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INNOVATE FASTER WITH RED HAT AND AWS

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AWS IN NUMBERS

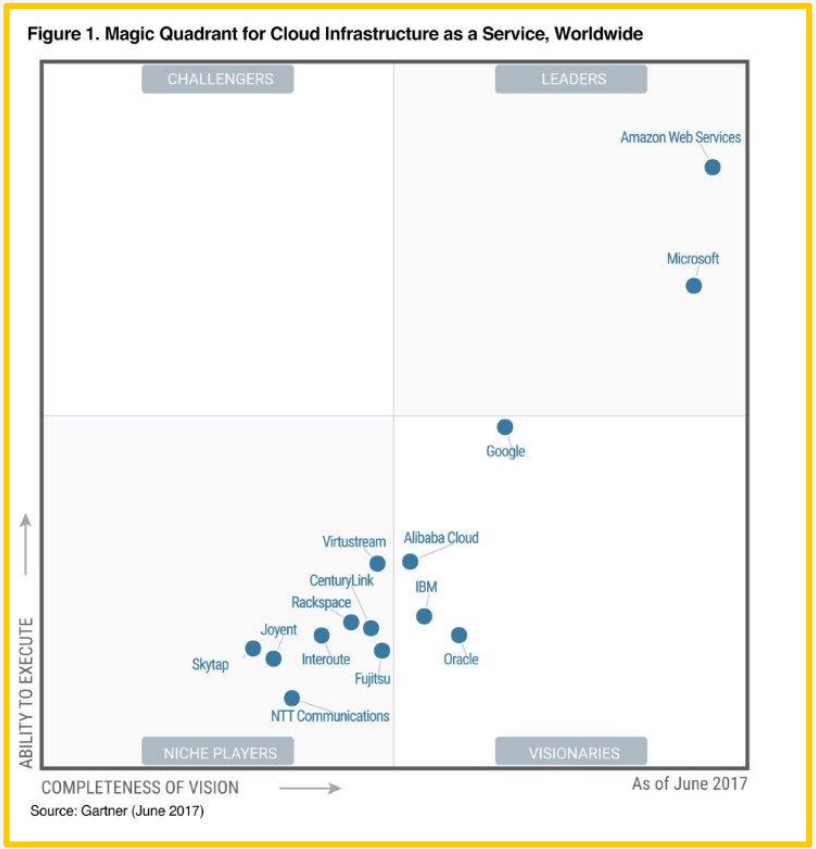
- Millions of active customers every month.

- AWS is now a $20+ billion run rate business.

- Fastest enterprise IT vendor to reach a $10 billion run-rate.

Gartner Magic Quadrant for Cloud Infrastructure as a Service, Worldwide*

AWS is positioned
highest in execution
and
furthest in vision
within the Leaders
Quadrant



*Gartner, Magic Quadrant for Cloud Infrastructure as a Service, Worldwide, Leong, Lydia, Petri, Gregor, Gill, Bob, Dorosh, Mike, August 32016

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6 REASONS BEHIND RAPID GROWTH

