



Cloud Security

By

Yeshwanth Reddy
R16BS039

What we'll cover today

What is Cloud Security?

Why do we need to Worry?

How is it Different?

What the Vendor bothers about?

What is a Security Threat on the Cloud?

What Does it Affect?

To What Extent?
What Else?



I don't need a hard disk in my computer if I can get to the server faster... carrying around these non-connected computers is byzantine by comparison.

Steve Jobs, late chairman of Apple (1997)



What Is Cloud Security?

Cloud Computing security is a fast-growing service that provides many of the same functionalities as traditional IT security. This includes protecting critical information from theft, data leakage and deletion.



The Cloud services
companies of all sizes...The
Cloud is for everyone. The
Cloud is a Democracy.

Marc Benioff, Founder, CEO and Chairman of
Salesforce



How is it different?

Cloud Security

Third-Party Data Centers

Low Upfront Infrastructure Investments

Quickly scalable

Efficient Resource Utilization

Reduced Time To Market

Usage-Based Cost

Traditional IT Security

In-House Data Centers

High Upfront Costs

Slow Scaling

Lower Efficiency

Longer Time To Market

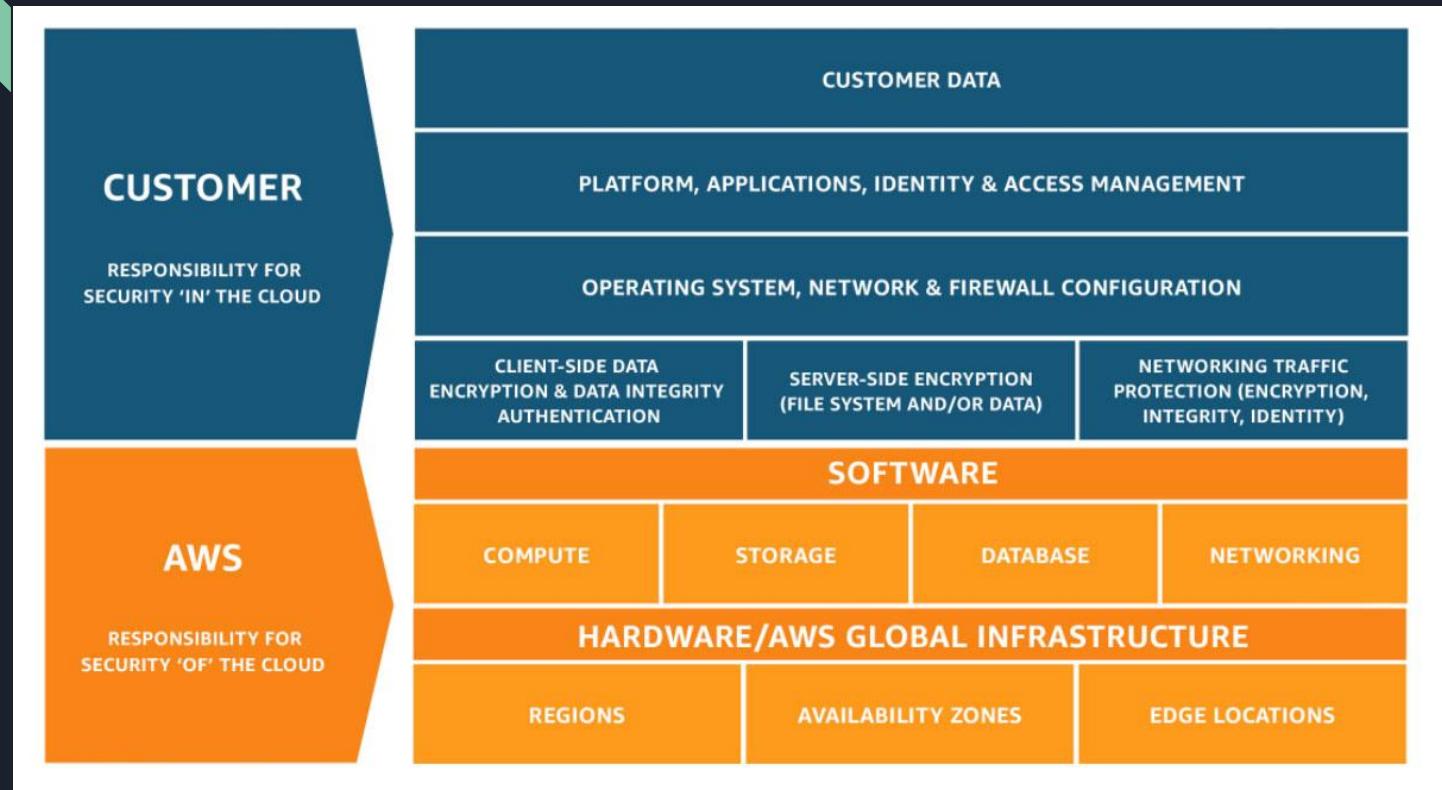
Higher Cost



Cloud computing is often far more secure than traditional computing, because companies like Google and Amazon can attract and retain cyber-security personnel of a higher quality than many governmental agencies

Vivek Kundra, former federal CIO of the United States

Why do we need to worry?



What the Vendor bothers about?



Strict Regulatory Standards

Higher regulatory requirements lead to better security solutions.



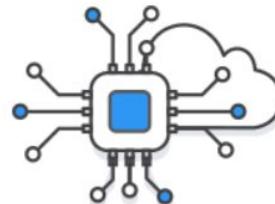
Security Tools

Many top cloud providers include access to extra security programs.



Confidentiality

Customer data is kept confidential.



DDoS Mitigation

A bigger company is able to better protect against DDoS attacks.





