

AWS
re:Invent

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Media & Entertainment

Attendee Guide 2021

Welcome!

On behalf of the entire Media & Entertainment team at AWS, I am excited to welcome you to re:Invent 2021. With the host of AWS solution and service launches and innovations during the past year, this is sure to be the best re:Invent yet.

This guide is full of tips and tricks provided directly from re:Invent alumni, teams, and staff to help you get the most out of your time at the show.

Most importantly, this guide also includes a curated list of the breakout and interactive sessions that I think are most relevant for attendees from the M&E industry.

Be sure to keep an eye on the [AWS Media Blog](#) leading up to the event, where you will find up-to-date information on all things M&E at re:Invent.

Eric Iverson
CTO, Media & Entertainment, AWS



Breakout Sessions

These are the sessions I highly recommend for M&E attendees. With topics including workload transformation, personalization, low latency, and scalability – as well as real-world use cases from customer presenters – these sessions contain essential information for anyone in the industry.

MDS201**Transform and innovate with AWS for media and entertainment**

This is the keynote for Media & Entertainment – highlighting all of the relevant news and releases from re:Invent, as well as a presentation from WarnerMedia about the launch of HBO Max.

Content creators, rights holders, producers, broadcasters, and distributors continue to face industry-wide disruption and transformation. The increased pace of innovation in media technologies—along with resiliency requirements and the demands of global audiences for high-quality live, on-demand, and personalized content—continues to be a challenge. Learn how AWS for media and entertainment simplifies using the cloud to build, deploy, and reinvent workloads, making it easier to select the right tools and partners for your highest-priority workloads, accelerate production launches, and see faster time-to-value. Hear how customers are creating content in the cloud, modernizing their broadcast and over-the-top distribution, and increasing customer engagement.

Eric Iversen – CTO for M&E, AWS

Jason Press – EVP of DTC, WarnerMedia

MDS202**A new reality for content production**

This session is a must-attend for anyone in content production – detailing the services and features available to accelerate creative workflows. The CEO of Weta Digital speaks to the company's journey to the cloud.

The world of content production in media and entertainment is evolving quickly. Studios have to find new ways for staff to work remotely while keeping pace with unprecedented audience demand for premium content. From on-set production to post-production, creative people are pushing technology and challenging traditional models to find new ways to deliver entertainment content while maintaining, or increasing, project quality. Learn how AWS is innovating with new services and by working with partners to help creative customers navigate remote work and achieve the scale they require to deliver projects faster than ever before.

Kyle Roche – GM for Immersive Technologies, AWS

Katrina King – Senior Specialist SA M&E, AWS

Prem Akkaraju – CEO, Weta Digital

MDS203

Transform sports broadcasts with data science and analytics

Sports continue to adopt the newest technologies to innovate in broadcasting. This session features Eurosport, speaking to how AI/ML deepen the fan experience.

In this session, learn about the transformation of broadcast experiences, and hear from AWS customers who are enhancing live sports presentations for fans. Then, learn how Eurosport uses real-time data from IoT devices along with predictive statistics to create rich fan experiences for the upcoming UCI Track Champions League. Discover how broadcast technologies and data science and analytics capabilities on AWS can enhance the experience for viewers watching in the stadium, on a mobile app, or at home.

Jamie Duemo – Principal BD Manager – M&E Broadcast, AWS
François Ribeiro – SVP, Discovery Sports

ADM302

Predictive audience scoring at scale with Amazon SageMaker

As platforms proliferate, audience scoring is essential. Hear from two companies about the methodology from each to learn best practices.

In this session for data scientists, data engineers, and technology executives, learn from two customer case studies how to use Amazon SageMaker to build large-scale machine learning pipelines for audience scoring. First, see how Acxiom used SageMaker for propensity scoring with hundreds of millions of records and thousands of propensity models. Then, learn how AppsFlyer developed a predictive analytics solution to accurately predict mobile user lifetime value for iOS 14+ campaigns based on 1–24 hours of user interaction. Discover details on feature engineering, recommended models, best practices, lessons learned, and pitfalls to avoid.

Ramesh Jetty – Solutions Architect, AWS
Orit Alul – Principal Solutions Architect, AWS
Benjamin Winestein – Senior Software Developer, AppsFlyer
Varadarajan Srinivasan – Sr. Director, Data Science and ML Engineering, Acxiom

GAM201

How Sony Interactive Entertainment launched PlayStation 5

While every product release faces unique challenges, learn how Sony Interactive Entertainment successfully launched PS5 during the global pandemic.

Sony Interactive Entertainment (SIE) is a global leader in interactive and digital entertainment that is responsible for creating the world-renowned PlayStation brand and family of products. This session explores how SIE prepared for the launch of PlayStation 5 (PS5) against the backdrop of a global pandemic. Learn how SIE delivered PS5 without downtime to millions of players around the world using a coordinated-operations planned response program and a robust, scalable, and secure infrastructure using AWS services, including Amazon EKS, Amazon EC2, Amazon Route 53, and Amazon CloudWatch.

Paul Viglienzone – Principal NA GameTech GTMS, AWS
Nathan Northcutt – Principal Software Engineer, Sony Interactive Entertainment
Jess Loeb – Principal Software Engineer, Sony Interactive Entertainment

GAM302

Riot Games at the edge: Launching VALORANT with AWS Outposts

Riot Games shares learnings and best practices from the release of its newest offering. With a focus on scalability and latency, there are sure to be points of interest for everyone in M&E in this session.

Riot Games develops, publishes, and supports some of the most player-focused games in the world, including League of Legends, one of the world's most played PC games and a key driver for the explosive growth of esports. In this session, learn how Riot Games orchestrated the successful global deployment of its latest 5v5 character-based tactical shooter, VALORANT. Using AWS services, including AWS Outposts and AWS Global Accelerator, Riot rapidly deployed and scaled game servers to millions of players around the world and reduced latency by up to 20 milliseconds to provide players with a seamless real-time gaming experience.

