IT'S A JUNGLE OUT THERE

AMAZON WEB SERVICES (AWS) OVERVIEW

“IF YOU NEVER WANT TO BE CRITICIZED, FOR GOODNESS’ SAKE DON’T DO ANYTHING NEW.”

Jeff Bezos

WHAT IS "CLOUD" COMPUTING?

- The on-demand delivery of IT resources and applications via the Internet with pay-as-you-go pricing.
- Six advantages of cloud computing:

    1. Trade capital expense for variable expense
    2. Benefit from massive economies of scale
    3. Stop guessing capacity
    4. Increase speed and agility
    5. Stop spending $ running and maintaining data centers
    6. Go global

- Bottom line: Provision what you need, pay as you go, and let someone else worry about the infrastructure.

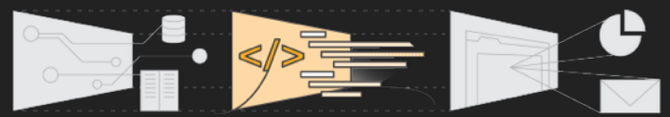
SCALABLE > ON-DEMAND > LOW-COST

TYPES OF CLOUD COMPUTING

- Infrastructure as a Service (IaaS):

contains the basic building blocks for cloud IT and typically provide access to networking features, computers (virtual or on dedicated hardware), and data storage space.

- Platform as a Service (PaaS):



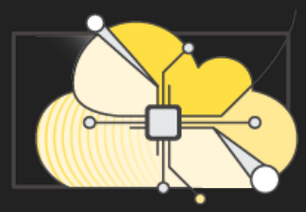
remove the need for organizations to manage the underlying infrastructure (usually hardware and operating systems) and allow you to focus on the deployment and management of your applications.

- Software as a Service (SaaS):

provides you with a completed product that is run and managed by the service provider. In most cases, people referring to Software as a Service are referring to end-user applications. With a SaaS offering you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use that particular piece software.

TYPES OF CLOUD COMPUTING DEPLOYMENT MODELS

- CLOUD:



A cloud-based application is fully deployed in the cloud and all parts of the application run in the cloud.

- HYBRID:

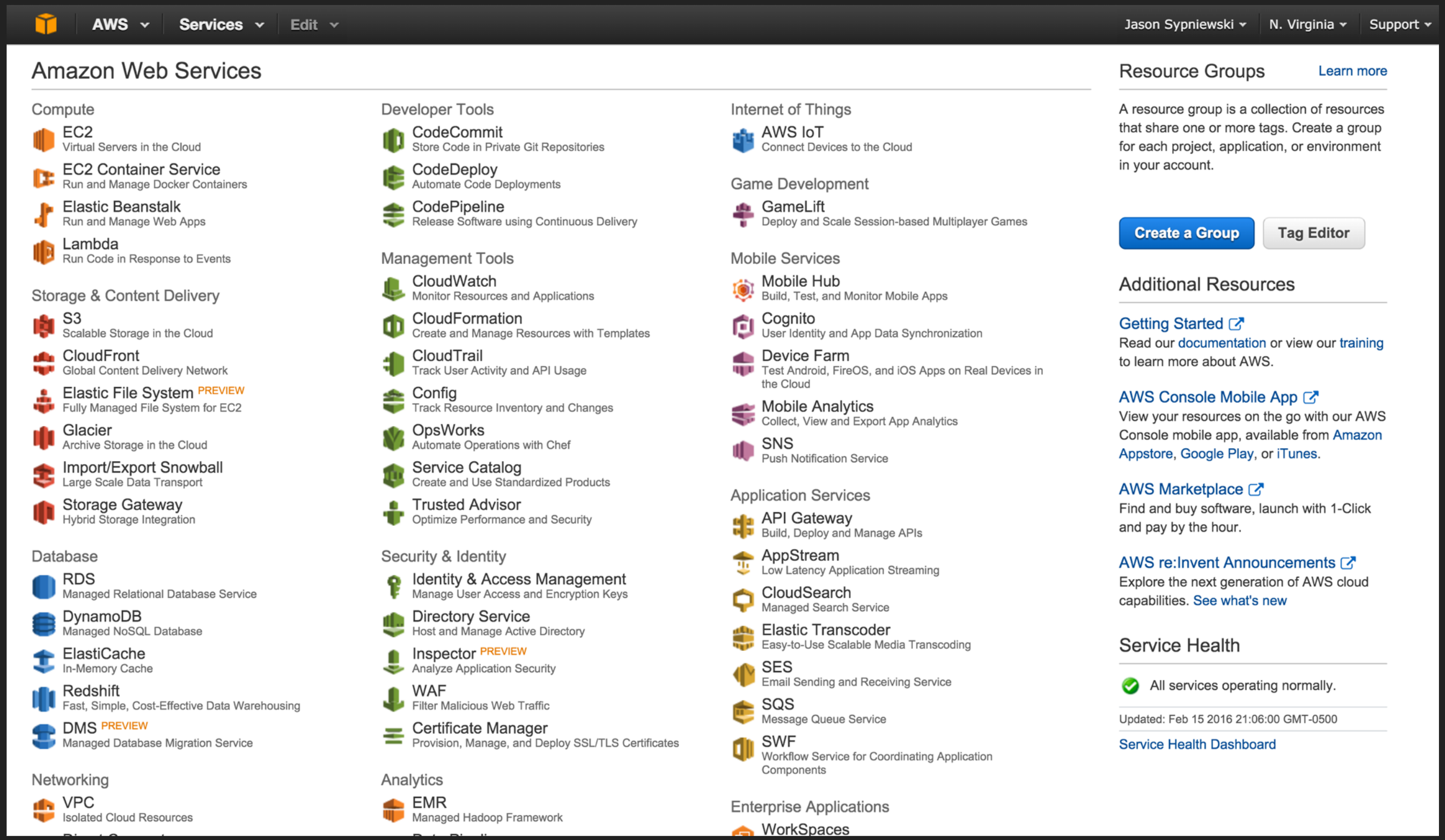
A hybrid deployment is a way to connect infrastructure and applications between cloud-based resources and existing resources that are not located in the cloud (i.e. existing on-premises infrastructure).