Stop running and maintaining data centers

Trade capital expense for variable expense

Benefit from massive economies of scale

Stop guessing capacity

Increase speed and agility

Go global in minutes

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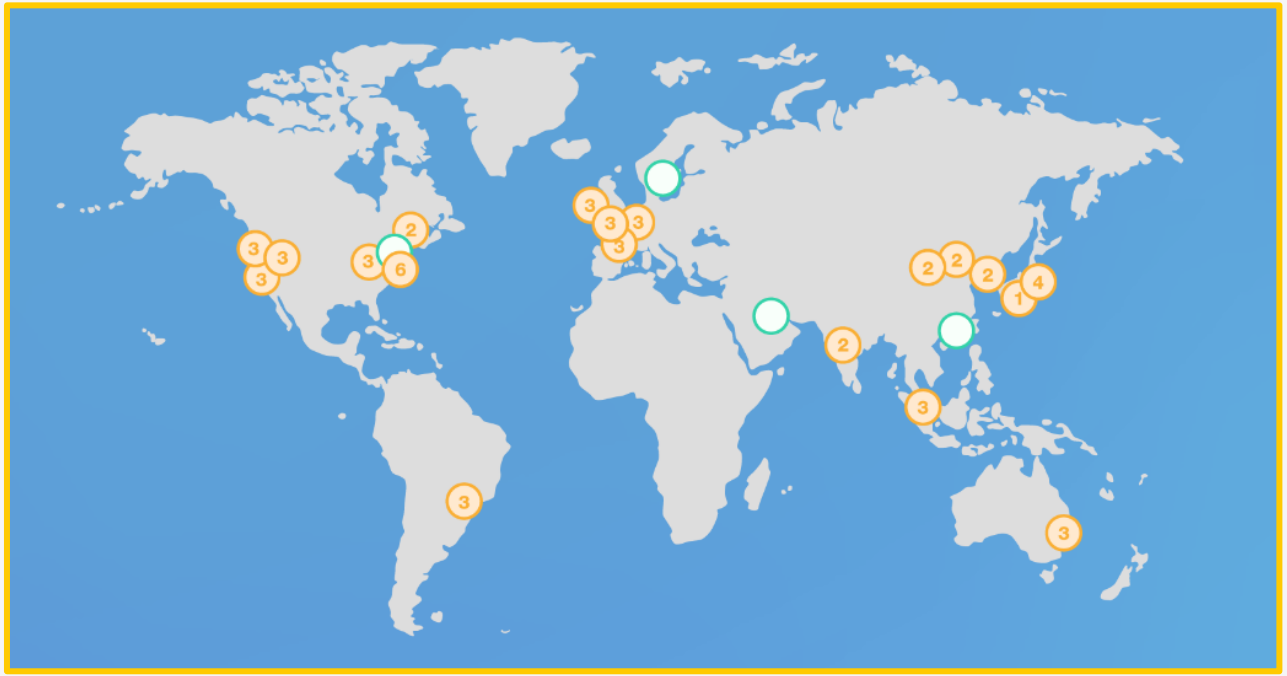
AWS GLOBAL INFRASTRUCTURE

18 regions (A Region is a physical location in the world where we have multiple Availability Zones.)

55 availability zones (Availability Zones consist of one or more discrete data centers, each with redundant power, networking and connectivity, housed in separate facilities.)



AWS ENTERPRISE CUSTOMERS

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RED HAT and AWS

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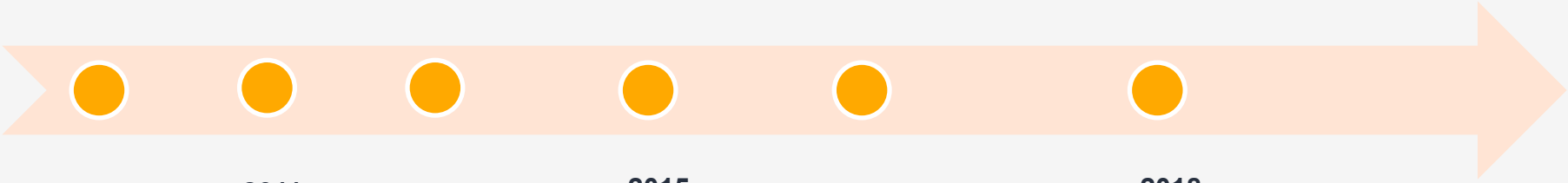
AWS + Red Hat Solutions



2008
Red Hat Enterprise Linux on AWS

2011
Red Hat Enterprise Linux available on-demand through AWS

2012
JBOSS on AWS

2015
Red Hat Enterprise Linux for SAP HANA on AWS

Red Hat Ansible on AWS

2017
Red Hat OpenShift packaged with AWS services through Service Broker

2018
Red Hat Enterprise Linux for SAP available on demand

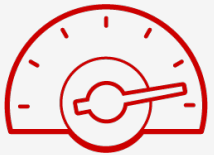
Better Together

Red Hat and AWS are collaborating to provide a complete, **enterprise-class computing environment** that is both simple and scalable for our customers

