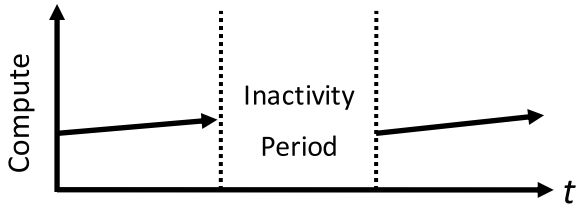
AWS and PostgreSQL

Štěpán Bechynský
Cloud and Web Services Senior Specialist
MSD IT Global Innovation Center @ Prague
@stepanb

Basics of cloud computing

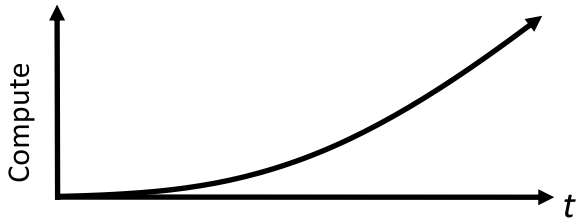
CLOUD

Cloud Computing Patterns



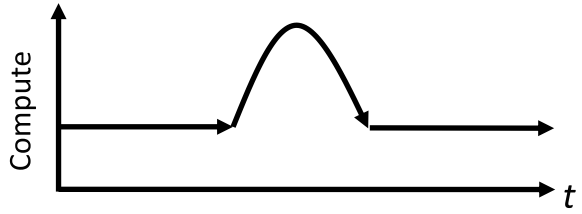
On and Off

On & off workloads (e.g. batch job)
Over provisioned capacity is wasted
Time to market can be cumbersome



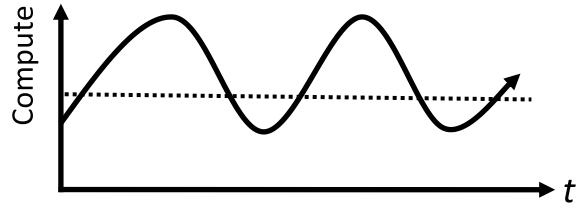
Growing Fast

Successful services needs to grow/scale
Keeping up w/ growth is big IT challenge
Cannot provision hardware fast enough



Unpredictable Bursting

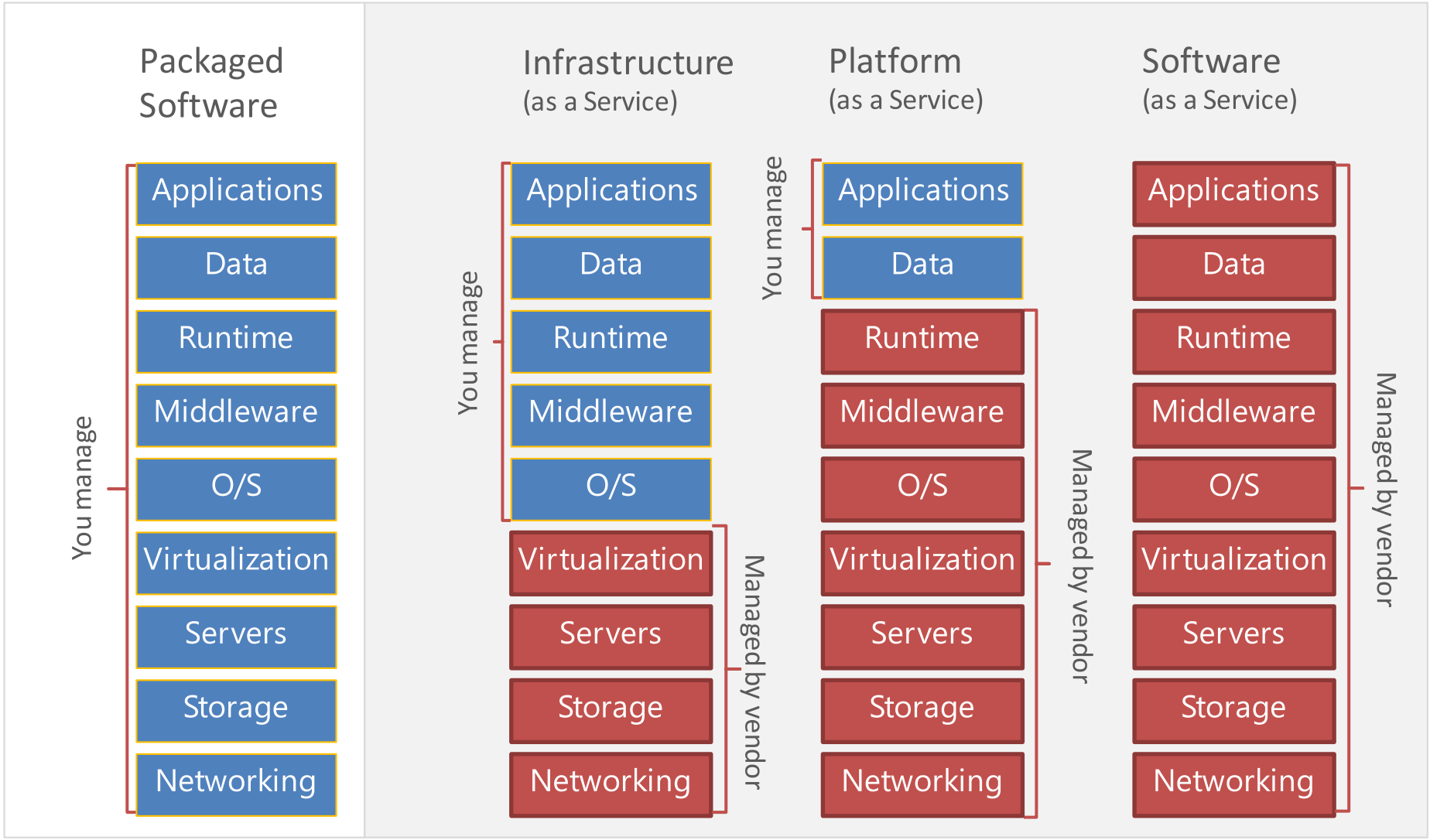
Unexpected/unplanned peak in demand
Sudden spike impacts performance
Can't over provision for extreme cases



