bedrock is now generally available](#)

## Generative AI (cont'd)

[Continued pre-training in Amazon Bedrock now available in preview](#)

[Amazon Bedrock now supports batch inference](#)

[Amazon Titan Text models—Express and Lite—now generally available in Amazon Bedrock](#)

[Amazon Titan Multimodal Embeddings foundation model now generally available in Amazon Bedrock](#)

[Stable Diffusion XL 1.0 foundation model from Stability AI is now generally available in Amazon Bedrock](#)

[Llama 2 70B foundation model from Meta is now available in Amazon Bedrock](#)

[Claude 2.1 foundation model from Anthropic is now generally available in Amazon Bedrock](#)

[Evaluate, compare, and select the best FMs for your use case in Amazon Bedrock \(Preview\)](#)

[Amazon Q generative SQL is now available in Amazon Redshift Query Editor \(preview\)](#)

[Announcing Amazon SageMaker HyperPod, a purpose-built infrastructure for distributed training at scale](#)

[Leverage FMs for business analysis at scale with Amazon SageMaker Canvas](#)

[Amazon SageMaker Canvas now supports natural language instructions for data preparation](#)

[Amazon SageMaker Clarify now supports foundation model \(FM\) evaluations in preview](#)

[Announcing new AWS AI Service Cards - to advance responsible AI](#)



# re:Invent 2023 Launch Summary Slides

## Internet of Things

[FreeRTOS roadmap and code contribution process now published on freertos.org](#)

[AWS IoT SiteWise Edge Now Available on Siemens Industrial Edge Marketplace \(Preview\)](#)

[Announcing vision system data from AWS IoT FleetWise \(Preview\)](#)

## Machine Learning

[Powered by foundation model, Amazon Transcribe now supports over 100 languages](#)

[Amazon Monitron launches Ex-rated sensors for hazardous locations](#)

[Recommend actions that increase brand loyalty with Amazon Personalize Next Best Action](#)

[AWS announces CloudWatch Logs Anomaly Detection and Pattern analysis](#)

[Amazon SageMaker launches a new version of Large Model Inference DLC with TensorRT-LLM support](#)

[AWS Clean Rooms ML is now available in preview](#)

[Amazon SageMaker Pipelines now provide a simplified developer experience for AI/ML workflows](#)

[Announcing smart sifting of data for Amazon SageMaker Model Training in preview](#)

[Amazon SageMaker launches new inference capabilities to reduce costs and latency](#)

[Announcing API support for creating Amazon SageMaker Notebook jobs](#)

## Machine Learning (cont'd)

[SageMaker now provides improved SDK tooling and UX for model deployment](#)

[Amazon SageMaker now provides a new setup and onboarding experience on AWS SageMaker console](#)

[New and improved Amazon SageMaker Studio](#)

[Amazon SageMaker Distribution is now available on Code Editor based on Code-OSS and JupyterLab](#)

[Bring your own Amazon EFS \(Elastic File System\) volume to JupyterLab and CodeEditor in Amazon SageMaker Studio](#)

[Announcing Code Editor, based on Code-OSS \(VS Code – Open Source\), in Amazon SageMaker Studio](#)

[Amazon SageMaker Studio now provides a faster fully-managed notebooks in JupyterLab](#)

## Migration & Transfer

[AWS Mainframe Modernization File Transfer with BMC is now generally available](#)

[AWS Mainframe Modernization Data Replication with Precisely is now available for IBM i](#)

[AWS Mainframe Modernization Replatform with NTT DATA is now available](#)

[Virtualization for SPARC on AWS with Stromasys is now available](#)

[Introducing AWS Mainframe Modernization Application Testing \(Preview\)](#)

## Networking & Content Delivery

[Application Load Balancer can authenticate X.509 certificate based identities with Mutual TLS support](#)

[Application Load Balancer increases application availability with Automatic Target Weights](#)

[Amazon Route 53 Application Recovery Controller launches zonal autoshift](#)

## Partner

[Announcing enhanced capabilities for Partner-Led Support](#)

[AWS Partner Network launches new Amazon EKS Ready Specialization](#)

[Introducing AWS Resilience Competency Partners](#)

[Announcing AWS Marketplace APIs for sellers](#)

[AWS Partner CRM Connector now supports AWS Marketplace](#)

[Announcing Solution Building Enablement for Partners](#)

[Announcing SaaS Quick Launch for AWS Marketplace](#)

## Quantum Technologies

[Amazon Braket launches Braket Direct, a program to dive deeper into quantum computing](#)



# re:Invent 2023 Launch Summary Slides

## Security, Identity, & Compliance

[Amazon GuardDuty now supports runtime monitoring for Amazon EC2 \(Preview\)](#)

[IAM Access Analyzer now simplifies inspecting unused access to guide you toward least privilege](#)

[New from AWS: You can now customize security controls in AWS Security Hub](#)

[IAM Access Analyzer introduces custom policy checks powered by automated reasoning](#)

[AWS Secrets Manager now supports batch retrieval of secrets](#)

[Amazon Detective supports security investigations for Amazon GuardDuty ECS Runtime Monitoring](#)

[Amazon Detective announces investigations for IAM](#)

[Introducing Amazon GuardDuty ECS Runtime Monitoring, including AWS Fargate](#)

[AWS Analytics simplify users' data access across services with IAM Identity Center](#)

[Amazon Detective now supports log retrieval from Amazon Security Lake](#)

[Amazon Inspector agentless vulnerability assessments for Amazon EC2 now in preview](#)

[Announcing new central configuration capabilities in AWS Security Hub](#)

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## Storage

[Amazon S3 Access Grants integrate with identity providers to simplify data lake permissions](#)

[Announcing Amazon FSx for NetApp ONTAP scale-out file systems](#)

[You can now manage and back up FSx for ONTAP FlexGroup volumes using the AWS Console and API](#)

[Announcing the new Amazon EFS Archive storage class](#)

[Amazon FSx for OpenZFS now supports on-demand data replication across file systems](#)

[Amazon EFS now supports up to 250,000 IOPS per file system](#)

[FSx for ONTAP now supports creating Multi-AZ file systems in Shared VPC participant accounts](#)

[AWS Backup now supports Amazon Elastic Block Store \(EBS\) Snapshots Archive](#)

[Announcing AWS Elastic Disaster Recovery in the AWS GovCloud \(US\) Regions](#)

[Amazon EFS Replication now supports failback](#)

[AWS Backup launches support for restore testing](#)

[New updates automatically accelerate Amazon S3 data transfer for ML training](#)

[Mountpoint for Amazon S3 CSI driver is now generally available](#)

[Mountpoint for Amazon S3 now supports the Amazon S3 Express One Zone storage class](#)

[Announcing the Amazon S3 Express One Zone storage class](#)

## Support

[AWS Support launches AWS Countdown with a premium tier](#)

## Well Architected

[Announcing Lens Catalog for the AWS Well-Architected Tool](#)