Getting Started with AWS

Services Overview

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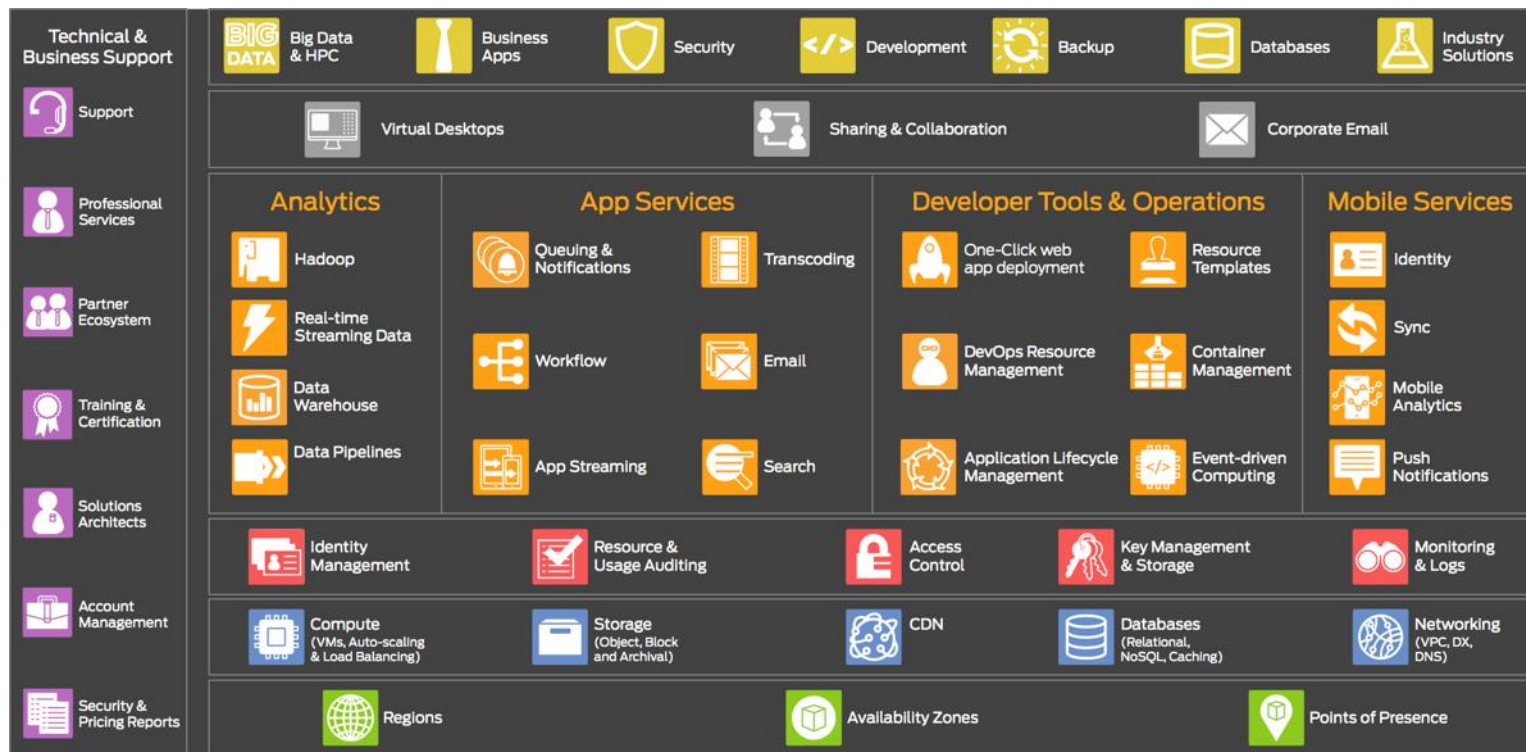
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AWS' Rapid Pace of Innovation

AWS has launched a total of 1,407 new features and/or services since inception in 2006.