Ashwin Raghuraman – Solutions Architect – Games, AWS
David Press – Senior Principal Software Engineer, Riot Games

NFX201

Create from anywhere: The Netflix Workstations story

With the shift to work from home, Netflix created a way for creatives to access required tools regardless of location. In this session, you will hear about best practices and lessons learned.

Netflix is poised to become the world's most prolific visual effects and animated content studio. To enable their artists around the world, they built Netflix Workstations, a secure way to access remote desktops and stream creative applications from any data center to any device. Artists can now access high-performing virtual workstations on AWS with the freedom to create no matter where they are. This session reviews the technologies Netflix used, such as NICE DCV, Amazon EC2 G4 instances, Spinnaker, and Salt, and provides a peek into the future of Workstations and how they can be leveraged for a variety of workflows.

Michelle Brenner – Senior Software Engineer, Netflix

NFX202

Netflix Drive: A cloud drive for end users

Content creation happens at a pace never before seen, highlighting the importance of a well-organized, highly-available media supply chain. Learn how Netflix built a secure and scalable storage solution.

Netflix Studios produces hundreds of petabytes of media and billions of media assets. These assets are managed, created, edited, encoded, and rendered by artists on a multitude of globally distributed workstation environments. Data and metadata for these assets are stored, cataloged, and archived on AWS Cloud. What architecture supports this scale and provides artists with a secure, performant, and seamless storage interface? In this session, learn about Netflix Drive, a generic cloud drive for storing and retrieving media assets. It ties together disparate data, like on Amazon S3, and metadata stores, like on Amazon DynamoDB and Amazon RDS, in a cogent form for creating and serving assets.

Vikram Krishnamurthy – Senior Software Engineer, Netflix
Kishore Kasi – Storage Architect, Netflix
Tejas Chopra – Senior Software Engineer, Netflix
Vikram Lakshmipathy – Sr. Customer Solutions Manager, AWS

NFX203

How Netflix operates mission-critical data stores on AWS

This session is an opportunity to learn directly from Netflix about how to create high-performance data stores – sharing tools and techniques so you can build off of a decade of experience.

Netflix relies heavily on high-performance data stores like EVCache to serve its mission of entertaining the world. Trusting in the submillisecond latencies served by EVCache poses a wide range of challenges, including operations, debugging, and mean time to react. In this session, learn how distributed database engineers with over a decade of experience running high-performance data stores at massive scale (billions of operations per second) have established tools, techniques, and approaches on AWS to debug and mitigate failures. At the end of this session, leave with an understanding of how to fulfill your SLOs without losing sleep.

Vikram Lakshmipathy – Sr. Customer Solutions Manager, AWS
Prudhviraj Karumanchi – Sr. Software Engineer, Netflix
Tharanga Gamaethige – Sr. Software Engineer, Netflix

NFX301

How Netflix is using IPv6 to enable hyperscale networking

While every company wants as many subscribers as possible, scaling to meet demand takes thought and planning. Learn how Netflix built workflows to overcome challenges created with continual growth.

Netflix continues to grow at an astonishing rate. With more subscribers and productions than ever, the network must continue to scale to connect it all. In this session, follow the Cloud Networking team on a journey to understand the scaling challenges that Netflix faces with IPv4 and the drivers for IPv6. Explore design patterns and architectural flaws that fundamentally shape the design of most VPC networks. Get insight into the close collaboration and co-innovation between Netflix and AWS that drove new features like prefix delegation and the tight feedback loop that takes features from unimpressive to amazing. Appreciate the simplicity that IPv6 can provide and gain motivation for your own journey.

Rob Hilton – Principal Solution Architect, AWS
Donavan Fritz – Sr. Network Site Reliability Engineer, Netflix
Joel Kodama – Sr. Network Site Reliability Engineer, Netflix

ADM301

Under the hood at Amazon Advertising

In this session for technology executives and engineering leaders, get an exclusive look at how Amazon Advertising uses AWS for real-time bidding, ad serving, and analytics. This session shares advanced ML and analytics use cases and provides an overview of how to use AWS for real-time personalization with streaming data.

NET319

Migrating large-scale websites to Amazon CloudFront

Dive deep into large-scale content-delivery network migrations in 2021 and find out why customers are moving workloads to Amazon CloudFront. Explore migration strategies, lessons learned, and business impact both during and after the migration. In this session, learn from real-world examples and explore sample architectures using edge compute features like CloudFront Functions and AWS Lambda@Edge. Learn how AWS technology and teams can support your migration, minimize your operational risks, and accelerate your migration.

AIM204

Enhancing the customer experience with Amazon Personalize

Personalizing content for a customer online is key to breaking through the noise. Yet, brands face challenges that often prevent them from providing these seamless, relevant experiences. Learn how easy it is to use Amazon Personalize to tailor product and content recommendations to ensure that your users are getting the content they want, leading to increased engagement and retention.

STG205

AWS storage solutions for containers and serverless applications

Modern applications have revolutionized application architecture by using containers for greater portability and/or building applications on serverless infrastructure to optimize compute resources. In this session, look at different storage services, including Amazon EFS, Amazon S3, and Amazon EBS, to help you determine which storage is the best fit for your modern applications.

ANT310

How VMware Carbon Black uses Amazon Kinesis to detect cybersecurity issues

VMware Carbon Black, a leader in cybersecurity, processes trillions of events per day to uncover concerning behavioral patterns and detect and prevent cybersecurity risks. VMware Carbon Black shares lessons learned while scaling its multi-tenant streaming data infrastructure and best practices for cost-effective data processing in real time.

TLC201

Reinventing communications together

AWS is helping communications service providers (CSPs) reinvent communications. In this session, learn how AWS is accelerating business value in multiple use cases, working with industry-leading CSPs and an extensive network of AWS Partners to build and orchestrate cloud-native 5G networks, transform business operations, manage data to personalize AI/ML interactions, and accelerate innovation for enterprise transformation.

