

Prague AWS User Group

Best of AWS re:Invent

Vladimir Simek, Sr. Solutions Architect @ AWS

December 12th, 2017

AWS re:Invent Week recap



40,000+
attendees

60,000+
live stream registrations

~1,500
technical sessions

[Amazon](#) | [Business](#) | [Technology](#)

Amazon unveils new cloud-computing services at pace of a startup, despite market dominance

Originally published November 29, 2017 at 6:54 am | Updated November 30, 2017 at 7:38 am



More than 40,000 developers, technologists and marketers gather at AWS's weeklong re:Invent conference in Las Vegas. (Courtesy of Amazon.com)

Compute

Compute

Amazon Elastic Container Service for Kubernetes (EKS) – PREVIEW



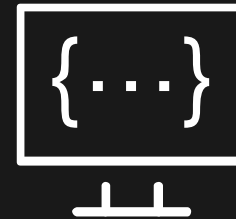
Native Upstream
Kubernetes



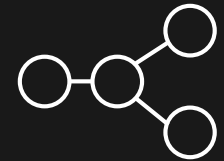
Managed Kubernetes
Control Plane



Secure



Automated
version
upgrades



Seamless integration
with AWS Services

Highly Available and Scalable Kubernetes Service

Compute

AWS Fargate – Available for ECS today, EKS in 2018

Run containers without managing servers or clusters



Easy to Use, Powerful
Container Model



No Instances to
Manage



Task Native API



Resource
Based Pricing

Compute

Amazon EC2 H1 Instances – General Availability

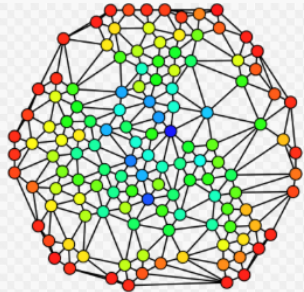
New dense storage instance family for big data workloads

H1 - New Storage-Optimized Instance

Up to 16TB of locally
attached HDD storage

Up to 25 Gbps network
bandwidth with ENA

Big Data Clusters



Kafka Streaming



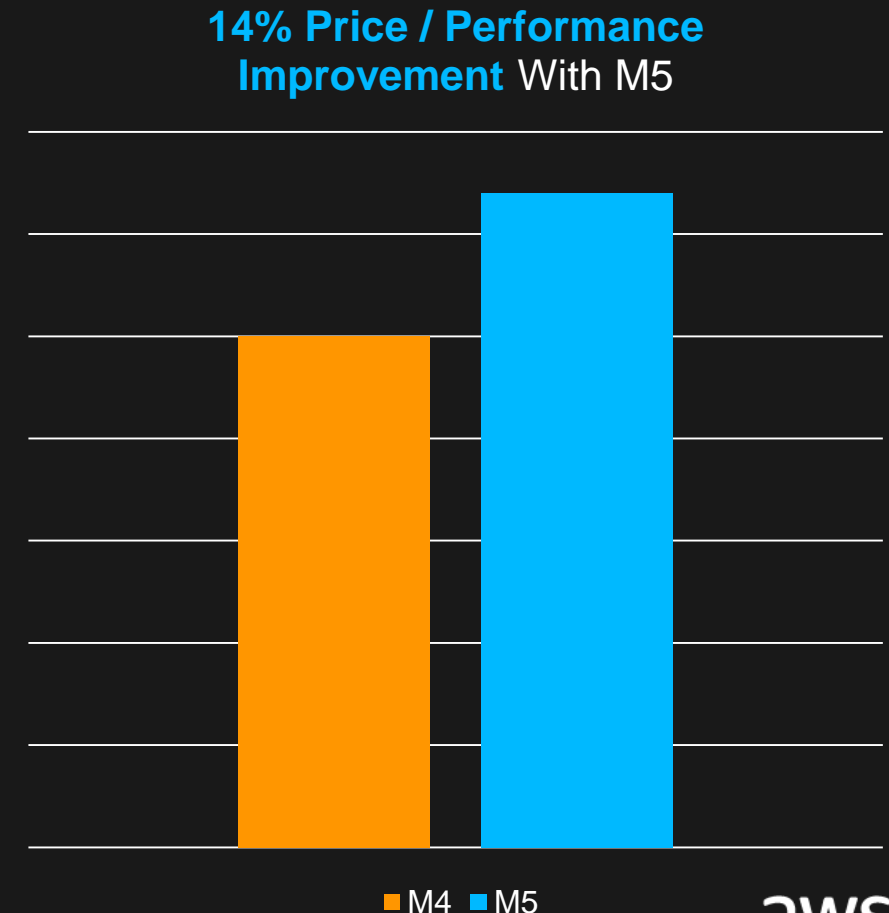
MapReduce



Compute

Amazon EC2 M5 Instances – General Availability

- Powered by 2.5 GHz Intel **Xeon Platinum** 8000-series "**Skylake**" Processor
- New larger instance size – m5.24xlarge with **96 vCPUs** and **384 GiB of memory**
- Improved network and EBS performance on smaller instance sizes
- Support for **Intel AVX-512**
- Powered by new lightweight Nitro Hypervisor



Compute

Amazon EC2 Bare Metal Instances – PREVIEW

Amazon EC2 Bare Metal Instances are on-demand instances that provide your applications direct access to the compute, memory, and networking resources of the underlying next-generation AWS hardware and software infrastructures.