82
2011

159
2012

280
2013

516
2014

+234*
2015

* As of April 30, 2015

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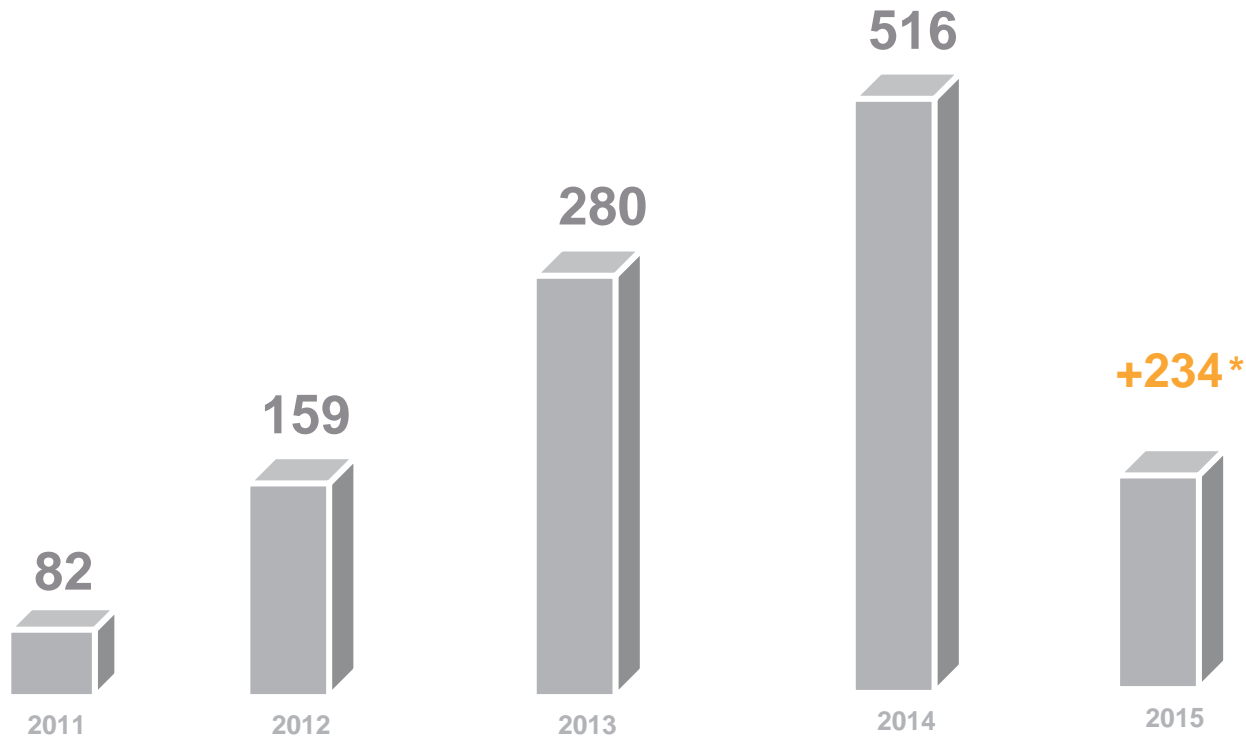
Extensive Platform Functionality

EC2

Auto Scaling

Lambda

EC2 Container Service

Compute

Elastic Compute Cloud (EC2)
Virtual Servers in the Cloud

- Resizable Compute Capacity
- Complete control of your computing resources
- Reduces time to obtain and boot new server instances to minutes
- Choose from 30+ different instance types
- Scale as your requirements change
- Pay only for what you use

Compute

Lambda
Run Code in Response to Events

- Lambda functions are triggered by events in other AWS services

- Automatically scales

- You only need to provide the code; There is no infrastructure to manage

- Pay only for what you use

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EC2 Container Service
Run and Manage Docker Containers

- A managed cluster for running Docker containers on EC2 instances

- Use the built in scheduler, write your own, or use a third-party scheduler

- Integrates with other services like ELB and EBS

- No additional charge

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Storage & Content Delivery

S3

Glacier

EBS

Storage Gateway

Import/Export

CloudFront

Simple Storage Service (S3)
Scalable Storage in the Cloud

- Storage for the Internet
- Store and retrieve any amount of data, at any time, from anywhere on the web
- Highly scalable, reliable, and secure
- Supports encryption
- Pay only for what you use

Glacier

Archive Storage in the Cloud

- Low cost storage for archiving and backup

- Secure and durable

- No limit to amount of data stored

- Flexible

- Pay only for what you use

- Simple integration with S3

Elastic Block Store (EBS)

Block Storage for EC2

- Persistent off-instance storage
- SSD or magnetic disk
- Durable snapshots to S3
- Encryption support
- Provisioned IOPS option

Storage & Content Delivery

Storage Gateway
Integrates On-Premises IT Environments with Cloud Storage

- Delivered as a virtual machine installed in an on-premise datacenter

- Integration with S3, EBS, and Glacier

- Secure data transmissions between AWS and on-premise resources

- Compatible with on-premise storage solutions through iSCSI interface.