Interactive Sessions

In these interactive sessions, you will learn best practices from subject matter experts. Workshops are hands-on, instruction-based workload building exercises with experts ready to help you out as needed. Chalk Talks are Q&A-based whiteboarding sessions, so come with questions. Builders' Sessions are small-group hands-on sessions, essentially a blend of Workshops and Chalk Talks.

MDS301 (Workshop)

Build an interactive live streaming platform

In this continuation of the re:Invent "Unicorn" workshop series, build an interactive live streaming application from scratch using Amazon IVS.

Do you want to live stream and interact with fans around the world? In this workshop, create engaging live experiences by building a fictional streaming platform that connects and entertains fans anywhere. Learn how to use AWS Amplify to build an interactive live video streaming application, including real-time GraphQL APIs backed by AWS AppSync and video streaming with Amazon Interactive Video Service, which is built on the same live streaming technology that powers Twitch. Hosted by experts in application development and streaming media, this workshop brings participants to the cutting edge of cloud-enabled interactive web video.

Sam Patzer – Sr. Solutions Architect, AWS
Shawn Przybilla – Principal, Solutions Architect, AWS

MDS302 (Chalk Talk)

Monetize your videos with free ad-supported streaming TV

To help with subscription overload, free ad-supported television (FAST) is becoming more popular. In this session, learn all about FAST and get answers from subject matter experts.

Households are becoming increasingly attracted to entertainment programming without subscription pricing. Free ad-supported television (FAST) is rapidly gaining traction with consumers and, in some cases, is used as a remedy for subscription overload. When delivered with scalable AWS services, FAST provides an opportunity to deliver more value with targeted ads and predictable costs. In this chalk talk, learn how to build and monetize a 24/7 FAST channel from your video-on-demand catalog. Create engaging experiences by incorporating live video production and inserting targeted ads for your audiences.

Ken Kanagaraj – Principal Architect, AWS
Chris Kuthan – Head WW DtC GTMS, AWS

MDS303 (Chalk Talk)

Build metadata-rich media libraries with machine learning

Machine learning continues to mature, and this session covers the newest metadata capabilities to make the most of your content archives.

Want to increase the value of your archive, and supercharge your content discoverability and monetization? This chalk talk covers how to generate and make searchable, detailed metadata for large content catalogs (such as images, video and audio files, and documents) using computer vision, speech to text, and natural language processing. It also details common challenges when integrating this data into different systems and discusses the use cases for accurate content metadata, such as moderation, localization, editing, search, and ad optimization.

Liam Morrison – Principal M&E SA, AWS
JJ Espinoza – Senior M&E Architect, AI/ML, AWS

MDS304 (Chalk Talk)

Live, from the cloud: It's production on AWS

Live production is a particularly hot topic this year – join this session to hear real-world use cases and get your questions answered.

Broadcasters around the world are moving live video production to the AWS Cloud. Using a combination of partner solutions and AWS services, users are optimizing the operating costs of production, testing new business models, and centralizing and automating operations, making it easier to find talent and stay focused on business goals. In this chalk talk, learn about different approaches and technologies that AWS customers and partners are using for live production in the cloud, such as the open-source AWS CDI SDK, Network Device Interface (NDI), Secure Reliable Transport (SRT), and more.

Aaron Tunnell – Principal NAMED M&E GTMS, AWS
Peter Riordan – Head WW Broadcast GTMS, AWS

MDS305 (Chalk Talk)

Automate video clipping and highlight generation

Video highlights are essential for companies of all types. This session teaches you how to use ML to automate clip creation. Subject matter experts give insights about ML techniques.

Do you want to save time and effort producing live video highlights using the power of ML? If so, join this chalk talk to learn how to create personalized sports and news highlights from live video with an ML-powered solution that uses Amazon Rekognition for object detection, Amazon Transcribe for speech to text, and Amazon SageMaker for bespoke ML modeling. Also, discover how to apply ML techniques to automate clips and highlight generation for any genre of content.

Aravindharaj Rajendran – Solutions Developer, AWS
Kyle Huang – Solutions Developer, AWS

AIM307 (Chalk Talk)

Automating content moderation to improve digital safety

With increased security and scrutiny around personally identifiable information (PII) learn how you can automate content moderation using AI.

Building human-based content moderation at scale can be time-consuming and expensive. Further, companies can face serious business consequences and put their users' privacy at risk if they are unable to moderate inappropriate content and redact personally identifiable information (PII). This chalk talk demonstrates how you can use Amazon AI services like Amazon Rekognition and Amazon Transcribe to create streamlined workflows to automate content moderation and redaction within video, audio, and images.

Liam Morrison – Principal M&E SA, AWS

AIM315 (Workshop)

Boost the value of your media content with ML-powered search

Learn how to use AI/ML to extract metadata to help produce, distribute, and monetize your content.

Consumers rely on content not only to entertain but also to educate and facilitate purchasing decisions. To meet this demand, media content production is exploding. However, the process of producing, distributing, and monetizing this content is often complex, expensive, and time-consuming. Applying artificial intelligence and machine learning (ML) capabilities like image and video analysis, audio transcription, machine translation, and text analytics can solve many of these problems. In this workshop, utilize ML to extract detailed metadata from content and make it available for search, discovery, and editing use cases.

Alex Burkleaux – Software Dev Engineer, AWS
Brandon Dold – Software Dev Engineer, AWS

ARC310 (Builders' Session)

Build a live streaming platform: Amazon IVS and Amazon Chime SDK

Using AWS, build your own live streaming channel in minutes, with chats and likes built in for real-time interactivity.