CPU – 2x Intel Xeon E5-2686 v4 processors running at 2.3 GHz, with a total of 36 hyperthreaded cores (72 logical processors)

RAM – 512 GiB

SSD – 15.2 terabytes of local, SSD-based NVMe storage

NIC – 25 Gbps of ENA-based enhanced networking.



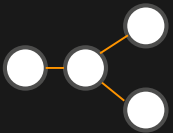
Databases

Database

Amazon Neptune – PREVIEW

Fully managed graph database for highly connected data

Open



Supports Apache TinkerPop™ & W3C RDF graph models

Fast & Scalable



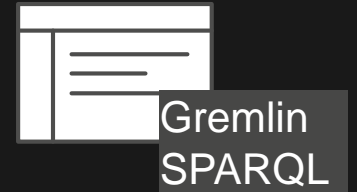
Store billions of relationships; query with millisecond latency

Reliable



6 replicas of your data across 3 AZs with full backup and restore

Easy



Build powerful queries easily with Gremlin and SPARQL

Database

Amazon Aurora Multi-Master – PREVIEW

First relational DB service with scale-out reads and writes,
across multiple datacenters

Scale out both reads and writes

Zero application downtime from ANY
instance failure

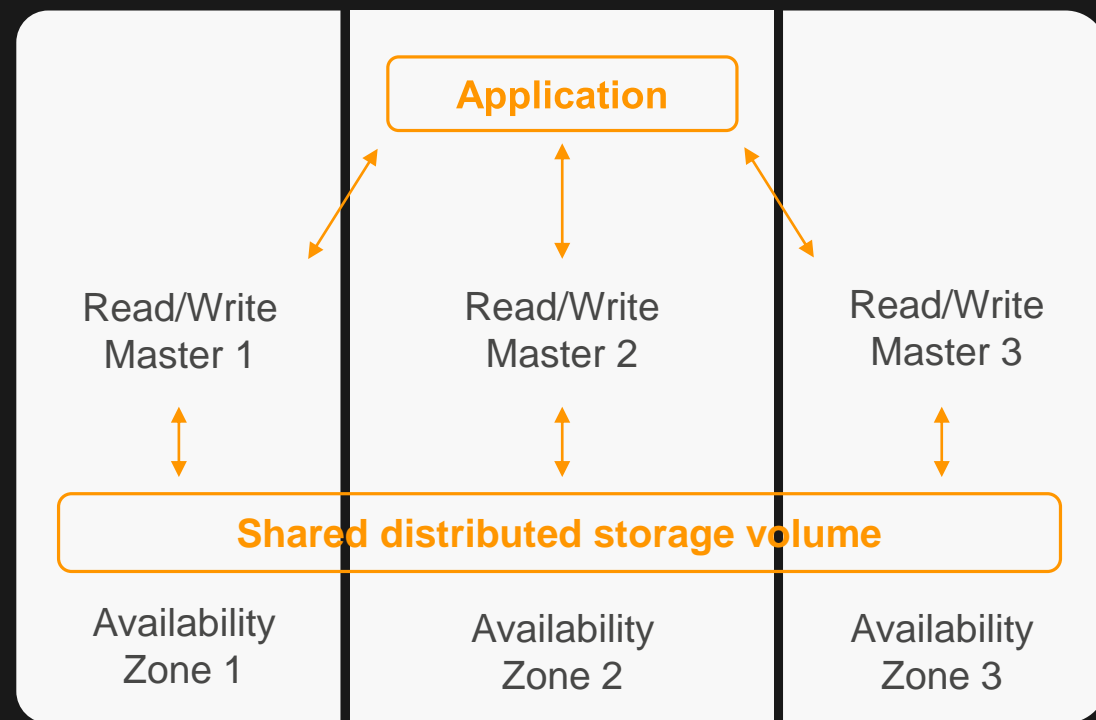
Zero application downtime from ANY AZ
failure