Cross-infrastructure consistency and availability

Unified experience in hybrid environments

Enterprise grade support



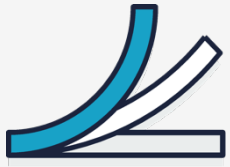
Reliable, scalable infrastructure

6D'S DISRUPTION

1. Digitized
2. Deceptive
3. Disruptive
4. Dematerialize
5. Demonetize
6. Democratize

Industry Shifts

Elasticity



Agility

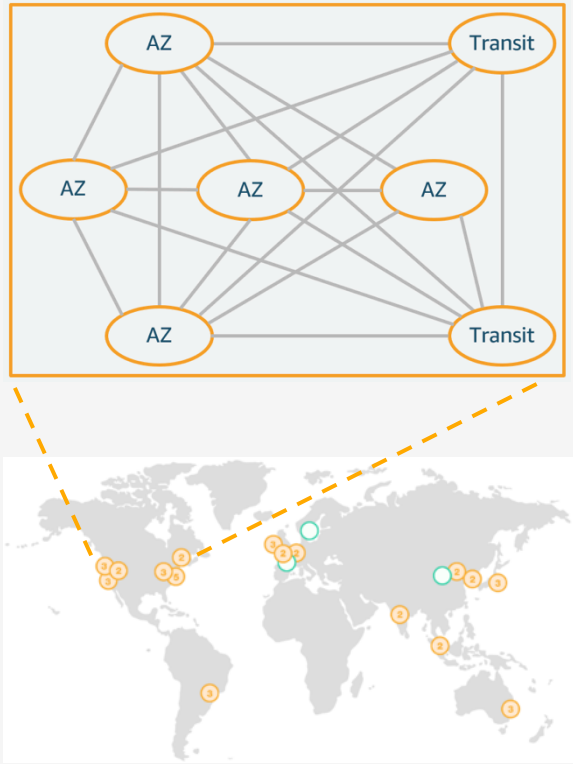
Availability

Availability

In information **technology**, high **availability** refers to a system or component that is continuously operational for a desirably long length of time. **Availability** can be measured relative to "100% operational" or "never failing."

