BioSense Webinar

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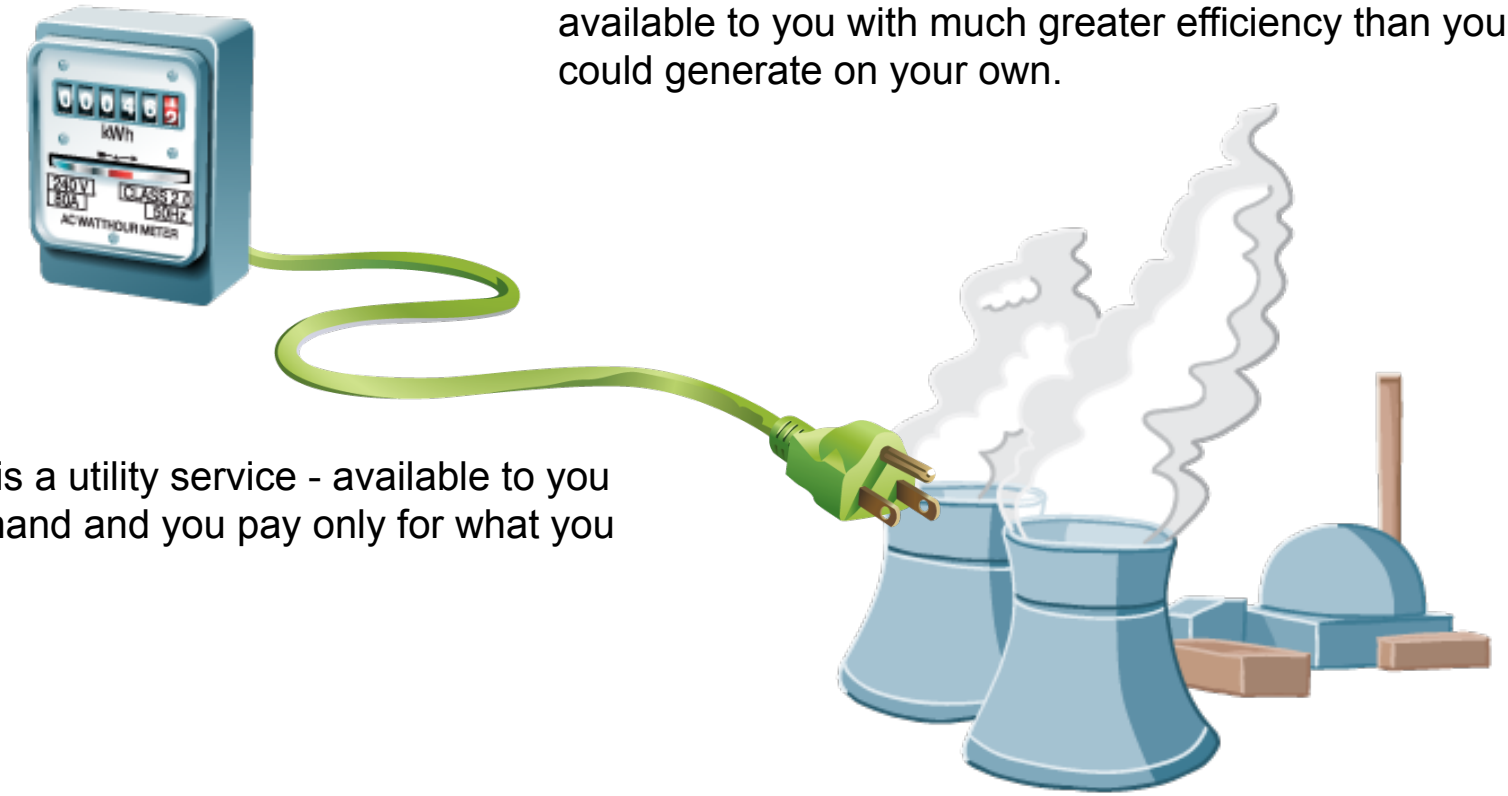
What is Cloud Computing?