Faster write performance and higher scale

Sign up for single-region multi-master
preview today; multi-region multi-master

AWS re:Invent coming in 2018

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Database

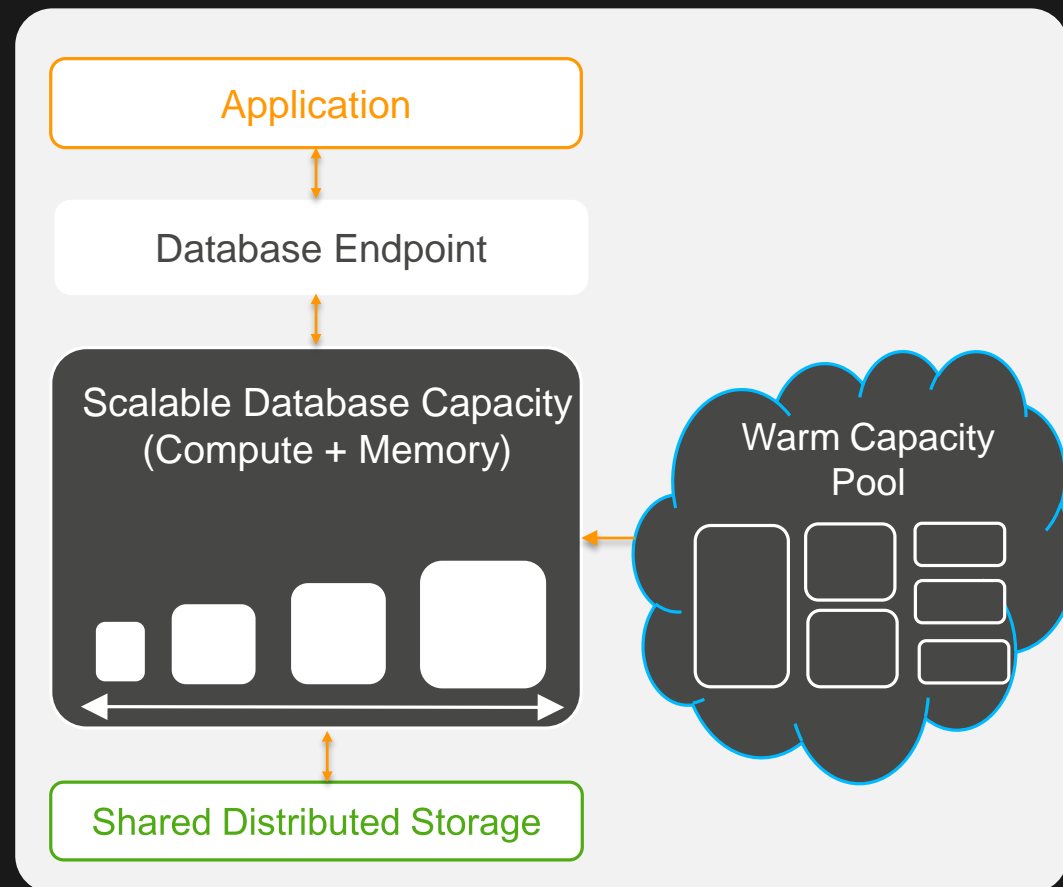
Amazon Aurora Serverless – PREVIEW

On-demand, auto-scaling
database for applications
with variable workloads

Starts up on demand, shuts down when
not in use

Automatically scales with no instances to
manage

Pay per second for the database capacity
you use



Database

Amazon DynamoDB Global Tables

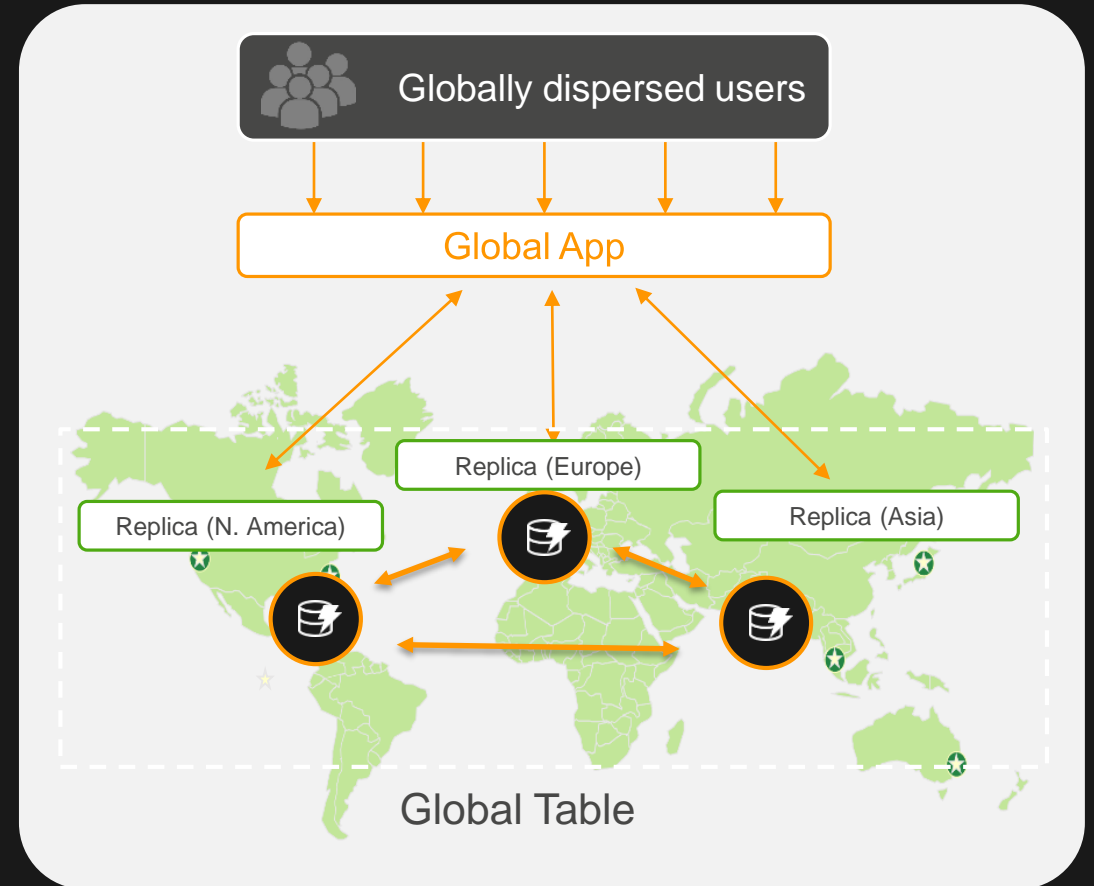
First fully managed, multi-master, multi-region database

Build high performance, globally distributed applications

Low latency reads & writes to locally available tables

Disaster proof with multi-region redundancy

Easy to setup and no application re-writes required



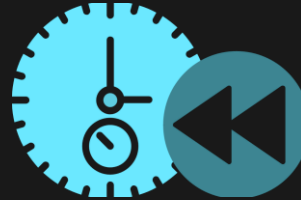
Database

Amazon DynamoDB Backup and Restore

First NoSQL database to automate on-demand and continuous backups



On-demand backups for
long-term data archival
and compliance
(GA)



Point in time restore for
short term retention and
data corruption protection
(Coming soon)