Live video streaming can help businesses reach out to their customers without physical limitations. In this builders' session, learn how to build your own global live streaming channel in minutes and add real-time interactive features like scalable chat and likes. Start with Amazon IVS for global streaming video and Amazon Chime SDK for chatting and walk through various services such as AWS Amplify, API Gateway, and Amazon DynamoDB to make a serverless live streaming chat application. By the end of this session, you will have built your own platform that is ready to stream globally.

Seungjune Kim – Associate Solutions Architect, AWS
Davin Mien – Solutions Architect, AWS
Ian Lim – Sr. Chime SDK SSA, AWS
Jiwon Yeom – Solutions Architect, AWS
Kwangyoung Kim – Solutions Architect, AWS
Woochul Jung – Solutions Architect, AWS
Chance Lee – Sr. Solutions Architect, AWS

AIM311 (Chalk Talk)

Tips and tricks to boost your personalized recommendations

Personalization is important to both consumers for relevant recommendations and companies to align business outcomes; learn how to optimize for both.

Get to know Amazon Personalize better by diving into how you can deliver relevant recommendations while also optimizing for the business outcomes that are important to you. In this interactive chalk talk, learn about Amazon Personalize and discuss best practices for delivering low-latency, highly relevant recommendations for your users in real time.

Ragini Prasad – Manager, Software Development, AWS
James Jory – Principal AI Services SA, AWS

CMP402 (Builders' Session)

Remote visualization for HPC applications with NICE DCV

With more remote employees in the workforce than ever, learn how to build and enable remote desktops and applications securely.

NICE DCV is a high-performance remote display protocol that provides you with a secure way to deliver remote desktops and application streaming from AWS or a data center to any device, over varying network conditions. NICE DCV is also free to use on Amazon EC2 – you only pay for the AWS resources you use with it. This builders' session provides an overview of NICE DCV, including its main features, use cases, architecture, best practices, and a demo.

Rey Wang – Sr. PMT – External Svcs, AWS
Jyothi Venkatesh – HPC Specialist SA, AWS

FWM202 (Workshop)

Build a real-time serverless application to drive fan engagement

Personalized app experiences are just as important as viewing experiences. In this workshop, build a real-time app to deepen user engagement.

Organizations are building real-time applications to deliver engaging user experiences. Real-time application features can be complex and time-consuming to build. With AWS AppSync, developers can use GraphQL APIs to unify real-time data access across multiple data sources to engage millions of end users, with built-in caches to improve performance, subscriptions to support real-time updates, and client-side data stores that keep offline clients in sync. In this workshop, learn how to use AWS Amplify, AWS AppSync, Amazon EventBridge, and Amazon Location Service to build a serverless web application that engages fans at large events, from music to sports, with real-time chat features and location-based notifications.

Stefano Sandrini – Principal EMEA Mobile Specialist SA, AWS

GAM301 (Workshop)

Build a multiplayer game launch simulator powered by AWS

This workshop focuses on debugging a video game launch, pulling from real-world developer experiences.

In this gamified workshop, learn how to develop, launch, and operate a video game on AWS. Test your skills in implementing AWS solutions to solve real-world problems seen by developers to support day one of a game launch. Set up servers that scale to millions with ease and provide players with a bug-free, fun, and low-latency experience with AWS services, including Amazon EC2, Amazon ECS, Amazon EC2 Auto Scaling, and Elastic Load Balancing.

Eric Kim – Associate Solutions Architect, AWS
Sam Biggins – Senior Solutions Architect, AWS

GAM305 (Workshop)

Develop, build, and test iOS games on Amazon EC2 Mac instances

Build and QA an iOS game on AWS. Learn ways to reduce costs, improve scale, and increase performance.

Break free from the restrictions of on-premises hardware and extend the flexibility, scalability, and cost benefits of AWS to iOS game development. In this workshop, walk through the steps to run your build pipeline in the cloud using Amazon EC2 Mac instances and EC2 Linux Spot Instances. Learn how to reduce the time and resources previously spent building and maintaining on-premises macOS environments. Focus entirely on the fun stuff by using AWS to provision and access macOS environments within minutes, reduce costs, and improve scalability and performance to develop, build, test, analyze, and improve iOS games.

Molly Sheets – Principal Product Manager Tech – Spatial Computing, AWS
Eugene Krasikov – Solutions Architect, AWS
Sergey Viktorovich Kurson – Solutions Architect, AWS

GAM303 (Chalk Talk)

Extend your global game architecture to the edge with AWS

Learn best practices around delivering low-latency, high-performance games. Hear from peers and subject matter experts in this Q&A-focused session.

Players expect globally available, low-latency, lightning-fast gameplay as standard. But your global game server strategy shouldn't come at a cost. In this chalk talk, discover how to deliver a faster, high-performance networking and game server strategy for your games, regardless of device or genre, using AWS edge computing. Learn how to ensure a global presence by moving infrastructure closer to your players and providing a seamless experience without compromising cost or operational overhead. Accelerate content delivery with Amazon CloudFront, extend your architecture to the edge with AWS Outposts, and optimize user traffic to reduce packet loss and deliver low-latency experiences with AWS Global Accelerator.

Natasha Rooney – Senior Solutions Architect, AWS
David Heidt – Sr. Game Tech SA, AWS

GAM304 (Chalk Talk)

Global game servers with compute, containers, and Amazon GameLift

A walk through different architecture options for building the right networking and game server solution for your specific use case.

Long player wait times and unstable game sessions can make even the most entertaining games unplayable. In this chalk talk, learn how to route players into game sessions faster and more efficiently and deliver seamless, low-latency experiences to gamers, wherever and however they choose to play. Explore different architectures to help you find the perfect networking and game server solution – whether you choose to gain granular control over processors, storage, and networking with Amazon EC2, run containerized microservices with Amazon ECS, or let Amazon GameLift handle the heavy lifting of deploying and managing dedicated game servers.

