Cloud & AWS
Demystified

Emily Nikoo

amazon web services

Google Cloud Platform

Azure

Dropbox

Google Drive

Sponsored by: CO WERKS · VYDIA · semgeeks · digital agency & consultants

1

- ▸ **What is the "Cloud"?**
- ▸ **Why Cloud vs On-Premise?**
- ▸ **Types of "Clouds"**
- ▸ **Cloud Services**
- ▸ **Amazon Web Services (AWS) Overview**
- ▸ **Use Cases**
- ▸ **Comparison with Microsoft Azure and Google Cloud**

SUMMARY

- **You definitely used the Cloud today…. probably in the last hour**

- **Did you….**

  - **Check your email on your phone?**

  - **Post pictures to Photos? Facebook or Instagram?**

- **Simply…**

  - **For a consumer, the Cloud simply provides the ability to store and access your files and applications over the Internet from anywhere, on multiple devices; instead of just from your computer at home**

  - **For an enterprise, the Cloud provides on-demand computer/server remote resources rather than fixed on-premise equipment and personnel**

WHAT IS THE "CLOUD"?

https://aws.amazon.com/what-is-cloud-computing/
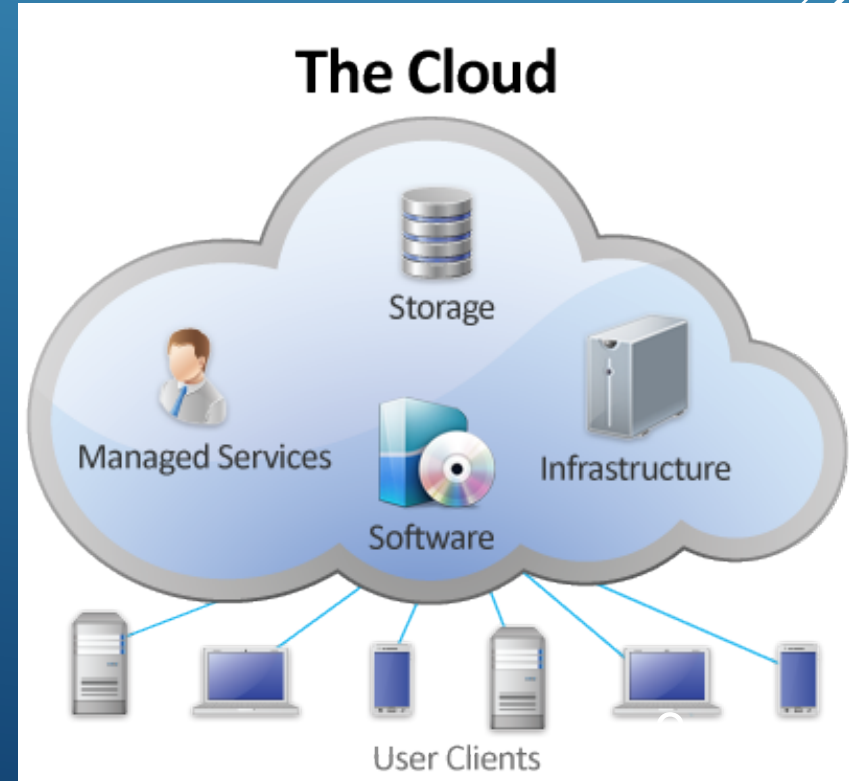
- **Key benefits to Cloud**
  - **Virtual- easier and more efficient access to data and applications**
  - **Flexible and Customizable**
  - **Scalable, On Demand (Up & Down)**
  - **"Pay-As-You-Go" Saves Money on Fixed Resources**
  - **Focuses a company's resources on their own business, results in quicker time-to-market of their own product and solutions (let it be someone else's headache)**
  - **Other- Security, Reliability**

WHY CLOUD VS ON-PREMISE

4

- **Consumer vs Enterprise**
- **Public, Private, Hybrid**
- **Top 3 Providers**
  - **Amazon Web Services (AWS)**
  - **Microsoft Azure**
  - **Google Cloud**
- **Services**
  - **Computing**
  - **Storage**
  - **Networking**
  - **Management**
  - **Integration**

TYPES OF "CLOUDS"

Top 20 Consumer Cloud Services
GLOBAL

1	Facebook	6	Gmail	11	Google Plus	16	VK
2	Twitter	7	StumbleUpon	12	Instagram	17	Photobucket
3	YouTube	8	Flickr	13	Tumblr	18	Spotify
4	LinkedIn	9	Vimeo	14	Yahoo! Mail	19	Evernote
5	Pinterest	10	Google Drive	15	Dropbox	20	SlideShare