Back up hundreds of TB
instantaneously with NO
performance impact

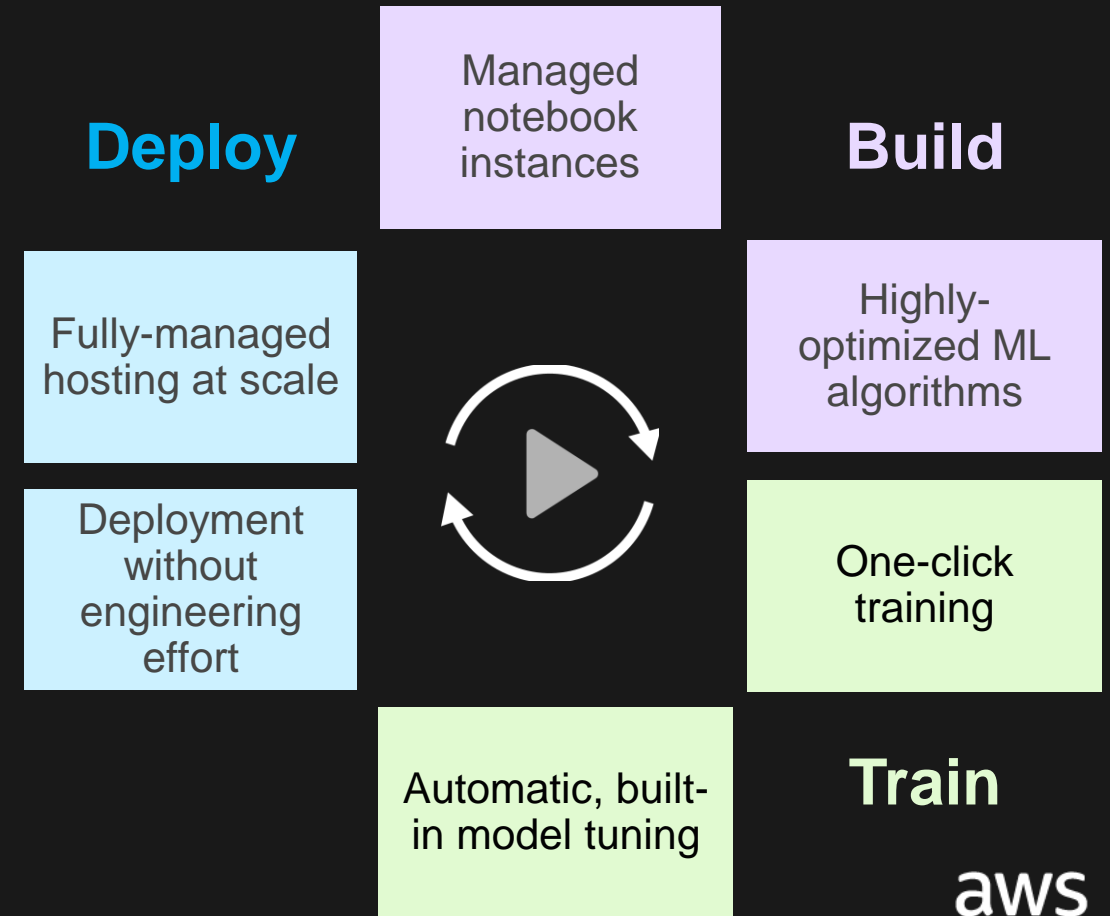
Machine Learning

Machine Learning

Amazon Sagemaker – General Availability

Build, Train, and Deploy
Machine Learning Models
at Scale

- Zero setup with Managed Notebooks
- Built-in, High Performance Algorithms
- One-click Training
- Automatic Model Tuning (Limited Preview)
- Reduced model training time
- One-Click Deployment
- Pay by the second



Machine Learning

DeepLens – General Availability

World's first deep learning enabled video camera for developers



A new way to learn

Custom built for deep learning

Broad Framework Support

Deploy models from Amazon SageMaker

Integrated with AWS

Full programmable with AWS Lambda

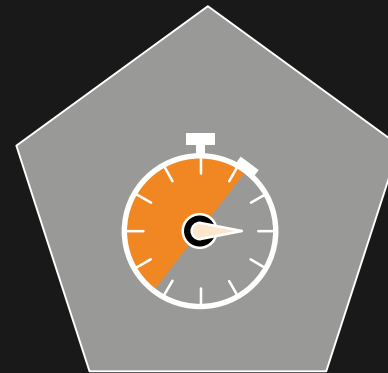
Machine Learning

Amazon Rekognition Video – General Availability

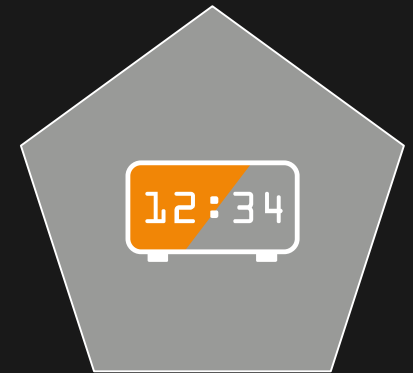
Analyze activity, recognize and track people in stored and live video stream

