ELASTIC COMPUTE CLOUD (EC2)

AGENDA

- What is AMAZON EC2
- Amazon Elastic computing
- Common Use cases
- Use case of EC2 by Wall street Example
- EC2 Features

WHAT IS AMAZON EC2

- Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing

- Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage.

- Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

WHAT IS AMAZON EC2

Amazon Elastic Compute Cloud

- Amazon EC2 = Virtual Machine
- Amazon EC2: on-demand compute power
  - Obtain and boot new server instances in minutes
  - Quickly scale capacity up or down
  - Servers from $0.02 (2 cents) per hour
  - On Demand, Reserved, and Spot Pricing

- Key features:
  - Support for Windows, Linux, FreeBSD, and OpenSolaris
  - Supports all major web and application platforms
  - Deploy across Availability Zones for reliability
 - monitors status and usage

EC2 USE CASES

Common Use Cases

- Web site hosting
- Application hosting/SaaS hosting
- Mobile and Social Applications
- Internal IT application hosting
- Content delivery and media distribution
- High performance computing, batch data processing, and large scale analytics
- Storage, backup, and disaster recovery
- Development and test environments

EXAMPLE UASGE
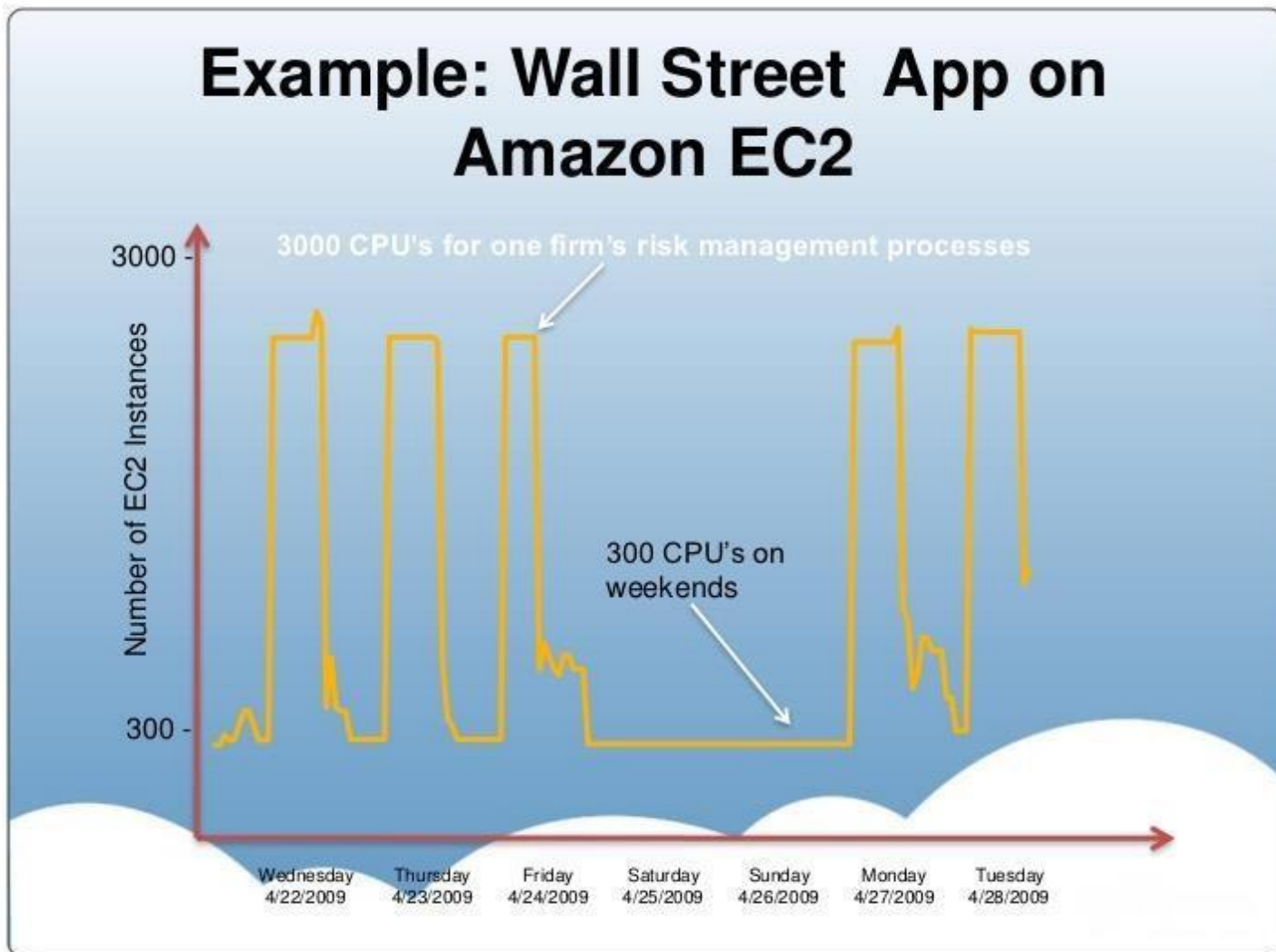
Features of Amazon EC2

- Virtual computing environments, known as *instances*
- Preconfigured templates for your instances, known as *Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software)*
- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as *instance types*
- Secure login information for your instances using *key pairs (AWS stores the public key, and you store the private key in a secure place)*

Features of Amazon EC2

- Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as *instance store volumes, Persistent storage volumes for your data using Elastic Block Store, known as Amazon EBS volumes*

- Multiple physical locations for your resources, such as instances and Amazon EBS volumes, known as *regions and Availability Zones*

- A firewall that enables you to specify the protocols, ports, and source IP ranges that can reach your instances using *security groups*

- Static IPv4 addresses for dynamic cloud computing, known as *Elastic IP addresses*