Predictable Bursting

Services with micro seasonality trends
Peaks due to periodic increased demand
IT complexity and wasted capacity

Cloud Computing Variants



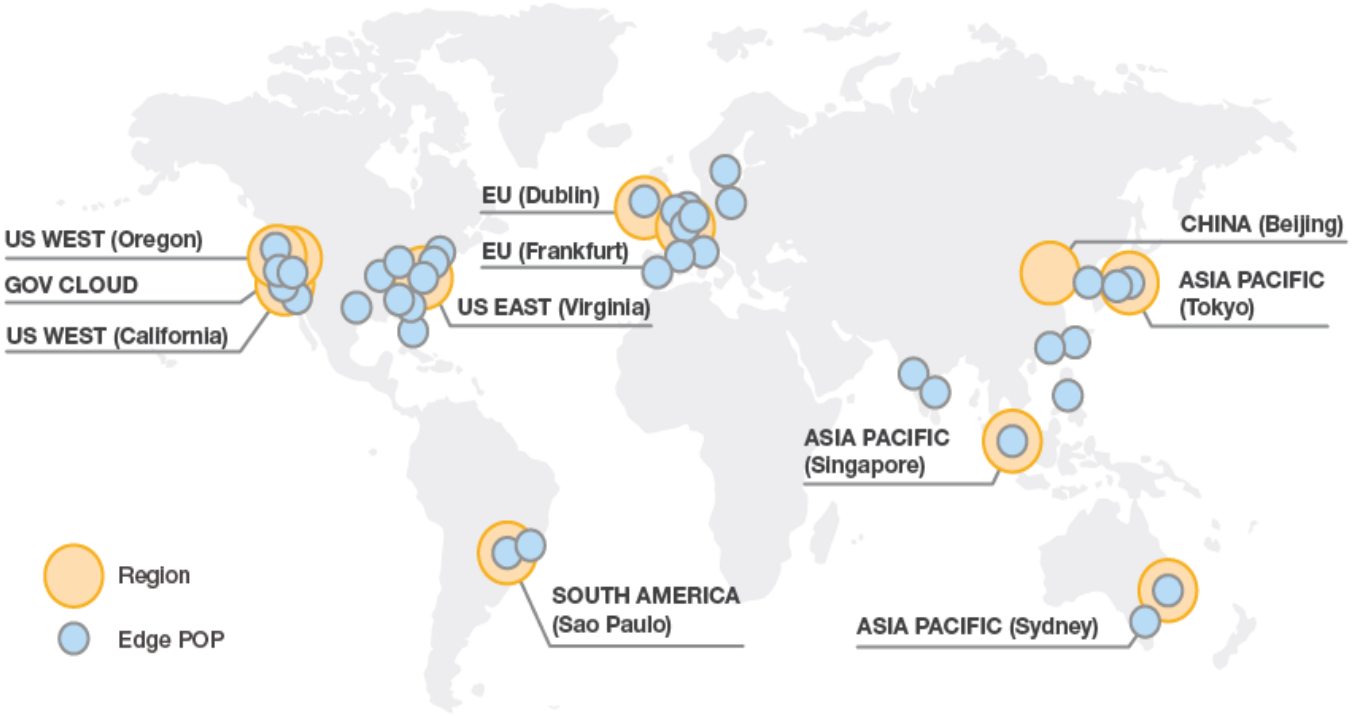
Database as Platform

- You maintain just database and security
- Automatic backups