Four primary capabilities

1. Person tracking
2. Facial recognition
3. Object and activity detection
4. Video streaming support



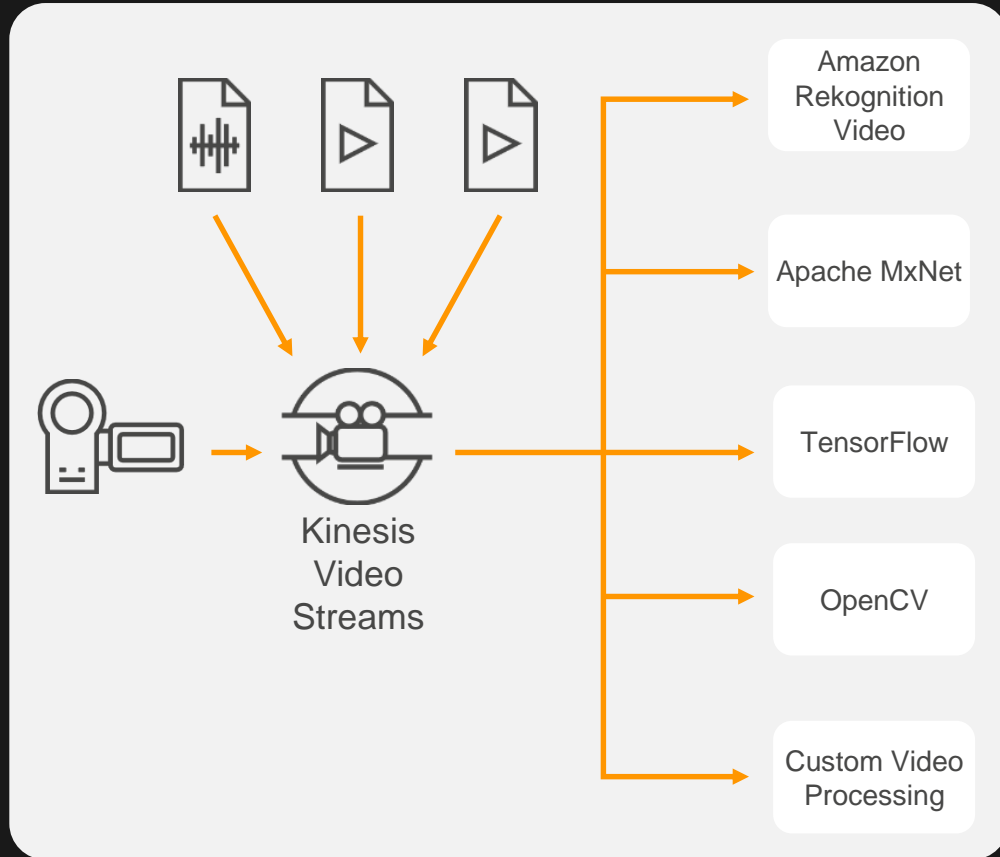
Real-time and batch
analysis



Motion and
time context

Analytics

Amazon Kinesis Video Streams – General Availability



Stream video from millions of devices

Easily build vision-enabled apps

Secure

Durable, searchable storage

Serverless

Machine Learning

Amazon Transcribe – PREVIEW

Amazon Transcribe is an automatic speech recognition (ASR) service that makes it easy for developers to add speech to text capability to their applications