Top 20 Enterprise Cloud Services
GLOBAL

1	Microsoft Office 365	6	Zendesk	11	GoToMeeting	16	SAP Human Capital Management
2	Salesforce	7	ServiceNow	12	ADP	17	SilkRoad
3	Cisco Webex	8	Oracle Taleo	13	Success Factors	18	SAS OnDemand
4	Concur	9	Workday	14	SharePoint Online	19	NetSuite
5	Yammer	10	Box	15	Hightail	20	BlueJeans

e.g. Storage; others- OneDrive, Box, Amazon Drive, iCloud
Email

EXAMPLES- CONSUMER & ENTERPRISE

https://spinbackup.com/blog/cloud-computing-trends-in-2016/
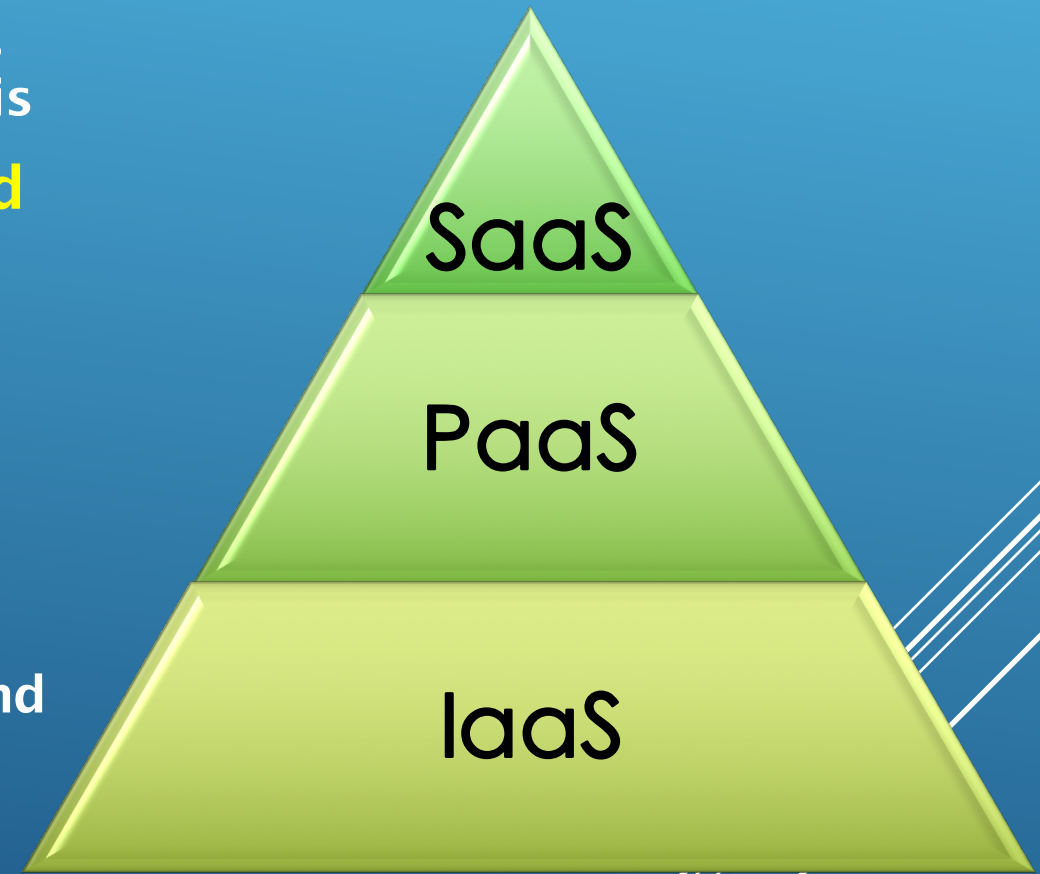https://www.skyhighnetworks.com/cloud-security-blog/the-20-totally-most-popular-cloud-services-in-todays-enterprise/