An analogy: think of electricity services…

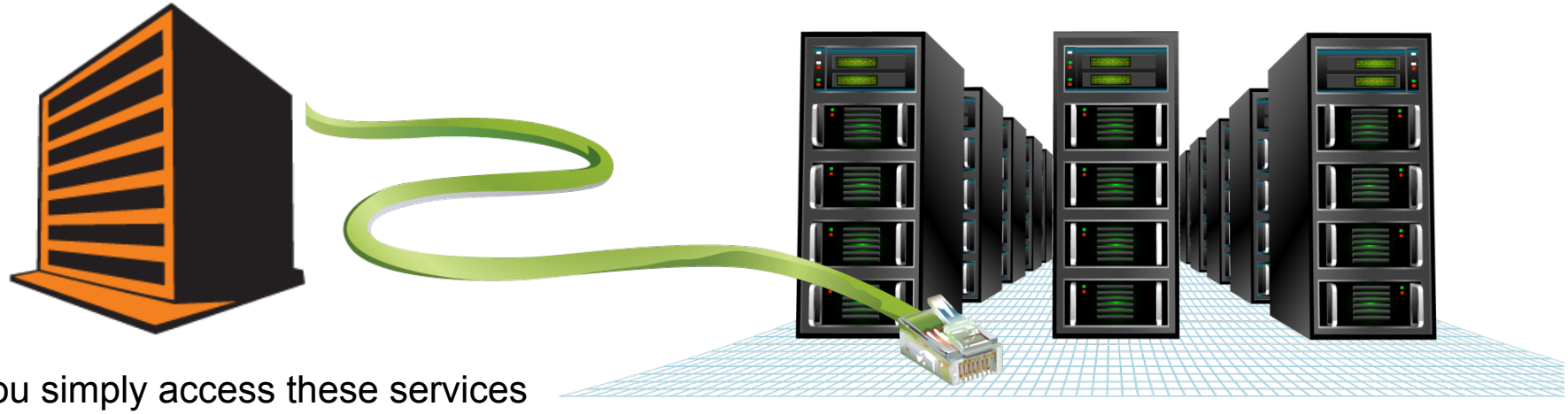
You simply plug into a vast electrical grid managed by experts to get a low cost, reliable power supply – available to you with much greater efficiency than you could generate on your own.



Power is a utility service - available to you on-demand and you pay only for what you use.

What is Cloud Computing?

Cloud Computing is also a utility service - giving you access to technology resources managed by experts and available on-demand.



You simply access these services over the internet, with no up-front costs and you pay only for the resources you use.