Support for both
regular &
telephony audio



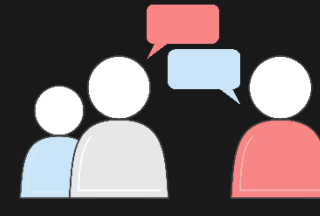
S3 Integration



Time Stamps



Punctuation
& formatting



Recognize
Multiple
Speakers



Custom
Vocabulary

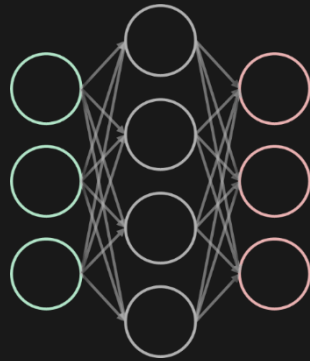
Machine Learning

Amazon Translate – PREVIEW

Amazon Translate is a neural machine translation service that delivers fast, high-quality, and affordable language translation.



REAL-TIME TRANSLATION



POWERED BY DEEP
LEARNING



12 LANGUAGE PAIRS
(more to come)



LANGUAGE DETECTION

Machine Learning

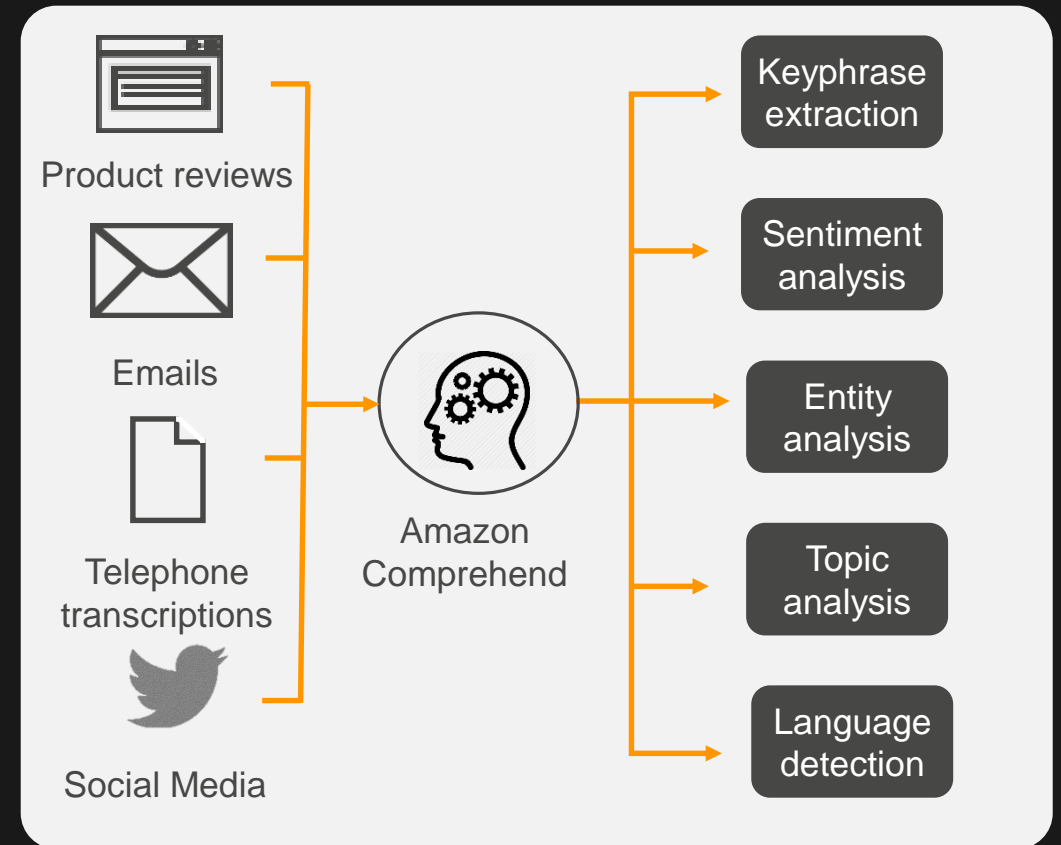
Amazon Comprehend – General Availability