6

- **Software-as-a-service (SaaS)- End Users**
  - "on-demand software"- users access numerous cloud-based applications on an as-needed basis
- **Platform-as-a-service (PaaS)- Developers and serving integration requirements**
  - tools needed to create a digital platform- design, develop, test, implement, manage, and operate applications
- **Infrastructure-as-a-service (IaaS)- System Administrators**
  - essential building blocks, database storage, and a virtual platform- for customers who are able to self-provision the storage or processing power
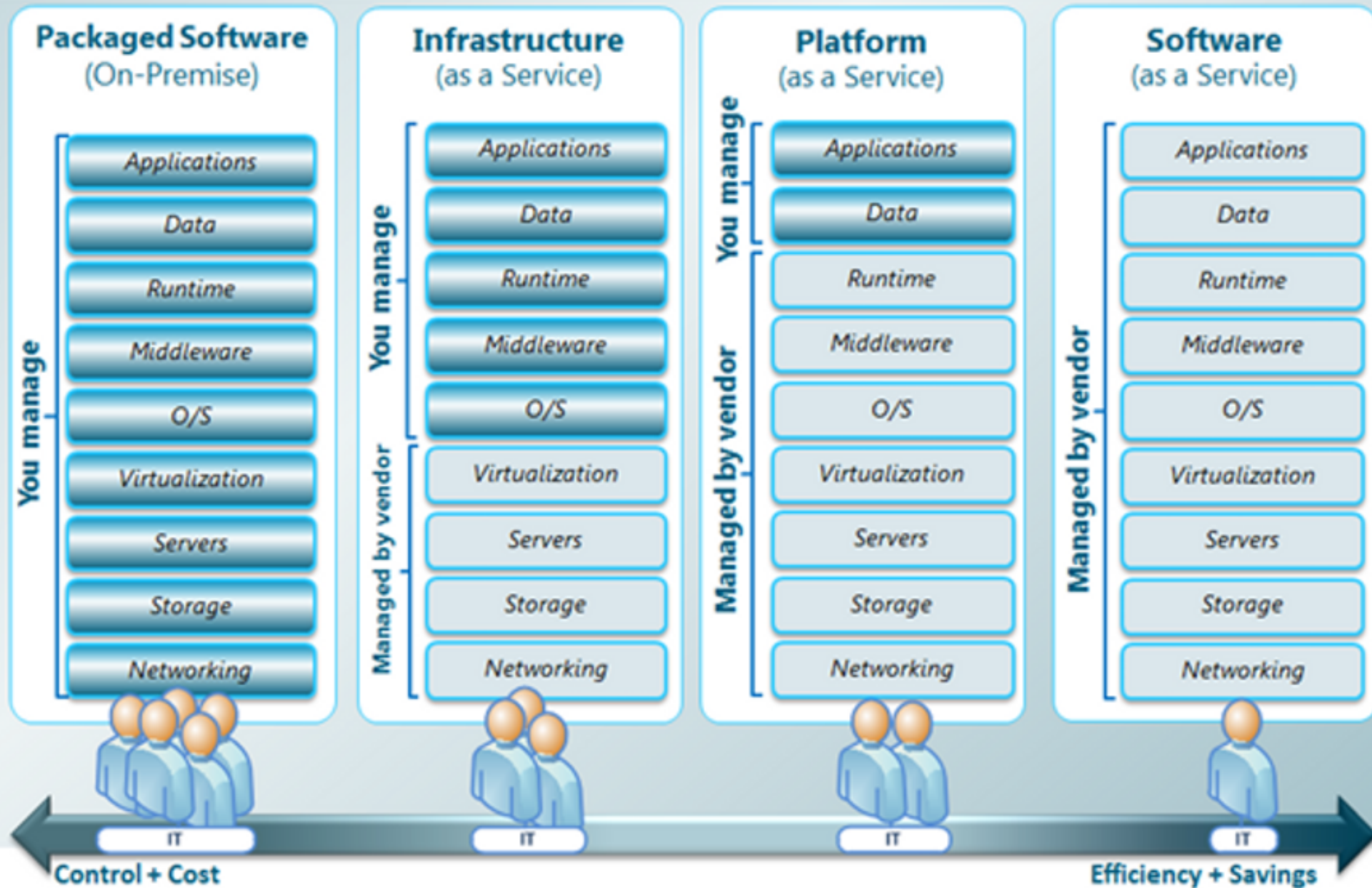
ENTERPRISE CLOUD COMPUTING MODELS

SaaS

PaaS

IaaS

https://www.chargebee.com/blog/understanding-types-cloud-computing/
https://www.cleo.com/blog/knowledge-base-what-is-cloud-computing

Cloud Services Architecture

https://devwp.eu/cloud-service-architecture-iaas-on-premise-vs-saas/

- **Compute**
- **Storage**
- **Databases**
- **Analytics**
- **Networking**
- **Mobile**
- **Developer Tools**
- **Management Tools**
- **Internet of Things (IoT)**
- **Security**
- **Enterprise**

AMAZON WEB SERVICES (AWS)

Analytics

Application Integration

AR & VR

AWS Cost Management

Blockchain

Business Applications

Compute

Customer Engagement

Database

Desktop & App Streaming

Developer Tools

Game Tech

Internet of Things

Machine Learning

Management & Governance

Media Services

Migration & Transfer

Mobile

Networking & Content Delivery

Robotics

Satellite

Security, Identity & Compliance

Storage

See All Products

https://aws.amazon.com/products/

AWS PRODUCTS & SERVICES

- **In 2018, there are over 20 categories and 90+ services.**
- **The most popular include:**
  - **Amazon Elastic Compute Cloud (EC2)**
  - **Amazon Simple Storage Service (S3)**

2011

2017

Compute
Amazon EC2
Amazon Elastic Container Service
Amazon Elastic Container Service for Kubernetes
Amazon Elastic Container Registry
Amazon Lightsail
AWS Batch
AWS Elastic Beanstalk
AWS Fargate
AWS Lambda
AWS Serverless Application Repository
Auto Scaling
Elastic Load Balancing
VMware Cloud on AWS