- ON-PREMISES:

Deploying resources on-premises, using virtualization and resource management tools, is sometimes called "private cloud".

Gartner Magic Quadrant for IaaS Worldwide

WHAT IS ALL THIS SH….STUFF!?!



AWS Management Console

BROAD & DEEP CORE CLOUD INFRASTRUCTURE SERVICES

Compute

- Virtual Servers
- Containers
- 1-Click Web App Deployment
- Event-Driven Compute Functions
- Auto Scaling
- Load Balancing

Storage & Content Delivery

- Object Storage
- CDN
- Block Storage
- File System Storage
- Archive Storage
- Data Transport
- Integrated Storage

Database

- Relational
- Database Migration
- NoSQL
- Caching
- Data Warehouse

Networking

- Virtual Private Cloud
- Direct Connections
- Load Balancing
- DNS

PROVISION HARDWARE > ENABLE STORAGE > ACCESS DATA > CONNECT RESOURCES

RICH PLATFORM SERVICES

Analytics

- Hadoop
- Data Pipelines
- Elasticsearch
- Streaming Data
- Machine Learning
- Business Intelligence
- Data Warehouse

Enterprise Applications

- Desktop Virtualization
- Email & Calendaring
- Document Sharing & Feedback

Mobile Services

- Mobile Development
- API Management
- Identity
- App Testing
- Mobile Analytics
- Development
- Notifications