- You have limited access to database server
- You have no access to operating system

Amazon Web Services

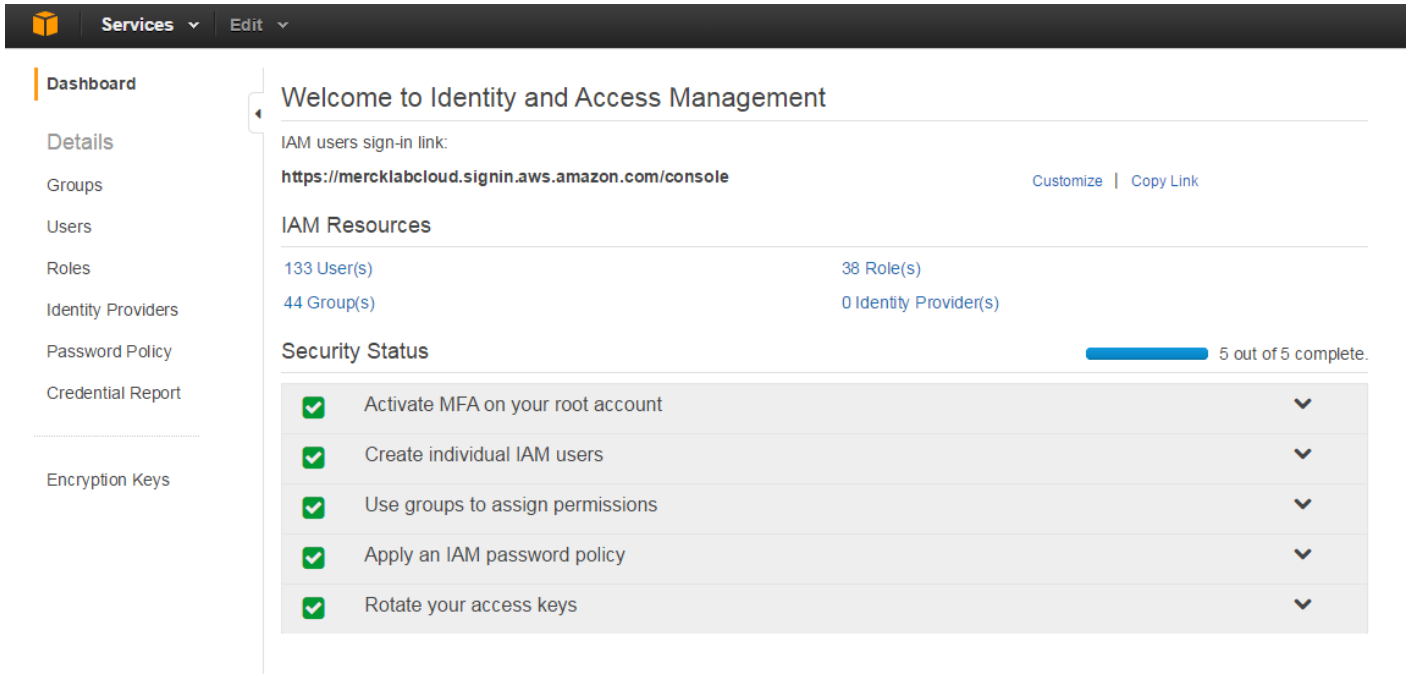
AWS

Regions and availibility zones



Identity and Access Management

- Main security tool
- IAM controls who can do what in your account
- Manage access to AWS