Storage
Amazon Simple Storage Service (S3)
Amazon Elastic Block Storage (EBS)
Amazon Elastic File System (EFS)
Amazon Glacier
AWS Storage Gateway
AWS Snowball
AWS Snowball Edge
AWS Snowmobile

Database
Amazon Aurora
Amazon RDS
Amazon DynamoDB
Amazon ElastiCache
Amazon Redshift
Amazon Neptune
AWS Database Migration Service

Migration
AWS Migration Hub
AWS Application Discovery Service
AWS Database Migration Service
AWS Server Migration Service

Networking & Content Delivery
Amazon VPC
Amazon CloudFront
Amazon Route 53
Amazon API Gateway
AWS Direct Connect
Elastic Load Balancing

Developer Tools
AWS CodeStar
AWS CodeCommit
AWS CodeBuild
AWS CodeDeploy
AWS CodePipeline
AWS Cloud9
AWS X-Ray
AWS Tools & SDKs

Management Tools
Amazon CloudWatch
AWS CloudFormation
AWS CloudTrail
AWS Config
AWS OpsWorks
AWS Service Catalog
AWS Systems Manager
AWS Trusted Advisor
AWS Personal Health Dashboard
AWS Command Line Interface
AWS Management Console
AWS Managed Services

Media Services
Amazon Elastic Transcoder
Amazon Kinesis Video Streams
AWS Elemental MediaConvert
AWS Elemental MediaLive
AWS Elemental MediaPackage
AWS Elemental MediaStore

Machine Learning
Amazon SageMaker
Amazon Comprehend
Amazon Lex
Amazon Polly
Amazon Rekognition
Amazon Machine Learning
Amazon Translate
Amazon Transcribe
AWS DeepLens
AWS Deep Learning AMIs
Apache MXNet on AWS
TensorFlow on AWS

Analytics
Amazon Athena
Amazon EMR
Amazon CloudSearch
Amazon Elasticsearch Service
Amazon Kinesis
Amazon Redshift
Amazon QuickSight
AWS Data Pipeline
AWS Glue

Security, Identity & Compliance
AWS Identity and Access Management (IAM)
Amazon Cloud Directory
Amazon Cognito
Amazon GuardDuty
Amazon Inspector
Amazon Macie
AWS Certificate Manager
AWS CloudHSM
AWS Directory Service
AWS Key Management Service
AWS Organizations
AWS Single Sign-On
AWS Shield

AR & VR
Amazon Sumerian

Application Integration
Amazon MQ
Amazon Simple Queue Service (SQS)
Amazon Simple Notification Service (SNS)
AWS AppSync
AWS Step Functions

Customer Engagement
Amazon Connect
Amazon Pinpoint
Amazon Simple Email Service (SES)

Business Productivity
Alexa for Business
Amazon Chime
Amazon WorkDocs
Amazon WorkMail

Desktop & App Streaming
Amazon WorkSpaces
Amazon AppStream 2.0

Internet of Things
AWS IoT Core
Amazon FreeRTOS
AWS Greengrass
AWS IoT 1-Click
AWS IoT Analytics
AWS IoT Button
AWS IoT Device Defender
AWS IoT Device Management

Game Development
Amazon GameLift
Amazon Lumberyard

Software

Compute
Amazon Elastic Compute Cloud (EC2)
Amazon Elastic MapReduce
Auto Scaling

Content Delivery
Amazon CloudFront

Database
Amazon SimpleDB
Amazon Relational Database Service (RDS)

E-Commerce
Amazon Fulfillment Web Service (FWS)

Messaging
Amazon Simple Queue Service (SQS)
Amazon Simple Notification Service (SNS)

Monitoring
Amazon CloudWatch

Networking
Amazon Virtual Private Cloud (VPC)
Elastic Load Balancing

Payments & Billing
Amazon Flexible Payments Service (FPS)
Amazon DevPay

Storage
Amazon Simple Storage Service (S3)
Amazon Elastic Block Storage (EBS)
AWS Import/Export

Support
AWS Premium Support

Web Traffic
Alexa Web Information Service
Alexa Top Sites

Workforce
Amazon Mechanical Turk

AWS EXPANSION

Forbes aws-service-sprawl-starts-to-hurt-the-cloud-ecosystem
https://www.clickittech.com/aws/top-10-aws-services/

AWS Featured Services

- Amazon EC2- Virtual servers in the cloud
- Amazon Simple Storage Service (S3)- Scalable storage in the cloud
- Amazon Aurora- High performance managed relational database
- Amazon DynamoDB- Managed NoSQL database
- Amazon RDS- Managed relational database service for MySQL, PostgreSQL, Oracle, SQL Server, and MariaDB
- AWS Lambda- Run code without thinking about servers
- Amazon VPC- Isolated cloud resources
- Amazon Lightsail- Launch and manage virtual private servers
- Amazon SageMaker- Build, train, and deploy machine learning models at scale

FEATURED AWS SERVICES

Learning Paths by Role

Build your cloud skills and advance toward AWS Certification with the role-based learning path that's right for you.