Attributes of Cloud Computing

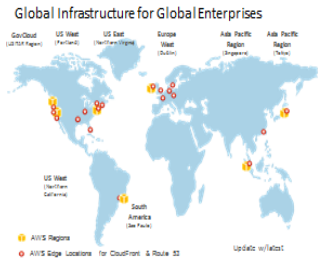
Scalable

Secure

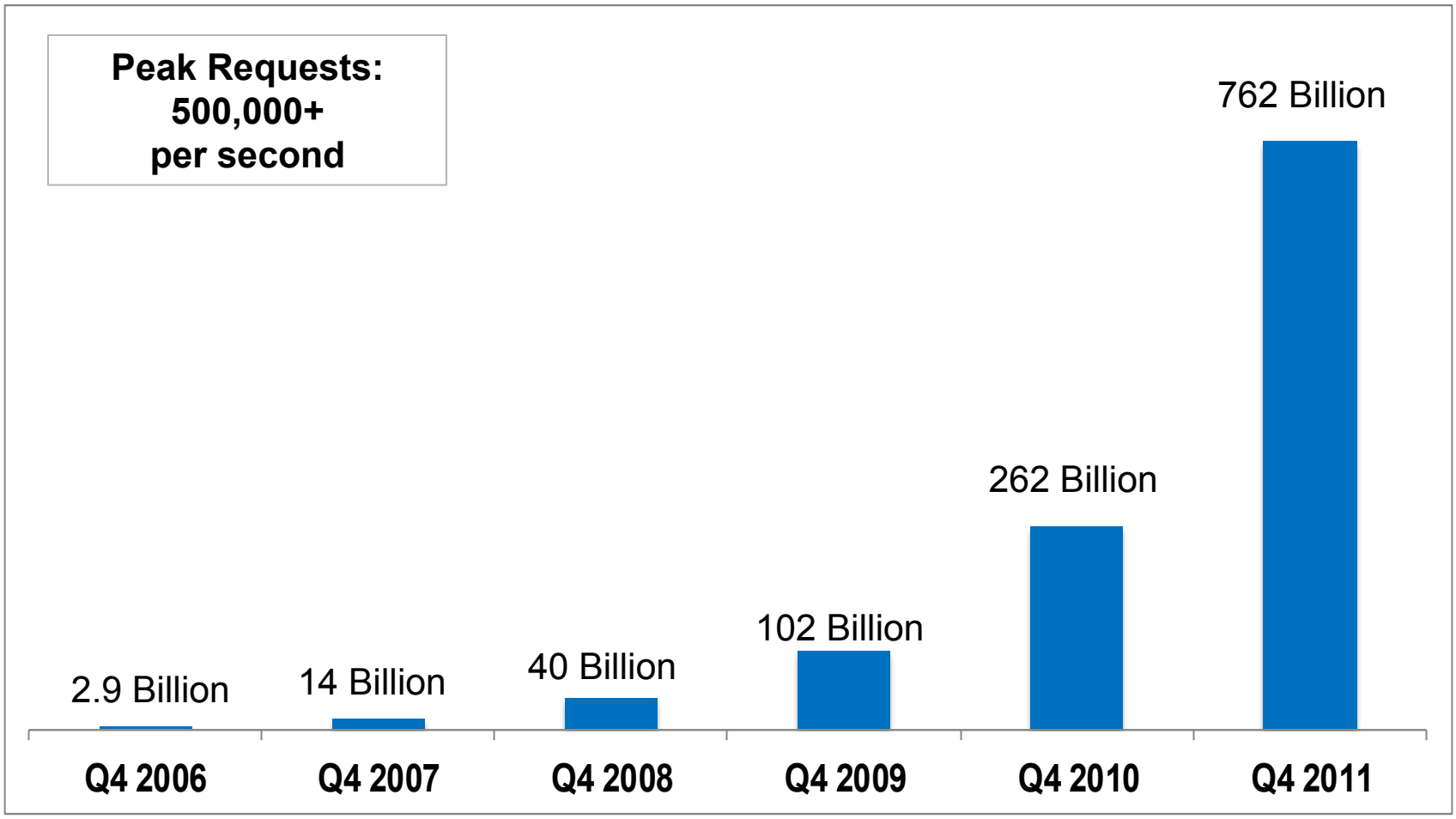
Distributed

Flexible

Programmable



The Cloud Scales: Amazon S3 Growth



Total Number of Objects Stored in Amazon S3

The Cloud Meets Enterprise Security Standards

Certifications

- SOC 1 Type 2 (formerly SAS-70)
- ISO 27001
- PCI DSS for EC2, S3, EBS, VPC, RDS, ELB, IAM
- FISMA Moderate Compliant Controls
- HIPAA & ITAR Compliant Architecture