Identity and Access Management

DEMO

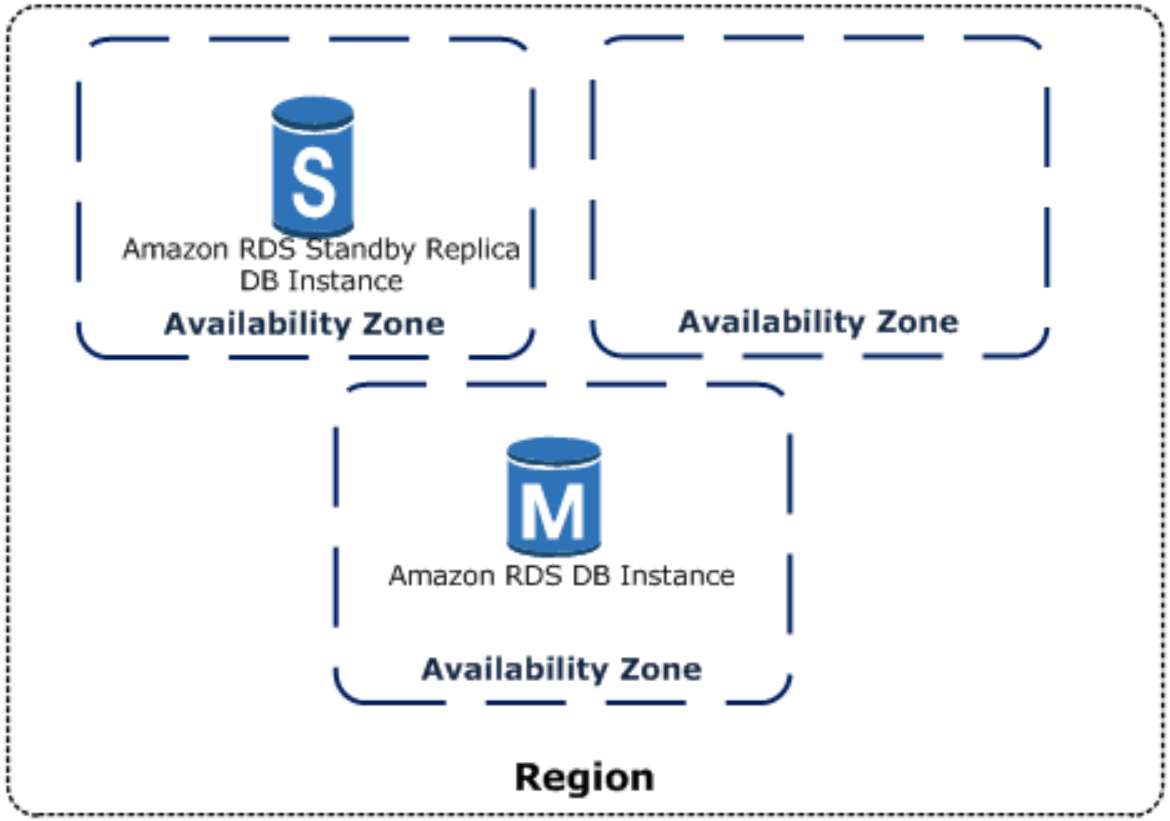
Amazon RDS

- Database as Platform
- Supports
  - Aurora
  - MS SQL
  - MySQL
  - ORACLE
  - PostgreSQL

PostgreSQL

- 9.3.3, 9.3.5
- Data encrypting
- Read replicas (standby)
- Monitoring
- Alternative – run database on EC2 instance

Availability



Run PostgreSQL using Management Console

DEMO

Security groups

- Firewall
- Internal (inside data center) rules
- External (internet) rules

Security groups

DEMO

Amazon SDK and Tools

- Automation scripts
- SDK supports different programming languages
- Security
  - EC2 instances roles
  - Keys

Create snapshot using AWS Cli

DEMO

Some questions?

Q & A