Cloud Practitioner

Learn cloud fundamentals and best practices.

Learn more >>

Architect

Learn to design highly available systems.

Learn more >>

Developer

Learn to develop applications for the cloud.

Learn more >>

Operations

Learn to automate applications, networks, and systems.

Learn more >>

AWS TRAINING

https://aws.amazon.com/training/

13

- **AWS- Netflix, Airbnb, Zillow, NFL, NASA JPL, Yelp, Samsung, iCIMS**
  - https://aws.amazon.com/solutions/case-studies/
  - https://aws.amazon.com/solutions/case-studies/netflix/
  - https://www.computerworlduk.com/cloud-computing/how-netflix-moved-cloud
- **Microsoft- SAP, Bentley**
  - https://azure.microsoft.com/en-us/case-studies/
- **Google- PayPal, HSBC, Twitter, 20th Century Fox, Snapchat, Spotify**
  - https://cloud.google.com/customers/#/

USE CASES- ENTERPRISE

CLOUD COMPARISON

PRODUCT	aws	Microsoft Azure	Google Cloud Platform
Virtual Servers	Instances	VMs	VM Instances
Platform-as-a-Service	Elastic Beanstalk	Cloud Services	App Engine
Serverless Computing	Lambda	Azure Functions	Cloud Functions
Docker Management	ECS	Container Service	Container Engine
Kubernetes Management	EKS	Kubernetes Service	Kubernetes Engine
Object Storage	S3	Block Blob	Cloud Storage
Archive Storage	Glacier	Archive Storage	Coldline
File Storage	EFS	Azure Files	ZFS / Avere
Global Content Delivery	CloudFront	Delivery Network	Cloud CDN
Managed Data Warehouse	Redshift	SQL Warehouse	Big Query

https://www.whizlabs.com/blog/aws-vs-azure-vs-google/
https://www.bmc.com/blogs/aws-vs-azure-vs-google-cloud-platforms/

AWS VS **Azure** VS **Google**

The most defining cloud battle of the present time is AWS vs Azure vs Google. Choosing one public cloud from three is considered a challenging task, let's make it easy!

CLOUD SERVICE PROVIDERS

Amazon - Amazon Web Services (AWS)	Azure - Microsoft	Google - Google Cloud

HOW OLD ARE THESE CLOUD PLATFORMS?

AWS - 12 years	Azure - 7 years	Google - 6 years

WHICH ONE TO CHOOSE AND WHY?

Dominant in many features like configuration, monitoring, security, and others - Extensive, mature offerings - Enterprise-friendly services - Open and Flexible - Global reach	- Integration with Microsoft tools - Broad feature set - Ranks first in development and testing tools - Open source support - Hybrid cloud	- Open source support and portability - Discounts & flexible contracts - Designed for cloud-based businesses - DevOps expertise

WHY NOT CHOOSE?

- Difficult to use - Overwhelming options - Cost management	- Less efficient management tooling - Less "enterprise-ready"	- Lately entered in IaaS market - Less data centres over the world - Fewer services and features

MARKET SHARE

62%	20%	12%

15

- **FREE TRIALS**
  - **AWS**;
  - **Azure**;
  - **Google Cloud**;
  - **Salesforce**
- **PRICING**
  - **Saving money is the key to deciding to use Cloud**
  - **Must optimize Cloud usage to optimize cost**
  - **Pricing is constantly adjusting due to competition and new offerings**
  - **Comparison and Calculator Links**
    - **https://medium.com/@distillerytech/comparing-aws-vs-azure-vs-google-cloud**
    - **https://www.rightscale.com/cloud-comparison-tool/**
    - **https://www.rightscale.com/lp/state-of-the-cloud**