Physical Security

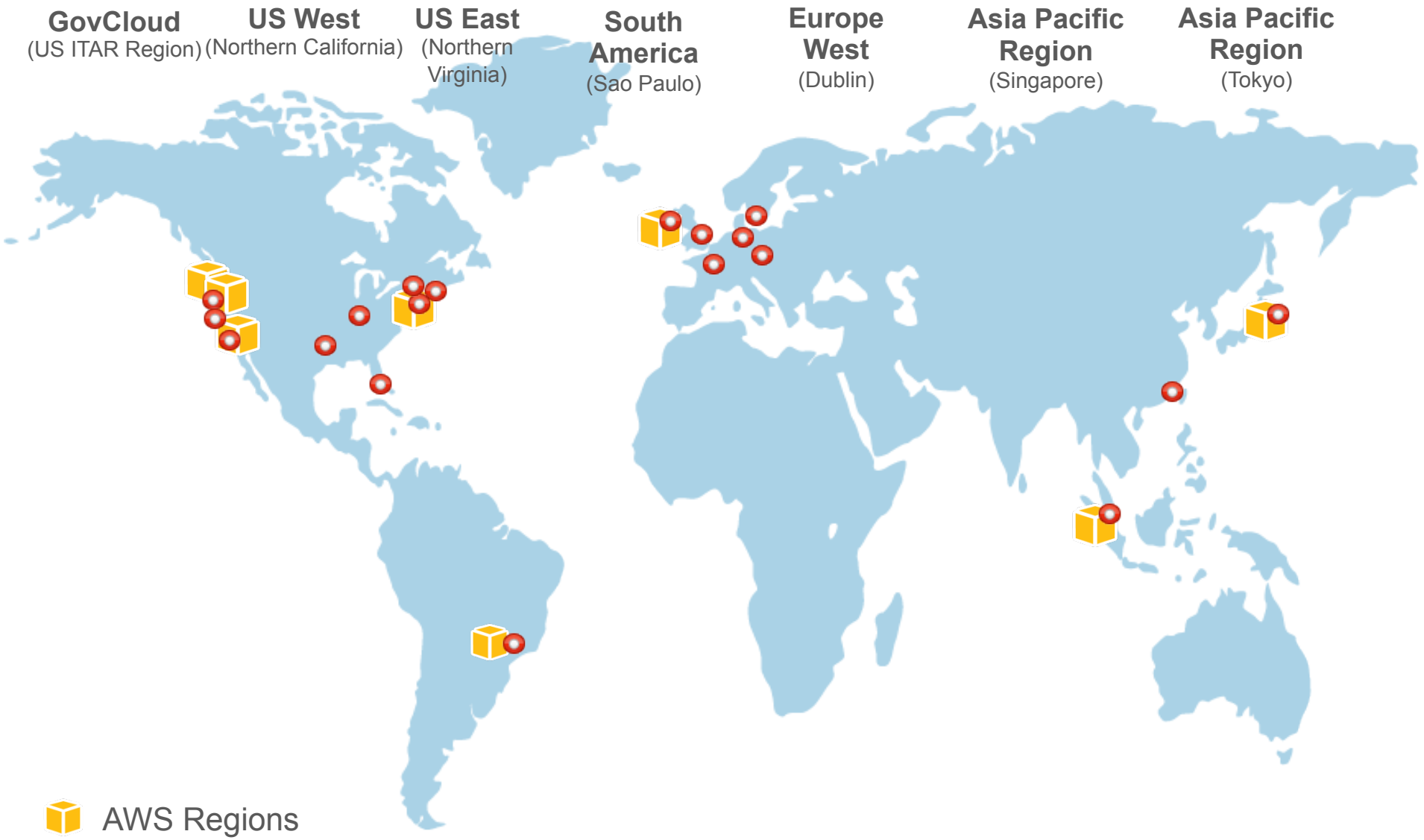
- Datacenters in nondescript facilities
- Physical access strictly controlled
- Must pass two-factor authentication at least twice for floor access
- Physical access logged and audited