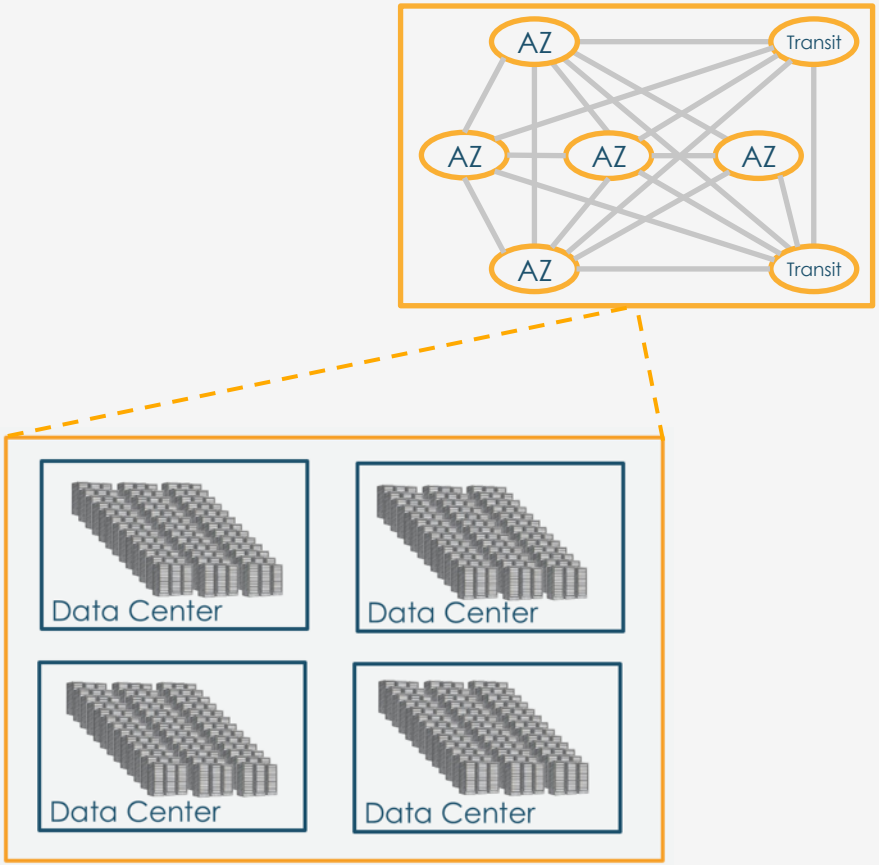
AWS regions

- Mesh of Availability Zones (AZs) and Transit Centers
- Redundant paths to transit centers
- Transit centers connect to:
  - Private links to other AWS regions
  - Private links to customers
  - Internet through peering & paid transit
- AZs <2ms apart & usually <1ms



AWS availability zones

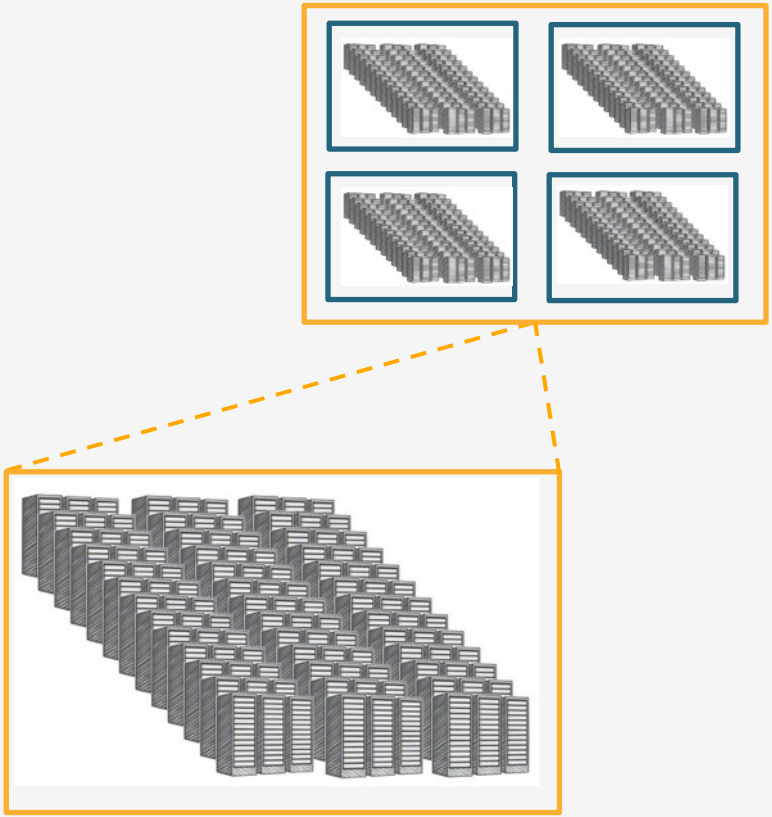
- Regional cluster of discrete DCs
- Separate redundant power, networking, connectivity and facility
- All regions have 2 or more AZs
- Each AZ is 1 or more DC
  - No data center is in two AZs
  - Some AZs have as many as 6 DCs
- DCs in AZ less than ¼ ms apart



AWS data centers

Single DC typically over 50,000 servers & often over 80,000

Larger DCs undesirable to reduce blast radius



Native Services For Availability

Amazon VPC

Amazon CloudFront

AWS Shield

AWS WAF

AWS CloudTrail

Elastic Load Balancing

Amazon CloudWatch

Amazon EC2 Systems Manager

Amazon Route 53

Auto Scaling

Elasticity

Elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible".