GETTING STARTED

EXTRAS

AWS Regions and Availability Zones

AWS REGIONS

RESOURCES

- ▶ **FROM PRESENTATION**
  - ▶ https://aws.amazon.com/what-is-cloud-computing/
  - ▶ https://spinbackup.com/blog/cloud-computing-trends-in-2016/
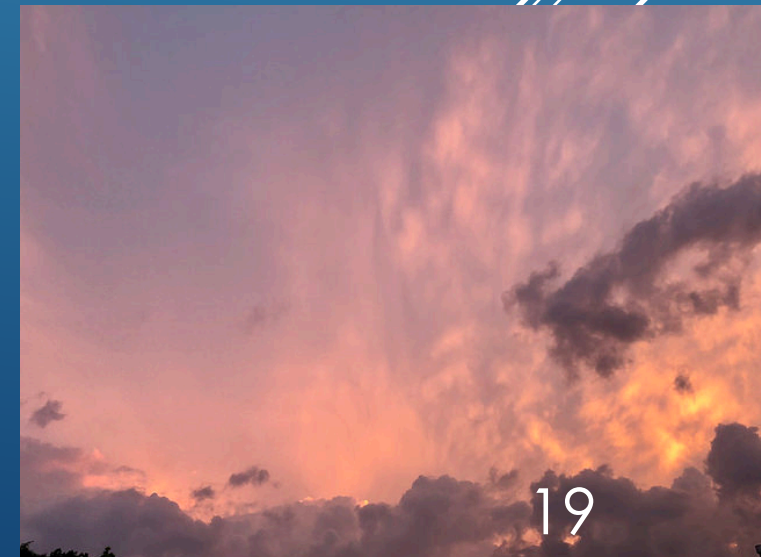 - ▶ https://www.skyhighnetworks.com/cloud-security-blog/the-20-totally-most-popular-cloud-services-in-todays-enterprise
  - ▶ https://www.chargebee.com/blog/understanding-types-cloud-computing/
  - ▶ https://www.cleo.com/blog/knowledge-base-what-is-cloud-computing
  - ▶ https://devwp.eu/cloud-service-architecture-iaas-on-premise-vs-saas/
  - ▶ https://aws.amazon.com/products/
  - ▶ https://www.forbes.com/sites/janakirammsv/2018/01/08/aws-service-sprawl-starts-to-hurt-the-cloud-ecosystem
  - ▶ https://www.clickittech.com/aws/top-10-aws-services/
  - ▶ https://www.whizlabs.com/blog/aws-vs-azure-vs-google/
  - ▶ https://www.bmc.com/blogs/aws-vs-azure-vs-google-cloud-platforms/
  - ▶ https://medium.com/@distillerytech/comparing-aws-vs-azure-vs-google-cloud-platforms-for-enterprise-app-development

- ▶ **CLASSES**
  - ▶ https://aws.amazon.com/training/
  - ▶ Microsoft Azure
  - ▶ Google Cloud
  - ▶ Edureka.co; LinkedIn; edX; Udemy;

19

- **In this Presentation:**
  - **AWS-** Amazon Web Service
  - **EC2-** Amazon Elastic Compute Cloud
  - **EFS-** Amazon Elastic File System
  - **EKS-** Amazon Elastic Container Service for Kubernetes
  - **GCP-** Google Cloud Platform
  - **IoT-** Internet of Things
  - **IaaS-** Infrastructure-as-a-service
  - **IAM-** Identity & Access Management
  - **PaaS-** Platform-as-a-service
  - **RDS-** Relational Database Service
  - **S3-** Amazon Simple Storage Service
  - **SaaS-** Software-as-a-service
  - **VPC-** Amazon Virtual Private Cloud
- **More and more and more…**
  - **Top 50-** https://www.elastichosts.com/blog/ultimate-list-of-cloud-computing-acronyms/
  - https://www.developer.com/cloud/acronym-anarchy-cloud-computing.html

CLOUD ALPHABET SOUP OF ACRONYMS

Google Cloud

DEVELOPER'S CHEAT SHEET

COMPUTE PRODUCTS

Compute Engine	Virtual Machines, Disks, Network
App Engine	Managed App Platform
Kubernetes Engine	Managed Kubernetes/Containers
Cloud Functions	Event-driven serverless functions

STORAGE PRODUCTS

Cloud Storage	Object Storage and Serving
Nearline	Archival Occasional Access Storage
Coldline	Archival Rare Access Storage
Persistent Disk	VM-attached Disks
Cloud Filestore	Managed NFS Server

DATABASES PRODUCTS

Cloud Bigtable	Petabyte-scale, low-latency nonrelational
Cloud Datastore	Horizontally Scalable Document DB
Cloud Firestore	Strongly-consistent Serverless Document DB
Cloud Memorystore	Managed Redis
Cloud Spanner	Horizontally Scalable Relational DB
Cloud SQL	Managed MySQL and PostgreSQL

DATA AND ANALYTICS PRODUCTS

Cloud Composer	Managed Workflow Orchestration Service
Cloud Dataflow	Stream/batch data processing
Cloud Datalab	Managed Jupyter Notebook
Cloud Dataprep	Visual data wrangling
Cloud Dataproc	Managed Spark and Hadoop
Cloud Pub/Sub	Global Real-time Messaging
Google BigQuery	Data Warehouse/Analytics
Google Data Studio	Collaborative Data Exploration/Dashboarding
Google Genomics	Managed Genomics Platform

AI AND MACHINE LEARNING PRODUCTS

Cloud AutoML Natural Language	Custom text classification models
Cloud AutoML Translate	Custom domain-specific translation
Cloud AutoML Vision	Custom image classification models
Cloud Job Discovery	Job Search with ML
Cloud Deep Learning VM Image	Preconfigured VMs for deep learning
Cloud Machine Learning Engine	Managed Platform for ML
Cloud Natural Language	Text Parsing and Analysis
Cloud Speech-To-Text	Convert Audio to Text
Cloud Text-To-Speech	Convert Text to Audio

AI AND MACHINE LEARNING PRODUCTS (CONT.)