HW, SW, Network

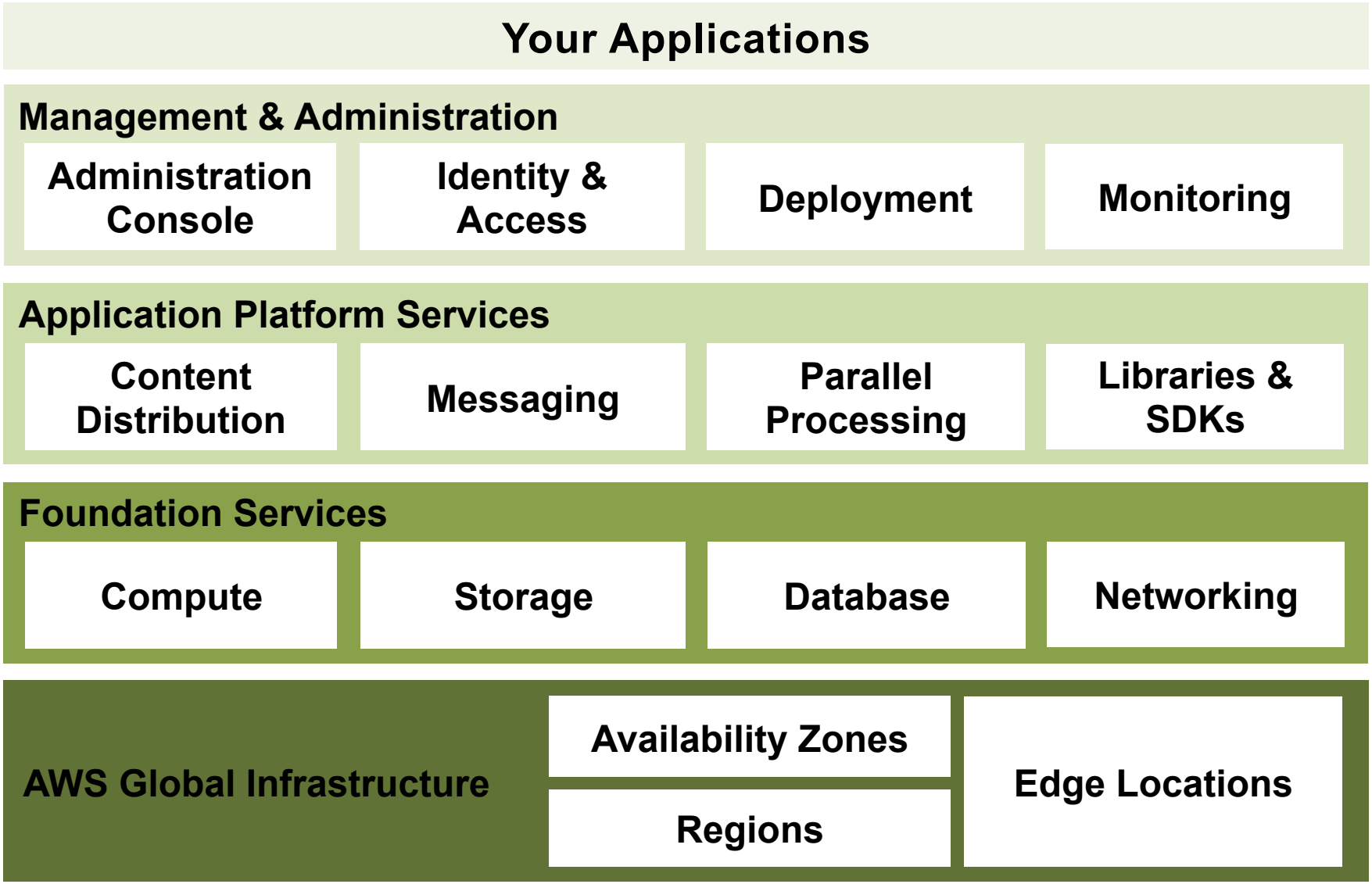
- Systematic change management
- Phased updates deployment
- Safe storage decommission
- Automated monitoring and self-audit
- Advanced network protection

AWS Security White Paper Available at http://aws.amazon.com/security

The Cloud is Distributed



The Cloud is Flexible



AWS GovCloud (US)

- AWS Region for US government agencies and contractors
- Move sensitive workloads to the cloud
- Access limited to US persons (ITAR)
- Enables compliance with HIPAA regulations

- Use cases:
  - Enterprise applications
  - HPC and Analytics
  - Storage and Disaster Recovery
  - Web Application Hosting

The Cloud is Flexible

- Choice of location (Region)
- Choice of development and management tools
- Choice of programming language
  - Java, Ruby, Python, Perl, .NET
  - AWS and third-party toolkits
- All cloud functions accessed as APIs
- All fully documented