Import/Export
Large Volume Data Transfer

- Ship a hard drive to AWS for import or export of data

- Supports large data transfers

- Data transferred to or from S3 or EBS

CloudFront

Global Content Delivery Network

- Distribute content with low latency, high transfer speeds, and no commitments

- 52 edge locations

- Simple integration with AWS services

- Static and dynamic content

- Advanced CDN features like SSL support, geographic restriction, and private content

Database

RDS

DynamoDB

ElastiCache

Redshift

Relational Database Service (RDS)
Managed Relational Databases

- Resizable capacity

- Handles time-consuming administration tasks

- Multiple engine types available

- High durability Options

- Automatic patching and backups

Database

DynamoDB

Predictable and Scalable NoSQL Data Store

- Fast, fully-managed NoSQL Database Service
- Capable of handling any amount of data
- Durable and Highly Available
- All SSD storage
- Simple and Cost Effective

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ElastiCache
In-Memory Cache

- Managed cache service

- Supports Memcached or Redis

- Simple resizing through API or console

- Integrates with Cloudwatch and SNS

Database

Redshift
Managed Petabyte-Scale Data Warehouse

- Fully managed SQL based data warehouse
- Online and functional in minutes
- Continuous backup
- Scale with no downtime
- Less than $1,000/TB/Year
- ODBC/JDBC Compliant

VPC

ELB

Route 53

Direct Connect

Virtual Private Cloud (VPC)
Isolated Cloud Resources

- Create user defined virtual networks

- Allows control of the networking environment

- Can be connected to existing datacenters over VPN or Direct Connect

- Can be peered with other VPCs in AWS

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Route 53
Scalable DNS and Domain Name Registration

- Answers DNS queries with low latency by using a global network of DNS servers
- Latency based routing to closest AWS endpoint
- Integration with other AWS services
- Register domain names

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Elastic Load Balancing (ELB)
Application Load Balancing

- Supports load balancing of HTTP, HTTPS and TCP traffic to EC2 instances

- Detects and removes failing instances

- Dynamically grows and shrinks based on traffic

- Integrates with Auto Scaling

Direct Connect
Dedicated Network Connection to AWS

- Establish a dedicated network connection from your premises to AWS

- Reduces bandwidth costs for high volume data transfers

- Offers consistent network performance

- Speeds from 50 Mbps to 10 Gbps per port

Simple Email Service (SES)
Email Sending Service

- Bulk and transactional email-sending service
- Eliminates email server management
- Meet rigorous Internet Service Provider (ISP) standards
- Built-in feedback loop on successful and unsuccessful messages

Simple Notification Service (SNS)

Push Notification Service

- Set up, operate, and send notifications
- Publish messages from an application and immediately deliver them to subscribers or other applications
- Push messages to mobile devices

Simple Queue Service (SQS)

Message Queue Service

- Managed and scalable message queue
- Building block for distributed systems
- Highly available and durable
- Pay for what you use

CloudSearch
Managed Search Service

- Integrate fast and highly scalable search functionality into applications

- Scales automatically

- AWS manages hardware provisioning, data partitioning, and software patches

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Elastic Transcoder

Easy-to-use Scalable Media Transcoder

- Converts media files between formats

- Highly scalable

- Integration with S3 and CloudFront

Simple Workflow Service

Workflow Service for Coordinating Application Components

- Coordinate processing steps across distributed systems

- Manages workflows, including state, decisions, executions, tasks, and logging

- Ensure tasks are executed reliably, in order, and without duplication

- Simple API calls can be executed from code written in any language

Directory Service

IAM

Trusted Advisor

CloudTrail

CloudWatch

AWS Config

Directory Service
Managed Directories in the Cloud

- Compatible with Active Directory
- Can be stand alone or integrated with existing directories
- Integrates with Zocalo, IAM, and Workspaces

Identity and Access Management (IAM)

Access Control and Key Management

- Create users, groups, and roles to allow access to AWS
- Can be federated with other systems
- Manages encryption keys