Cloud TPU	Specialized Hardware for ML
Cloud Translation API	Language Detection and Translation
Cloud Video Intelligence	Scene-level Video Annotation
Cloud Vision API	Image Recognition and Classification
Dialogflow Enterprise Edition	Create Conversational Interfaces

NETWORKING PRODUCTS

Carrier Peering	Peer through a carrier
Direct Peering	Peer with GCP
Dedicated Interconnect	Dedicated private network connection
Partner Interconnect	Connect on-premises network to VPC
Cloud Armor	DDoS Protection and WAF
Cloud CDN	Content Delivery Network
Cloud DNS	Programmable DNS Serving
Cloud Load Balancing	Multi-region Load Distribution
Cloud NAT	Network Address Translation Service
IPsec VPN	Virtual private network connection
Network Service Tiers	Price vs Performance Tiering
Network Telemetry	Network Telemetry Service
Virtual Private Cloud	Software Defined Networking

INTERNET OF THINGS PRODUCTS

Cloud IoT Core	Device Management and ingest data

IDENTITY AND SECURITY PRODUCTS

Access Transparency	Audit Cloud Provider Access
Binary Authorization	Kubernetes Deploy-time Security
Cloud Data Loss Prevention API	Classify, Redact Sensitive Data
Cloud HSM	Hardware Security Module Service
Cloud IAM	Resource Access Control
Cloud Identity	Manage Users, Devices & Apps
Cloud Identity-Aware Proxy	Identity-based App Signin
Cloud Key Management Service	Hosted Key Management Service
Cloud Resource Manager	Cloud Project Metadata Management
Cloud Security Command Center	Asset inventory, discovery, search, management
Cloud Security Scanner	App Engine Security Scanner
Security Key Enforcement	Two-step Key Verification
Shielded VMs	Hardened VMs
Titan Security Key	Two-factor Authentication (2FA) Device

MANAGEMENT TOOLS PRODUCTS

Cloud APIs	APIs for Cloud Services
Cloud Billing	Billing and Cost Management Tools
Cloud Billing API	Programmatically Manage GCP Billing
Cloud Console	Web-based Management Console
Cloud Deployment Manager	Templated Infrastructure Deployment
Cloud Mobile App	iOS/Android GCP Manager App
Cloud Shell	Browser-based Terminal/CLI
Stackdriver Debugger	Live Production Debugging
Stackdriver Error Reporting	App Error Reporting
Stackdriver Logging	Centralized Logging
Stackdriver Monitoring	Infrastructure and Application Monitoring
Stackdriver Profiler	CPU and heap profiling
Stackdriver Transparent SLIs	Monitor GCP Services
Stackdriver Trace	App Performance Insights

DEVELOPER TOOLS

Cloud SDK	CLI for GCP
Cloud Build	Continuous integration/delivery platform
Cloud Source Repositories	Hosted Private Git Repos

DEVELOPER TOOLS (CONT.)

Cloud Scheduler	Managed cron job service
Cloud Tools for IntelliJ	IntelliJ GCP Tools
Cloud Tools for PowerShell	PowerShell GCP Tools
Cloud Tools for Visual Studio	Visual Studio GCP Tools
Cloud Tools for Eclipse	Eclipse GCP Tools
Container Registry	Private Container Registry/Storage
Gradle App Engine Plugin	Gradle App Engine Plugin
Maven App Engine Plugin	Maven App Engine Plugin

MIGRATION (TO GCP)

Google Transfer Appliance	Rentable Data Transport Box
Cloud Storage Transfer Service	Cloud to Cloud Transfers
BigQuery Data Transfer Service	Bulk Import Analytics Data
Velostrata	Lift-and-shift VM Migration

API PLATFORM AND ECOSYSTEMS

API Analytics	API Metrics
API Monetization	Monetize APIs
Apigee API Platform	Develop, secure, monitor APIs
Apigee Sense	API protection from attacks
Cloud Endpoints	Cloud API Gateway
Cloud Healthcare API	Healthcare System GCP Interoperability
Developer Portal	API Managment Portal
GCP Marketplace	Partner & Open Source Marketplace