Natural Language Processing
to discover insights from text

Classify language, extract key phrases, understand
sentiment, identify / organize documents by topic

Continuously trained and constantly improving

Integrated with Amazon S3 and AWS Glue

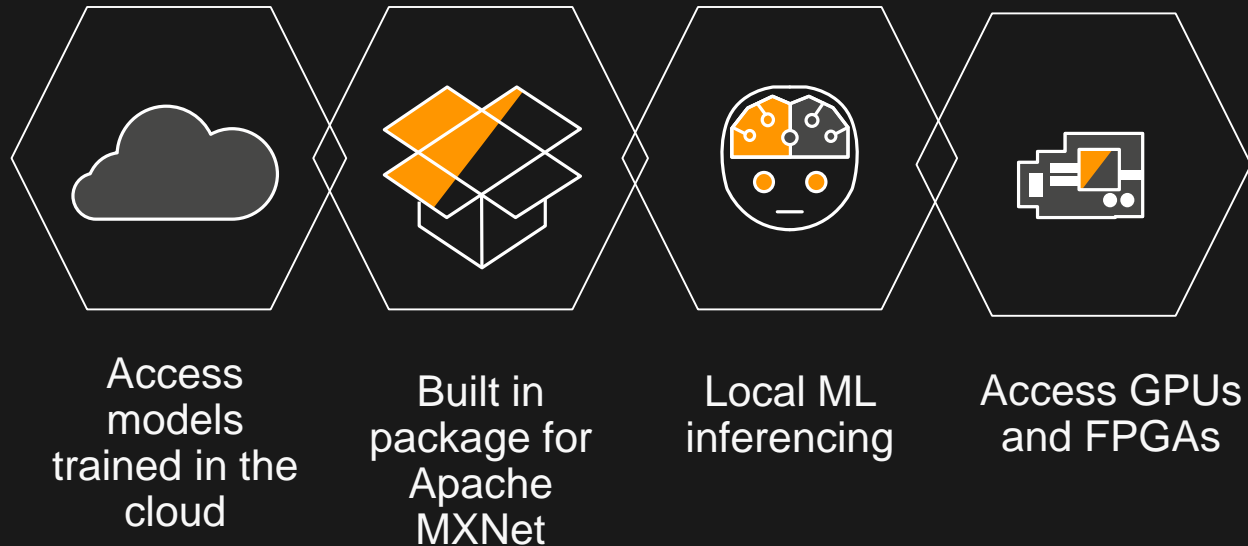


Internet of Things



ML Inference for AWS Greengrass – PREVIEW

Run machine learning models on the edge



Other Announcements

Developer Tools

Introducing AWS Cloud9 – General Availability

A cloud-based IDE to write, run, and debug your code



AWS
re:Invent

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Code with just a browser



Code together in real time



Build serverless apps with ease



Direct terminal access to AWS



Start new projects quickly



What is this?



Will it rain tomorrow?

Set an alarm for eight a.m.



Echo (1st Gen.)



Echo Dot (1st Gen.)



Echo Dot (2nd Gen.)



Echo Show



Echo Spot



Echo (2nd Gen.)