Trusted Advisor

AWS Cloud Optimization Expert

- Checks your AWS account for cost optimization, performance, fault tolerance, and security

- Basic checks are free, all checks unlocked with business level support

CloudTrail
User Activity and Change Tracking

- Records AWS API calls for your accounts
- Log files of API calls stored in S3
- Enables security analysis, resource change tracking, and compliance auditing
- Ability to sent notifications upon log file delivery
- Support for many AWS services

CloudWatch
Resource and Application Monitoring

- Visibility into resource utilization, operational performance, and overall demand patterns

- Supports custom metrics

- Can set alarms that send notifications or trigger Auto Scaling events

- Log aggregation with CloudWatch Logs

AWS Config
Resource Configurations and Inventory

- Inventories AWS resources

- Notifications on configuration change

- Keeps history of configuration changes

- Integration with partner solutions

Elastic Beanstalk

OpsWorks

CloudFormation

CodeDeploy

Elastic Beanstalk
AWS Application Container

- Ideal for developers that simply want to upload their code and have the service manage the rest

- Supports Docker, Java, .NET, Node.js, PHP, Python, and Ruby

- Automatically handles deployment, load balancing, auto-scaling, and application health monitoring

- Retain full control over the AWS resources powering your application

OpsWorks
DevOps Application Management Service

- Deploys, operates, and automates applications
- Model the layers of your applications into stacks
- Use Chef recipes and cookbooks
- Prebuilt templates for PHP, Ruby, Java, Node.js
- Granular security control
- Use it in AWS or on premises

CloudFormation
Templated AWS Resource Creation

- Model, provision, and update AWS resources in JSON formatted text files
- Deploy stack from template with runtime parameters
- Repeatable, reliable deployments

CodeDeploy
Automated Deployments

- Automates deployment of software to EC2 instances

- Allows for rolling updates and health checks

- Platform and language agnostic

- Integrates with existing tool chains

- Use it on AWS or on premises

EMR

Kinesis

Data Pipeline

Machine Learning

Elastic MapReduce (EMR)

Managed Hadoop Framework

- No hardware or virtualization software

- Secure (run in your own VPC)

- Reduces operational overhead of running MapReduce workloads

- Integrates with other AWS services

Kinesis

Real-time Processing of Streaming Big Data

- Fully-managed service for real time processing of streaming data, at any scale

- Integrate with S3, Dynamo DB, and Amazon Redshift

- Build custom applications on top of Kinesis data

Data Pipeline

Orchestration for Data-Driven Workflows

- Move data between different AWS data and compute resources

- Transform data during transfer

- Integrate with on-premise data sources

Machine Learning
Build Smart Applications Quickly and Easily

- Guided creation of machine learning models
- Can pull training data from S3 or RedShift
- Supports batch and real-time predictions

Workspaces

Desktops in the Cloud

- Create and manage virtual desktops for your users

- Integrates with VPC and Directory Service

- Clients for Windows, Mac, iPad, Kindle Fire, and Android

WorkDocs

Secure Enterprise Storage and Sharing Services

- Store and share documents with others

- Review and feedback workflow

- Integrates with your corporate directory

- Integrates with desktops, laptops, tablets, and Workspaces

WorkMail

Secure Email and Calendaring Service

- Managed business email and calendaring service
- Enterprise grade security
- Outlook compatible
- Access from anywhere

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Questions?

AWS Summit – Chicago: An exciting, free cloud conference designed to educate and inform new customers about the AWS platform, best practices and new cloud services.

Details
- July 1, 2015
- Chicago, Illinois
- @ McCormick Place

Featuring
- New product launches
- 36+ sessions, labs, and bootcamps
- Executive and partner networking

[Registration is now open](#)
- **Come and see what AWS and the cloud can do for you.**

CTA Script

- If you are interested in learning more about how to navigate the cloud to grow your business - then attend the AWS Summit Chicago, July 1st.
- Register today to learn from technical sessions led by AWS engineers, hear best practices from AWS customers and partners, and participate in some of the 30+ paid sessions and labs.
- Simply go to https://aws.amazon.com/summits/chicago/?trkcampaign=summit_chicago_bootcamps&trk=Webinar_slide
 to register today.
- Registration is FREE.

TRACKING CODE:

- Listed above.

Thank you!