Internet of Things

- IoT Platform
- Device SDK
- Registry
- Device Shadows
- Rules Engine

INCREASE PRODUCTIVITY AND EFFICIENCY

Developer Tools

Source Code Management

Code Deployment

Continuous Delivery

Management Tools

Monitoring & Logs

Resource Templates

Usage & Resource Auditing

Dev/Ops Resource Management

Service Catalog

Performance Optimization

Security & Identity

Access Control

SSL/TLS Certificates

Key Storage & Management

Identity Management

Security Assessment

Web Application Firewall

Application Services

API Management

App Streaming

Search

Transcoding

Email

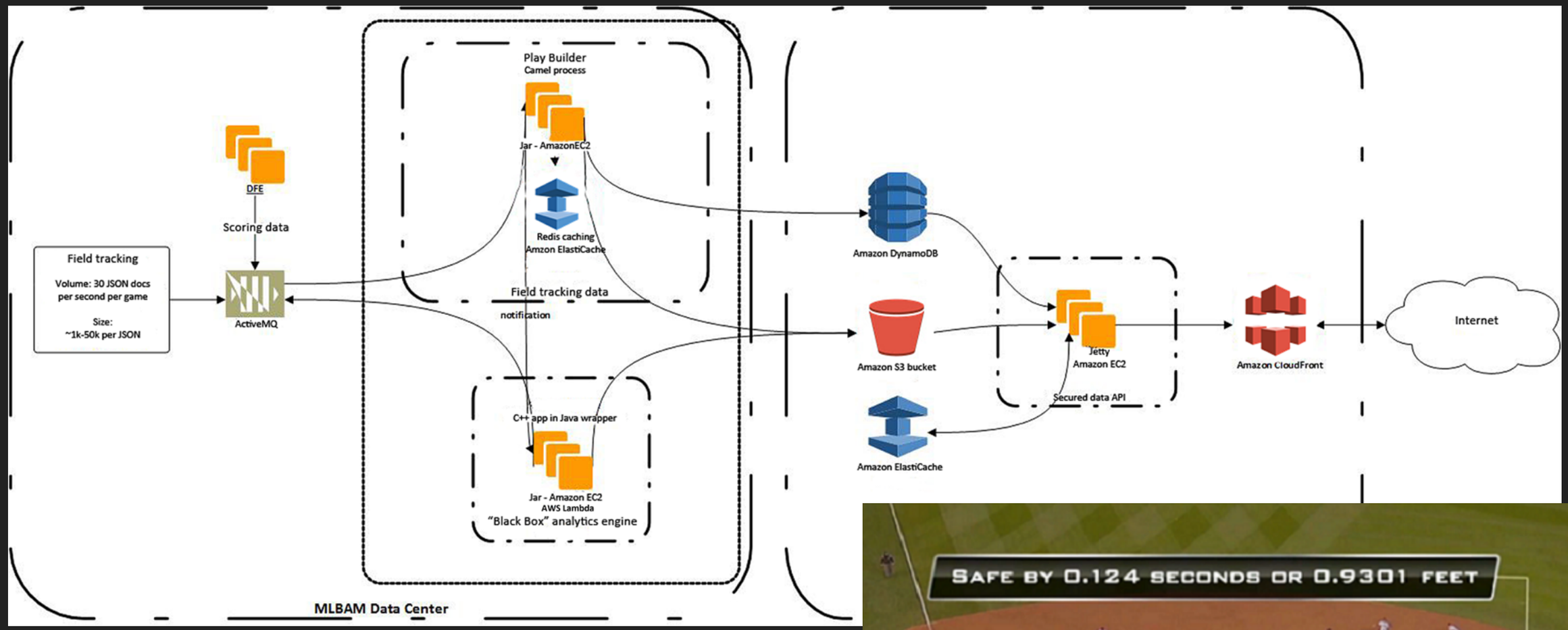
Notifications

Queueing

Workflow

CONFIGURATION & RESOURCE MANAGEMENT > SECURITY > APPLICATION SERVICES

CASE STUDY: MLB ADVANCED MEDIA – STATCAST



"…MLBAM anticipates that an average of 7 TB of data will be generated per game. With 2,430 games in a season, that's about 17 petabytes of data each season."

https://aws.amazon.com/solutions/case-studies/major-league-baseball-mlbam/

AMAZON SDK FOR PYTHON

- Boto3
  - makes it easy to integrate your Python application, library, or script with AWS services including Amazon S3, Amazon EC2, Amazon DynamoDB, and more.
  - https://github.com/boto/boto3

AMAZON LUMBERYARD

lumberyard beta

- A free, cross-platform AAA game engine deeply integrated with AWS and Twitch – with full source code provided.
- Available today in beta for developers building PC and console games. Mobile and VR platforms coming soon.

RESOURCES

- Instructional Videos and Labs:
  - https://aws.amazon.com/training/intro_series/
- Classes and Workshops:
  - https://aws.amazon.com/training/course-descriptions/
- AWS Certifications:
  - https://aws.amazon.com/certification/
- YouTube Tutorial Series:
  - https://www.youtube.com/user/awstutorialseries


"DON'T JUMP. IT'S NOT THAT COMPLICATED. JUST GIVE AMAZON YOUR CREDIT CARD NUMBER, SIGN IN, AND THEN GO UPDATE YOUR SKILLS ON LINKEDIN."