Toni Syvanen – Game Tech SA, AWS

Liga Viskinte – Sr. Technical Account Manager, AWS



ANT309 (Chalk Talk)

Simplifying Amazon S3 analytics with Amazon Kinesis Data Firehose

Join this chalk talk to learn how Amazon Kinesis Data Firehose enables you to reliably load your streaming data into data lakes, data warehouses, and analytics services built on AWS, with AWS Partners, and using open-source tools. This talk includes a demonstration showcasing how Amazon Kinesis Data Firehose easily captures, transforms, and delivers streaming data to a data lake built on Amazon S3

AIM309 (Chalk Talk)

Tips and tricks for building your computer vision application

In this session, learn how to build computer vision applications that automate visual analysis with Amazon Rekognition – without any previous machine learning experience needed. Explore the new and enhanced face-detection, moderation, celebrity-recognition, video-segmentation, custom-label, and text-detection APIs and features for Amazon Rekognition.

ANT314 (Chalk Talk)

Process streaming data using Amazon MSK & Amazon Kinesis Data Analytics

In this chalk talk, learn how to use Amazon MSK, Amazon Kinesis Data Analytics for Apache Flink, and AWS Lambda to build serverless streaming data pipelines. Discover best practices for application operations and reliability, and see how AWS managed services can help you avoid potential challenges.

NFX401 (Chalk Talk)

How Netflix is using IPv6

In this chalk talk, the Netflix Cloud Networking team dives deep into what makes IPv6 a viable option and the technical solutions that have been developed along the way. Attendees can engage with Netflix engineers to gain a stronger understanding of the changes needed to make IPv6 work.

AIM308 (Chalk Talk)

Harness the power of ML to protect your business with Amazon Fraud Detector

In this session, learn how Amazon Fraud Detector transforms raw data into highly accurate ML-based fraud detection models. Then, discover how the service does data preparation and validation, feature engineering, data enrichment, and model training and tuning. Finally, with actual customer examples across a wide range of industries and fraud use cases, find out how the service makes deployment easy.

FWM302 (Chalk Talk)

Deep dive on authorization and data with AWS Amplify

This chalk talk details how virtually everything works in Amplify's authorization and data categories. Topics will range from authentication and authorization to tokens, signatures, access control mechanisms, GraphQL queries, mutations, subscriptions, and data access patterns. The chalk talk covers details on the basics as well as theory and customizations.

NET212 (Chalk Talk)**Securing non-cacheable end-user workloads at the edge**

Join this chalk talk to learn how you can protect your applications from distributed denial of service (DDoS) events at the edge using AWS Global Accelerator and AWS Shield. Consider best practices for using AWS resources to move non-cacheable user traffic while protecting your applications, maintaining availability, and optimizing performance.

SEC309 (Chalk Talk)**Adversary emulation for incident-response readiness**

In this chalk talk, AWS and Discovery+ answer your questions about how to use real-world threat simulations and how to replay them to understand adversary tactics, techniques, and procedures. From these use cases, learn how to use AWS security services to detect, triage, scope, investigate, and respond to security events.

NET321 (Chalk Talk)**Accelerating access to compute endpoints**

Join this chalk talk to learn how you can help improve performance and availability for internet users connecting to your Amazon EC2 and container-based application endpoints with AWS Global Accelerator. Explore different routing options and bring your networking questions to the live Q&A.

STG309 (Workshop)**Integrating serverless applications with AWS storage services**

AWS Lambda is a serverless compute service that lets you run code without provisioning or managing servers. In this workshop, gain hands-on experience integrating AWS Lambda with Amazon S3 and Amazon EFS.

NET323 (Chalk Talk)**Designing secure microservice architecture to protect APIs**

APIs can present a risk to organizations as an access point to their application servers. In this chalk talk, review best practices for building a resilient architecture specifically for your API-driven applications. Learn practical tips for defending against DDoS attacks and securing APIs with OAuth JWT authentication.

STG314 (Workshop)**Configuring multi-Region applications using Amazon S3**

Whether you are running applications in more than one AWS Region to be closer to end users or just to help ensure the highest availability for business-critical applications, this workshop is intended to help you use the latest Amazon S3 features to build robust, fault-tolerant applications capable of running your most demanding workloads.

Other recommendations

Keynotes



Adam Selipsky Keynote

Adam Selipsky is the CEO of Amazon Web Services (AWS), the world's most comprehensive and broadly adopted cloud platform. Having previously led AWS Marketing, Sales, and Support for 11 years, from 2005–2016, Selipsky helped launch and grow AWS from a startup into a multi-billion dollar business. Prior to rejoining AWS in 2021, Selipsky was most recently President and CEO of Tableau Software. He led Tableau through its acquisition by Salesforce, in what was the third-largest software industry acquisition at the time. Selipsky has also held various leadership roles at RealNetworks, and before that, was a Principal at strategy consulting firm Mercer Management Consulting. He has an AB in government from Harvard University and an MBA from Harvard Business School.



Dr. Werner Vogels Keynote

Dr. Werner Vogels is Chief Technology Officer at Amazon.com, where he is responsible for driving the company's customer-centric technology vision. As one of the forces behind Amazon's approach to cloud computing, he is passionate about helping young businesses reach global scale and transforming enterprises into fast-moving digital organizations. Vogels joined Amazon in 2004 from Cornell University, where he was a distributed systems researcher.



Peter DeSantis Keynote

Peter DeSantis is the Senior Vice President of AWS Global Infrastructure and Customer Support. In this role, he leads the AWS teams responsible for designing the data centers, servers, and network that underpin our AWS services and for deploying and operating this infrastructure worldwide as well as for the customer-facing organizations providing support for our AWS products.

Live stream sponsored by:



Machine Learning Keynote

Swami Sivasubramanian is Vice President at AWS in charge of all Amazon AI and machine learning services. His team's mission is "to put machine learning capabilities in the hands of every developer and data scientist." Swami and the AWS AI and ML organization work on all aspects of machine learning, from ML frameworks (TensorFlow, Apache MXNet, and PyTorch) and infrastructure, to Amazon SageMaker (an end-to-end service for building, training, and deploying ML models in the cloud and at the edge), and finally AI services that make it easier for app developers to incorporate ML into their apps with no ML experience required.