Echo Plus



Business Productivity

Alexa for Business Is Now Generally Available



Smarter Workplace

Conference rooms

Shared spaces

Lobbies



Workforce Productivity

Business calling

Calendar management

Business applications



Centralized Admin Control

Device management

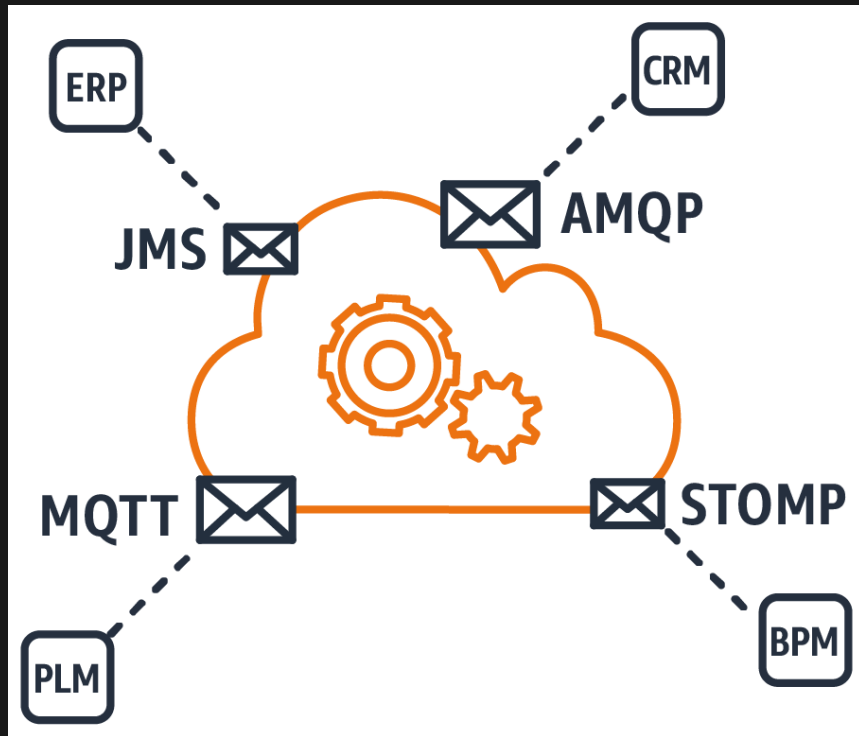
User management

Private skills

Short Demo Time!

Application Services

Amazon MQ – General Availability



Offload broker set up and administration

High availability and durability

Easily migrate from standards-based brokers

Launch a message broker in minutes

Pay as you go – get started for free

Security, Identity and Compliance

Amazon GuardDuty – General Availability

Intelligent threat detection for AWS accounts and workloads

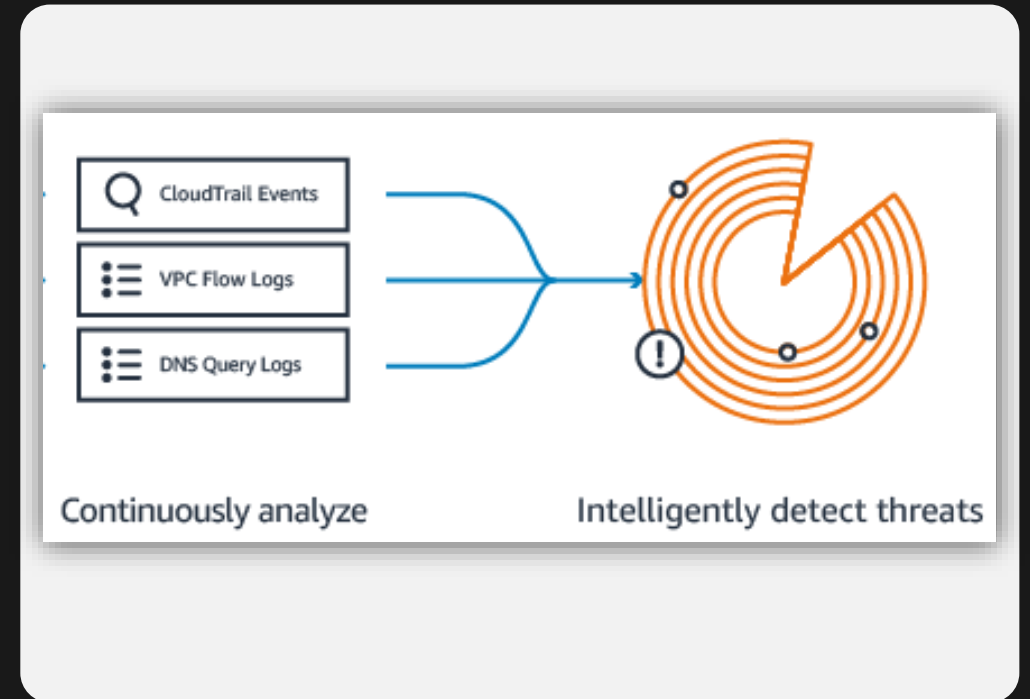
Continuous analysis of billions of events

Detections maintained by AWS Security

Uses machine learning and threat intelligence

Strengthens security through automation

One-click deployment with no additional software or infrastructure to manage



Amazon Sumerian

PREVIEW – The fastest and easiest way to create VR, AR, and 3D experiences



Create and run VR, AR, and 3D apps

Browser editor based on WebGL/WebVR

Create digital characters called Hosts

Script the logic within scenes

Run on platforms including Oculus Rift, HTC Vive, and mobile devices

<https://aws.amazon.com/new/reinvent/>

Q & A

Thank you