GOOGLE MAPS PLATFORM

Directions API	Get Directions Between Locations
Distance Matrix API	Calculate Travel Times
Geocoding API	Convert Address to/from Coordinates
Geolocation API	Derive Location Without GPS
Maps Embed API	Web Embedded Maps
Maps JavaScript API	Dynamic Web Maps
Maps SDK for Android	Maps SDK for Android
Maps SDK for iOS	Maps SDK for iOS
Maps Static API	Web Static Maps
Maps Unity SDK	Unity SDK for Games
Maps URLs	URL Scheme for Maps
Places API	Metadata About Places (REST)
Places Library, Maps JS API	Metadata About Places (JavaScript)
Places SDK for Android	Places SDK for Android
Places SDK for iOS	Places SDK for iOS
Roads API	Metadata About Roads
Street View API	Street View API
Time Zone API	Convert Coordinates to Timezone

G SUITE PLATFORM

App Maker	Assistive App Building
Apps Script	Extend and Automate Everything
Editor Add-ons	Extend Docs, Sheets, Slides
Gmail Add-ons	Contextual Apps in Gmail
Hangouts Chat Bots	Conversational Bots in Chat
Calendar API	Create and Manage Calendars
Classroom API	Provision and Manage Classrooms
Drive API	Read and Write Files
Gmail API	Enhance Gmail and Inbox
Sheets API	Read and Write Spreadsheets
Slides API	Create and Edit Presentations
Drive Picker	Drive File Selection Widget
Admin SDK	Managed G Suite Resources
Email Markup	Interactive Email using Schema.org
G Suite Marketplace	Storefront for Integrated Applications
Other G Suite APIs/SDKs	Contacts, Google+, Tasks, Vault.

MOBILE PRODUCTS (FIREBASE)

Cloud Firestore	Document Store and Sync
Cloud Functions for Firebase	Event-driven Serverless Applications
Cloud Storage for Firebase	Object Storage and Serving
Crashlytics	Crash Reporting and Analytics
Firebase A/B Testing	Create A/B Test Experiments
Firebase App Indexing	App / Google Search Integration
Firebase Authentication	Drop-in Authentication
Firebase Cloud Messaging	Send Device Notifications
Firebase Dynamic Links	Link to App Content
Firebase Hosting	Web Hosting with CDN/SSL
Firebase In-App Messaging	Send Contextual Messages In-App
Firebase Performance Monitoring	App Performance Monitoring
Firebase Predictions	Predict User Targetting
Firebase Realtime Database	Real-time Data Synchronization
Firebase Remote Config	Remotely Configure Installed Apps
Firebase Test Lab	Mobile testing device farm
Google Analytics for Firebase	Mobile App Analytics
ML Kit for Firebase	ML APIs for Mobile

GCP FOUNDATIONAL OPEN SOURCE PROJECTS

Apache Beam	Batch/Streaming Data Processing
gRPC	RPC Framework
gVisor	Secure Container Runtime
Istio	Connect and Secure Services
Knative	Serverless framework for Kubernetes
Kubeflow	ML Toolkit for Kubernetes
Kubernetes	Management of containerized applications
OpenCensus	Cloud Native Observability Framework
TensorFlow	ML Framework

ADDITIONAL RESOURCES

Google Cloud Home Page	https://cloud.google.com
Google Cloud Blog	https://cloud.google.com/blog
GCP Medium Publication	https://medium.com/google-cloud
Apigee Blog	https://apigee.com/about/blog
Firebase Blog	https://firebase.googleblog.com
G Suite Developers Blog	https://gsuite-developers.googleblog.com
Google Cloud Certifications	https://cloud.google.com/certification
Google Cloud System Status	https://status.cloud.google.com
Google Cloud Training	https://cloud.google.com/training
Google Developers Blog	https://developers.googleblog.com
Google Maps Platform Blog	https://mapsplatform.googleblog.com
Google Open Source Blog	https://opensource.googleblog.com
Google Security Blog	https://security.googleblog.com
Kaggle Home Page	https://www.kaggle.com
Kubernetes Blog	https://kubernetes.io/blog
Regions and Network Map	https://cloud.google.com/about/locations

https://raw.githubusercontent.com/gregsramblings/google-cloud-4-words/master/Poster-medres.png

BIO

Emily Nikoo is an innovative product leader in technology, focused on customer success and user experience. Her journey began in the space program designing communications systems, and led to cable television, media & entertainment (most recently at Comcast Business as a Director of Portfolio Management).

She formed The Nikoo Group to help people tackle technology issues in all facets. Most particularly she works with nonprofit organizations supporting patients & caregivers who are facing health crises.

Believing everyone can benefit and enjoy the power of technology, Emily drives STEM initiatives in both K-12 and University settings, as well as socializing seniors in tech.

Emily earned her Bachelor of Science in Electrical Engineering from Purdue University with an emphasis in communications systems, and her Masters of Electrical Engineering at the University of Houston while working in conjunction with Johnson Space Center's manned flight program.

3 things you might not know about me-
- I am an avid traveler, photographer and foodie with 250,000 TripAdvisor Readers
- I've been in a real Space Shuttle (on the ground) and watched IMAX Blue Planet raw footage with the astronauts who filmed it
- I'm a kick ass patient advocate and caregiver