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.

Live stream sponsored by:



Leadership sessions

Leadership sessions*



SPOTLIGHT SESSION

All Builders Welcome

LaDavia Drane

Director, Inclusion, Diversity & Equity



SPOTLIGHT SESSION

AWS Executive Panel

Francesca Vasquez

Vice President, Technology



*Sessions are subject to change

Leadership sessions*



AWS Marketplace

Stephen Orban

General Manager, AWS Marketplace



AWS Public Sector

Max Peterson

Vice President, Worldwide Public Sector



AWS Public Sector Partners

Sandy Carter

Vice President, Worldwide Public Sector
Partners and Programs



AWS Storage

Mai-Lan Tomsen-Bukovec

Vice President, Worldwide Public Sector
Partners and Programs



AI/ML

Bratin Saha

Vice President, Machine Learning

Leadership sessions*



Analytics

Rahul Pathak

Vice President, Analytics



Architecture

Brian Taptich

Vice President, AWS Worldwide
Specialist Organization



Business Applications

Peter Hill

Vice President, Business Applications



Cloud Operations

Bill Vass

Vice President, Engineering – Storage,
Automation, Streaming & Management



Compute

David Brown

Vice President, Amazon EC2

Leadership sessions*



Containers

Deepak Singh

Vice President, Compute Services



Databases

Jeff Carter

Vice President, Relational Databases



Developer

Ken Exner

Director, AWS Developer Tools



Edge

Bill Vass

Vice President, Engineering – Storage,
Automation, Streaming & Management



Enterprise and Migration

Todd Weatherby

Vice President, Professional Services

Live stream sponsored by:

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Leadership sessions*



IoT

Michael MacKenzie
General Manager, AWS IoT



Networking & Content Delivery

David Brown
Vice President, Amazon EC2



Security, Compliance, and Identity

Stephen Schmidt
Vice President and Chief Information Security Officer

Live stream sponsored by:



Serverless

David Richardson
Vice President, Serverless



Training & Certification

Maureen Lonergan
Director of AWS Training and Certification

Learn



Choose the learning methods that work for you



Breakout sessions

Available from intermediate (200) through expert levels (400), so you can grow your skills, no matter where you are in your career. Select from any track, level, or available session type to tailor your re:Invent experience.



Workshops

Workshops are two-hour hands-on sessions where you work in teams to solve problems using AWS services. Workshops organize attendees into small groups and provide scenarios to encourage interaction, giving you the opportunity to learn from and teach each other.



Chalk talks

Chalk talks are a highly interactive content format with a small audience. Each begins with a short lecture (10–15 minutes) delivered by an AWS expert, followed by a 45- or 50-minute Q&A session with the audience.



Builders' sessions

These are 60-minute small group sessions with up to six attendees per table, and one AWS expert, who is there to answer questions and provide guidance. It's just you, your laptop, and the AWS expert.

Choose the learning methods that work for you



Training and Certification

Learn directly from AWS experts and get practical experience with real-world cloud scenarios. Skill up fast with a bootcamp, show your expertise by earning an AWS Certification, and practice your craft with one of our labs.



AWS DeepRacer

Developers of all skill levels can compete in virtual races during re:Invent for a chance to win prizes and glory! Tune in to AWS DeepRacer TV throughout re:Invent to catch the championship action.



Jams and GameDays

Test your skills in implementing AWS solutions by solving real-world problems in a gamified, risk-free environment. Take part in collaborative and interactive learning exercises—and win prizes!



Expo

Learn from AWS experts and partners. The Expo at The Venetian will be host to AWS Village, AWS Partner Network, AWS Marketplace, Builders' Fair, Developer Lounge, a demo theater, Jam Lounge, Startup Central, and sponsor booths.

Play



Play



Midnight Madness

Once again this year, we will be hosting an AWS-style pep rally to kick off the week and welcome our most dedicated fans. Midnight Madness provides a sneak peek into re:Invent, complete with the first product launch of re:Invent 2021.



Quirky

Experience Amazon's unique culture at one (or more!) of our Quirky events. Whether it's board games, bingo, or a sneak peek of one of your favorite Amazon TV shows, we've got something for everyone.



re:Play party

For our 10th annual re:Play party, we have an amazing lineup, featuring all the classic re:Play activities like dodgeball and office chair grand prix, and we have a very special musical headliner. Stay tuned for more information!



Restaurant receptions

Join the conversation at our vibrant restaurant receptions. Meet people from across the tech world and connect on topics of interest to you at a range of wonderful venues.

Reserved seating

RESERVED SEATING WALKTHROUGH

Navigate to the session catalog

After logging in to the event portal, click on the side nav and click "Sessions".



portal.awsevents.com/events/reInvent2021/dashboard/event/sessions

AWS Events

AWS re:Invent 2021

▼ Event

My calendar

Sessions

▶ Registration information

▶ Payment

Contact us

AWS Code of Conduct

AWS re:Invent 2021 > Event > Sessions

Sessions

All sessions

My favorites

My reservations

Search sessions by keyword

Showing 25 of 881 sessions

▼ Cost

- ☐ Paid sessions
☐ Free sessions

▼ Days

- ☐ Monday



15 years of AWS with J

BOA201

Amazon S3 and Amazon EC2 are...
this breakout session, have a chat...
customers keep surprising us with...
and shares lessons on how to bes...

Session type: Breakout Session

Topics: BuildOn.AWS

Session level: 200 - Intermediate

RESERVED SEATING WALKTHROUGH

Using catalog filters

When viewing the session catalog, there is a set of filters available on the left sidebar of the sessions catalog that shows a variety of filters you can use while browsing. Filters include: price, day of the week, difficulty level, session type, topic, AWS service, and industry.