AWS

Example



Satellite



Security, Identity & Compliance



Storage



See All Products

AWS Identity and Access Management (IAM)
Manage user access and encryption keys

Amazon Cloud Directory
Create flexible cloud-native directories

Amazon Cognito
Identity management for your apps

Amazon GuardDuty
Managed threat detection service

Amazon Inspector
Analyze application security

Amazon Macie
Discover, classify, and protect your data

AWS Artifact
On-demand access to AWS' compliance reports

AWS Certificate Manager
Provision, manage, and deploy SSL/TLS certificates

AWS CloudHSM
Hardware-based key storage for regulatory compliance

AWS Directory Service
Host and manage active directory

AWS Firewall Manager
Central management of firewall rules

AWS Key Management Service
Managed creation and control of encryption keys

AWS Organizations
Policy-based management for multiple AWS accounts

AWS Secrets Manager
Rotate, manage, and retrieve secrets

AWS Security Hub
Unified security and compliance center

AWS Shield
DDoS protection

AWS Single Sign-On
Cloud single sign-on (SSO) service

AWS WAF
Filter malicious web traffic





What is a Security Threat on the Cloud?

Is it your Data?

Is it your Credentials?

Is it your Servers?

Is it all of the above(No, Isn't it Yes?)

Is it something else?



Passion provides Purpose,
But Data drives Decisions

Andy Dunn



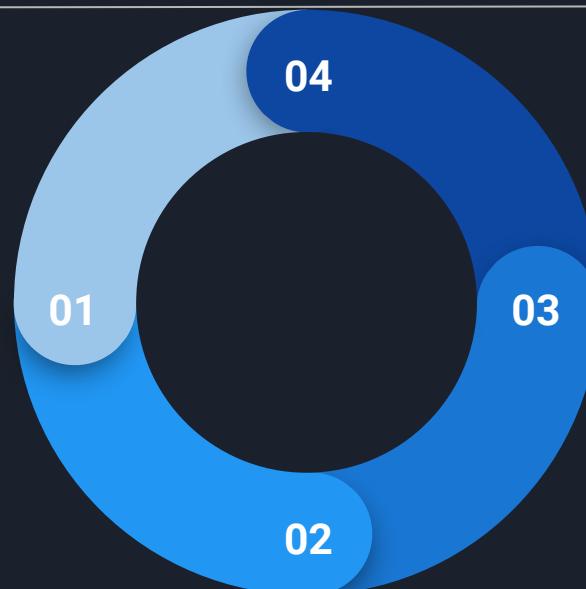
What does it affect?

Customer
Satisfaction

Data

Resources

Trust





Big Data knows and can
deduce more about you than
your Big Brother ever could

Toomas Hendrick Ilves



Best Practices

Principle of Least
Privileges

Encrypting the Data

Backup

Multi-Regional or

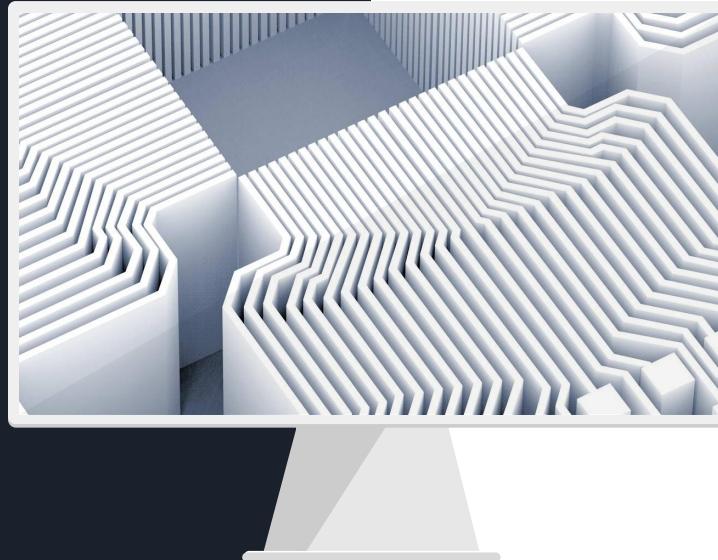
Multi-AZs





Do Not

Use Root Login

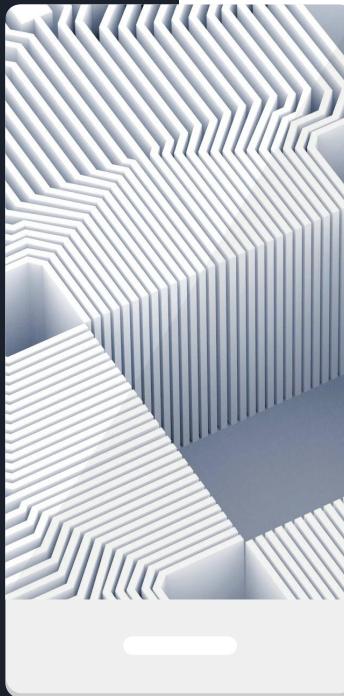


Instead use the IAM users
with the highest privileges
with MFA enabled



Secure Login

MFA



Multifactor **authentication (MFA)** is a security system that requires more than one method of authentication from independent categories of credentials to verify the user's identity for a login or other transaction



How Much?

To What Extent?





What Else?

The background of the slide features a dark grey gradient. It includes abstract elements such as a circular inset showing a close-up of a printed circuit board (PCB) with various electronic components and a blue-to-green diagonal triangle graphic.

[https://media.giphy.com/
media/3owvKhU1zh5VlZ
mb6w/giphy.mp4](https://media.giphy.com/media/3owvKhU1zh5VlZmb6w/giphy.mp4)

How Security is

Thank you!

These slides will be available at

<https://github.com/imjuststarting/presentations/>