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Native Services For Elasticity

Amazon SNS

Amazon DynamoDB

Amazon VPC

Amazon CloudFront

Auto Scaling

Amazon EC2

Amazon SES

Amazon SQS

Amazon S3

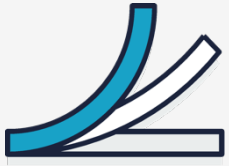
Elastic Load Balancing

Amazon CloudWatch

Amazon Route 53

Amazon Athena

AWS Lambda



Agility

Technical **agility** is the ability to quickly and smoothly adapt to or integrate current technologies with newer, different, disruptive, expansive or convergent technologies.

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What does this mean to you?

Integration into AWS services

Global Footprint

Security

Partner Ecosystem

Featured solutions

RED HAT® ENTERPRISE LINUX®

RHEL on Amazon EC2 allow customers to build and test enterprise applications on AWS and in their on-premises datacenters. Red Hat maintains the base RHEL images for Amazon EC2. AWS customers receive updates at the same time that updates are made available from Red Hat, so computing environment remains reliable and secure and RHEL-certified apps maintain supportability.

RED HAT® OPENSHIFT

Red Hat OpenShift is a container platform that gives development and IT operations teams the ability to accelerate application delivery with the speed and consistency that business demand. Enterprise customers can build new applications or refactor existing applications using a micro-services architecture through containers.

RED HAT® CLOUDFORMS

Red Hat CloudForms on AWS helps IT operations teams enhance the visibility and control they need to utilize AWS services in a secure and responsible way. CloudForms' self-service catalog, combined with automated discovery and full life-cycle management, ensures cloud deployments are standardized, and compliant with policy, while not being "in the way" of developers.

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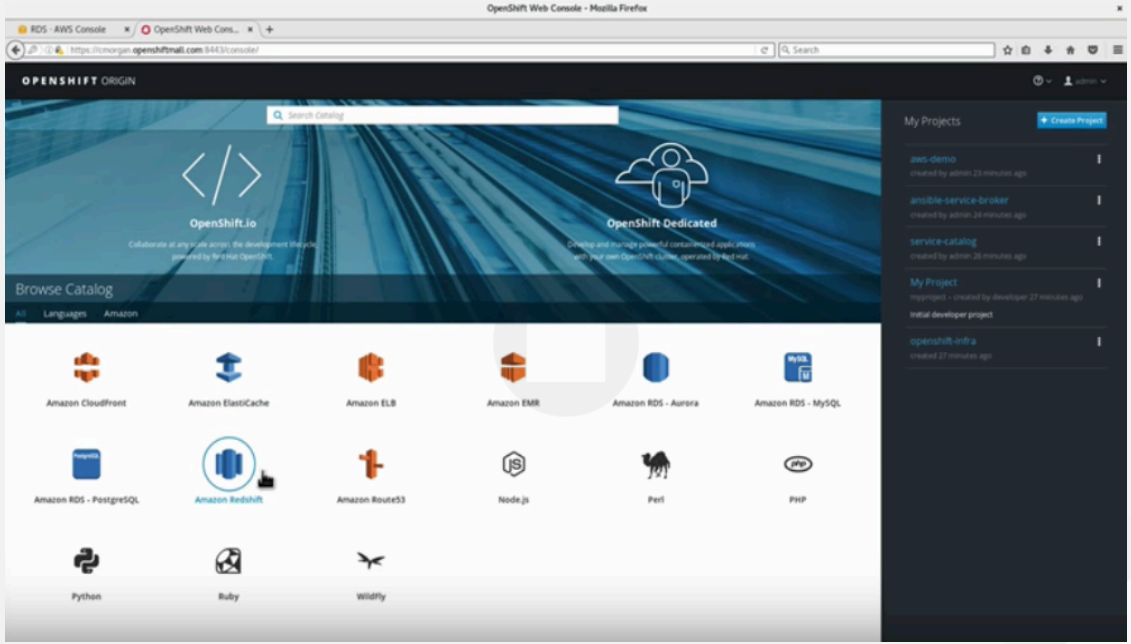
Integration with AWS Open Service Broker API