AWS re:Invent 2021 > Event > Sessions

Sessions

All sessions

My favorites

My reservations

Showing 25 of 881 sessions

▼ Cost

- ☐ Paid sessions
- ☐ Free sessions

▼ Days

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday

▼ Session level

- ☐ 100 - Foundational
- ☐ 200 - Intermediate
- ☐ 300 - Advanced
- ☐ 400 - Expert

▼ Session type

★ 15 years of AWS with Jeff Barr

BOA201

Amazon S3 and Amazon EC2 are turning 15 this year, and in this breakout session, have a chat with him about how AWS customers keep surprising us with their amazing projects and shares lessons on how to best build on AWS. Last but

Session type: Breakout Session

Topics: BuildOn.AWS

Session level: 200 - Intermediate

Job Role: Developers, Architect

★ 5 ways to stay on top of your cloud learn

BOA202-R1 Repeat

No matter what project you're building, as a developer, you learn, experiment, and build on AWS while keeping your skills sharp to discover AWS and start working with its foundational services to optimize your learning experience in the cloud.

Session type: Chalk Talk

Topics: BuildOn.AWS

RESERVED SEATING WALKTHROUGH

Using catalog search

At the top of the session catalog, there is a search bar where you can enter freeform text to search the full catalog. The search box searches through all of the displayed text fields of a session, including session ID, title, abstract, and level.



AWS re:Invent 2021 > Event > Sessions

Sessions

All sessions

My favorites

My reservations

 Search sessions by keyword

Showing 25 of 881 sessions

▼ Cost

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- ☐ Free sessions

▼ Days

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday

▼ Session level



15 years of AWS

BOA201

Amazon S3 and Amazon S3 Glacier are helping our customers keep surplus inventory and shares lessons on how to manage it.

Session type: Breakout**Topics:** BuildOn.AWS**Session level:** 200 - Intro**Job Role:** Developers, Architects

5 ways to stay

RESERVED SEATING WALKTHROUGH

Favoriting and un-favoriting a session

When viewing the session catalog, any session shown in the results has a star icon on it. Clicking that star will mark it as a favorite. To un-favorite it, simply click the star again.



15 years of AWS with Jeff Barr

BOA201

Amazon S3 and Amazon EC2 are turning 15 this year, and Jeff Barr, VP of AWS, will be leading this breakout session, have a chat with him about how AWS was born, how it has grown, and how customers keep surprising us with their amazing projects. Along the way, Jeff will share and shares lessons on how to best build on AWS. Last but not least, go

Session type: Breakout Session

Topics: BuildOn.AWS

Session level: 200 - Intermediate

Job Role: Developers, Architect

RESERVED SEATING WALKTHROUGH

Reserving a session

For events with reserved seating, when a session has available seats, the button on the session card will say “Reserve seat”.

For sessions with a price greater than zero, the button will say “Buy for <price>”. Clicking purchase will open up the purchase form where you can complete your transaction. Once the transaction is complete, that session will show on your reservations list.



A practical guide to building an industrial data lake on AWS

MFG301

Analyzing the massive quantities and types of data generated in an industrial setting can enable effective into production optimization opportunities. An industrial data lake is foundational to help manage and st insights for their factory digital transformation efforts. This chalk talk walks through the steps to building industrial customer.

Session type: Chalk Talk

Topics: Manufacturing

Session level: 300 - Advanced

[Reserve a seat](#)

Date

Time

Loca



AWS Cloud Technical Essentials (option 1)

TNC101-R2 [Repeat](#)

This bootcamp introduces you to essential AWS services and common solutions. The bootcamp covers fun security. It also explores concepts that increase your understanding of AWS services, so you can make mor apply highly available, fault-tolerant, scalable, and cost-effective cloud solutions.

Session type: Bootcamp

Topics: Training and Certification

Session level: 100 - Beginner

[Buy for \\$1.00](#)

Date

Time

Loca

RESERVED SEATING WALKTHROUGH

Waitlisting a session

When a session has no seats available, because the capacity has already been met, then the button will say “Join waitlist”. If you join a waitlist for a session, and a seat becomes available in that session, you may automatically be placed in that session and we will notify you via email.



15 years of AWS with Jeff Barr

BOA201

Amazon S3 and Amazon EC2 are turning 15 this year, and Jeff Barr, VP and Chief Evangelist at AWS, has been born, how the developer experience has evolved over the years, and how customers keep surprising us with the AWS community and shares lessons on how to best build on AWS. Last but not least, go back in time as Jeff

Session type: Breakout Session

Topics: None

Session level: 200 - Intermediate

Join waitlist

RESERVED SEATING WALKTHROUGH

Viewing your favorites, reservations, and waitlisted sessions

Along the top of the catalog page, there are 3 tabs: 1) All sessions, 2) My favorites, and 3) My reservations. Clicking on “My favorites” will show you a list of only sessions you have favorited. Clicking on “My reservations” will show you a list of items you have reserved or waitlisted.



AWS re:Invent 2021 > Event > Sessions

Sessions

All sessions

My favorites

My reservations

🔍 Search sessions by keyword

Showing 25 of 881 sessions

▼ Cost

RESERVED SEATING WALKTHROUGH

Cancelling a reservation or waitlist

When viewing a session, in any tab, if you have reserved or waitlisted, you can cancel that action by simply clicking the button again. It will show a dropdown that says "Cancel reservation" or "Leave waitlist".



Automating content moderation to improve digital safety

AIM307

The volume of user-generated content and third-party content has been exploding in social media, online end users, companies need to find a way to review audio, image, video, and text content at scale for potential content. This chalk talk provides hands-on experience to implement a multimodal AI content moderation solution using speech (Amazon Transcribe), and text (Amazon Comprehend).

Session type: Chalk Talk

Topics: Artificial Intelligence and Machine Learning

Session level: 300 - Advanced

Reserved ▲

Cancel reservation

BOA201

Amazon S3 and Amazon EC2 are turning 15 this year, and Jeff Barr, VP and Chief Evangelist, will share how the developer experience has evolved over the years, and how customers keep the community and shares lessons on how to best build on AWS. Last but not least, go back to the beginning.

Session type: Breakout Session

Topics: None

Session level: 200 - Intermediate

Waitlisted ▲

Leave waitlist

RESERVED SEATING WALKTHROUGH

Viewing your calendar

In the main navbar on the left of the session catalog, you will see a link that says “My calendar”.

AWS Events

Reserved Seating Demo 2021

Event

[My calendar](#)[Sessions](#)[Speaker dashboard](#)[▶ Registration information](#)[▶ Payment](#)[Contact us](#)[AWS Code of Conduct](#)[Reserved Seating Demo 2021](#) > [Event](#) > [My calendar](#)

< November 2021 >

	Mon 29	Tue 30
12 am		
1 am		
2 am		
3 am		

RESERVED SEATING WALKTHROUGH

Viewing your calendar

If you navigate to the calendar, you will see all of your favorites, reserved seats, and waitlisted seats on the corresponding days that those sessions are scheduled.

[Reserved Seating Demo 2021](#) > [Event](#) > [My calendar](#)

< November 2021 >

	Mon 29	Tue 30	Wed 01	Thu 02
12 am				
1 am				
2 am				
3 am				
4 am				
5 am				
6 am				
7 am				
8 am				
9 am				
10 am		<div>Achieve high performance and cost-e... 10:00 AM – 11:00 AM</div>	<div>Amazon Lightsail: Move your first ap... 10:00 AM – 11:00 AM</div>	
11 am				
12 pm				
1 pm		<div>Automating content moderation to i... 1:00 PM – 2:00 PM</div>		
2 pm				
3 pm				

Make a plan

Building your agenda

SESSIONS

Breakout sessions are lecture-style and one hour long. Sessions are delivered by AWS experts, customers, and partners, and they typically include 10–15 minutes at the end for Q&A.

WORKSHOPS

Workshops organize attendees into small groups and provide scenarios to encourage interaction, giving you the opportunity to learn from and teach each other.

50%

25%

15%

10%

CHALK TALKS

Chalk talks are one hour long and contain expert-level content presented by AWS experts. The goal is to foster a technical discussion around real-world architecture challenges

BUILDERS' SESSIONS

These are 60-minute small group sessions with up to six attendees per table, and one AWS expert, who is there to answer questions and provide guidance.



PRO TIP:

Breakout sessions should make up the bulk of your plan. You can find customers directly speaking about their real-world experiences of using AWS products and services in sessions!

Building your agenda



PRO TIPS:

- Make sure to watch the leadership sessions that are most relevant to your areas of interest to get the most strategic updates.
- Be sure to not miss out on all the keynotes, as that's where you'll catch the biggest AWS launches.
- re:Invent always tries to feature many customers directly speaking about their real-world experiences of using AWS products and services. You'll find them in many breakout sessions, as well as keynotes.
- Think about topics that are currently mission critical to your team, and topics you're interested in learning more about.
- Breakout sessions will be available to watch virtually, even if you are registered for in-person re:Invent.
- Make an extensive list of sessions to watch! Favorite lots of sessions so when reserved seating goes live, you have lots of options.

Got free time on your schedule?

There are many learning opportunities across the re:Invent campus in Las Vegas that require no reservation. Drop by the Expo, visit a content hub, or practice your craft in one of our labs.



Expo

Learn from AWS experts and partners. The Expo at The Venetian will be host to AWS Village, AWS Partner Network, AWS Marketplace, Builders' Fair, Developer Lounge, a demo theater, Jam Lounge, Startup Central, and sponsor booths. Come by and see all that the Expo has to offer!



Content hubs

Breakout session repeats will take place all week in all re:Invent venues, along with overflow sessions in our content hubs (centralized overflow rooms in every venue). We will also stream live content to the content hubs as the sessions fill up.



Labs

Practice your craft in a live AWS sandbox environment. Try any of our 100+ self-paced labs on your own, or reserve time with an AWS expert who can coach and guide you. Whether you're just starting out or honing your technical skills, learn by doing with labs.

Your re:Invent checklist

- ☐ Register for re:Invent / Book your hotel / Book your travel reservations / Upload your badge photo
- ☐ If attending in person, review the [health measures](#) in place for this year's re:Invent
- ☐ Visit the [re:Invent website](#) to stay up to date on announcements
- ☐ Add all five [keynotes](#) to your agenda
Pro Tip: This is where you'll catch the biggest AWS launches
- ☐ Add your favorite leadership sessions to your agenda
- ☐ Get ready for reserved seating: favorite the learning sessions of interest to you
- ☐ Familiarize yourself with sponsors in the [Expo](#), along with the Expo map
- ☐ If you're attending with a team, connect with your colleagues to plan how to conquer the many hours of content
Pro Tip: Don't forget to find time to reconvene with your team and debrief on everyone's learnings
- ☐ Check out the [Play](#) activities and add them to your agenda
- ☐ Watch all the [How to re:Invent](#) videos to prepare for the week
- ☐ Follow Amazon Web Services on Instagram, Facebook, LinkedIn, and Twitter

Useful resources

Useful resources

How to re:Invent

Everything you need to know about how to re:Invent. Insider tips, planning advice, and interviews with re:Invent experts. Stay tuned for more episodes on the road to re:Invent!

[How to re:Invent](#)

Health measures

The health and safety of our customers, partners, and employees remains our top priority. Review our updated COVID-19 vaccination requirements for attending re:Invent in Las Vegas.

[Health measures](#)

FAQs

Get all the info you need on topics such as health and safety, registration, accessibility, and much more.

[FAQs](#)

Thank **you!**