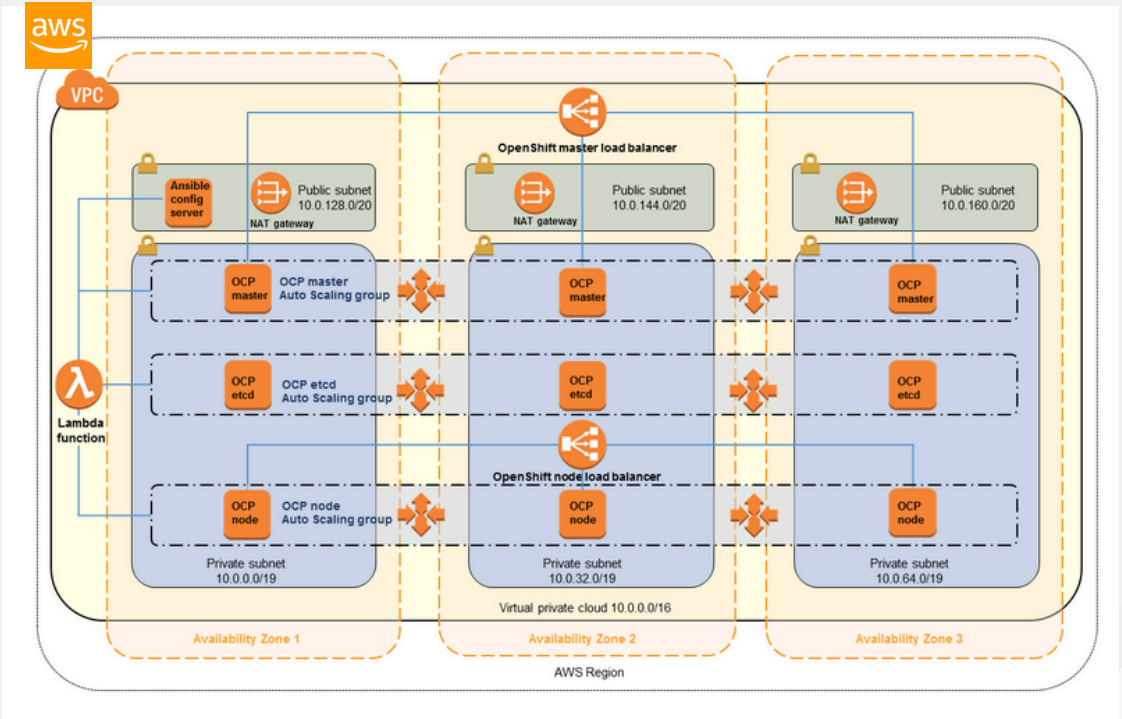
Red Hat OpenShift customers can seamlessly configure, deploy, and scale AWS services like Amazon RDS, Amazon Aurora, Amazon Athena, Amazon Route 53, and AWS Elastic Load Balancing directly within the Red Hat OpenShift console.



Deploying Red Hat OpenShift on AWS

A Quick Start is available that will configure a VPC that spans three Availability Zones with private and public subnets in each zone as well as deploying Master, Infrastructure, and Application OCP nodes in each Availability Zone.

https://aws.amazon.com/quickstart/architecture/openshift/



Customer Success

Owned and operated by Schiphol Group, Amsterdam Airport Schiphol is Europe's fourth-largest airport in terms of passenger number, number four in air transport movements, and ranks third in terms of cargo volume.

CHALLENGE
Improve its passenger experience and become the best digital airport.

SOLUTION
Amsterdam Airport Schiphol migrated several of its IT systems to the cloud to become more flexible, secure, and efficient. To do this, they quickly deployed Red Hat OpenShift Container Platform to run on Amazon Web Services (AWS) public cloud environment.

RESULTS
Launched a new cloud platform in 10 days and cut development time for new services and APIs by 50%.

Source: Red Hat case study, Amsterdam Airport Schiphol builds agile cloud with Red Hat, August 2017.

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Merci

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