

The world of AWS

AWS CONCEPTS



Amar Suchak

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What is AWS?

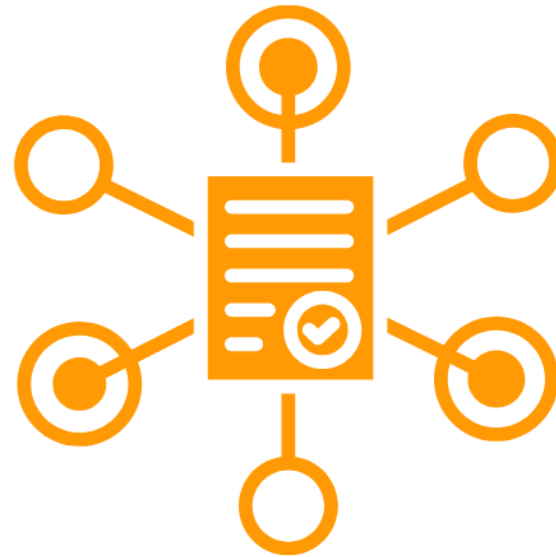


- Over 200 fully-featured services
- Global data centers
- Provides flexibility and scalability to support your goals

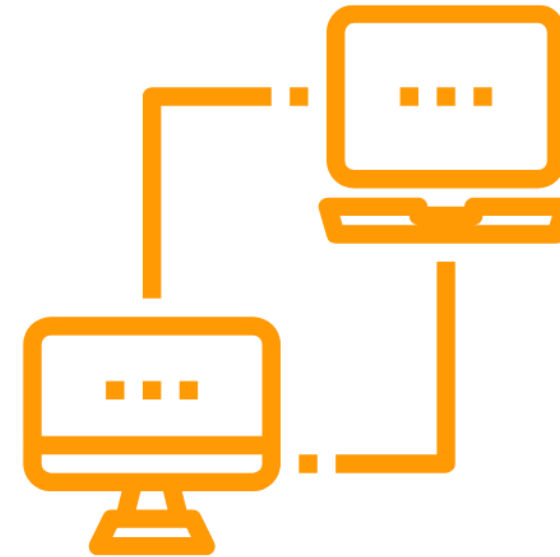
Chapter 1: Benefits, Well-Architected Framework, Migration



**EXPLORE THE BENEFITS
OF USING THE CLOUD**



**UNDERSTANDING THE
AWS WELL-ARCHITECTED
FRAMEWORK**



**DISCUSS ADVANTAGES
AND STRATEGIES FOR
MIGRATING TO AWS**

Chapter 2: Cloud Economics, Deployment, Global Architecture



**UNDERSTANDING COST
BENEFITS OF THE
CLOUD**

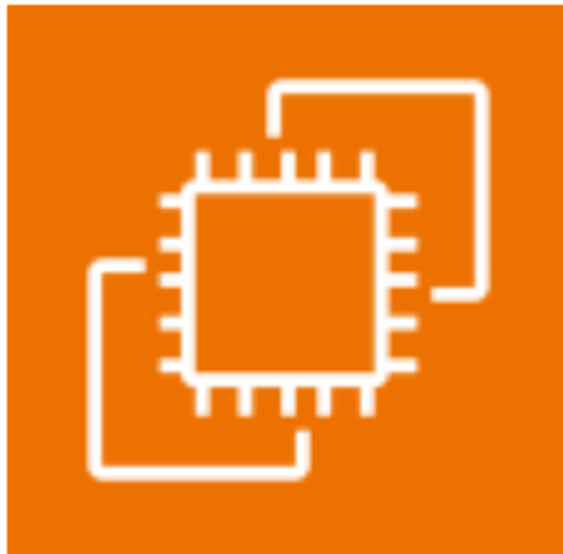


**DEPLOYING AND
OPERATING IN THE
CLOUD**



**UNDERSTAND THE
GLOBAL NETWORK OF
AWS**

Chapter 3: EC2, S3 and RDS



**COMPUTE:
AMAZON EC2**











**STORAGE:
AMAZON S3**



**DATABASES:
AMAZON RDS**


Course format


 Services [Option+S]     N. Virginia  **datacamp-learner-user @ 3397-1279-7442** 





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 [S3](#)


 [AWS Billing Conductor](#)


 [Billing and Cost Management](#)


 [IAM](#)


 [Lambda](#)


 [EC2](#)


 [Certificate Manager](#)


 [IAM Identity Center](#)


 [Secrets Manager](#)


 [Trusted Advisor](#)

 [Security Hub](#)


 [CloudWatch](#)



[View all services](#) 





 **Applications (0)** [Info](#)



[Create application](#) 



Region: US East (N. Virginia)



us-east-1 (Current Region) 


 **1** 

Name 	Description 	Region 	Originating account
<div>No applications Get started by creating an application. Create application</div>			
Go to myApplications 			

 **Welcome to AWS** 

 **AWS Health** [Info](#) 

 **Cost and usage** [Info](#) 

 datacamp

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Join the Cloud Revolution!

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Benefits of AWS

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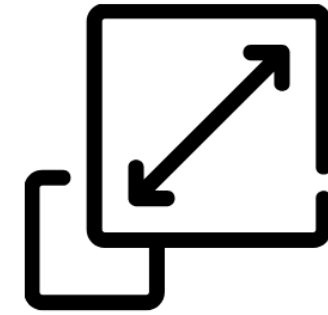
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Before the cloud...



¹ Photo by Manuel Geissinger

Power of the cloud



6 key advantages of using the cloud



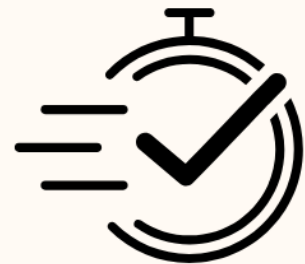
**PAY FOR WHAT
YOU USE**



**ECONOMIES OF
SCALE**



**NO MORE GUESSING
CAPACITY**



**INCREASED SPEED
AND AGILITY**



**SAVE MONEY ON
DATACENTERS**



**GO GLOBAL IN
MINUTES**

Pay for what you use



**PAY FOR WHAT
YOU USE**

- Consumption based model: start small and pay for what you use
- Can lead to variable month-to-month costs
- Allows for opportunities to save

Economies of scale



- AWS has the ability to offer pay-as-you-go costs due to its vast customer base.

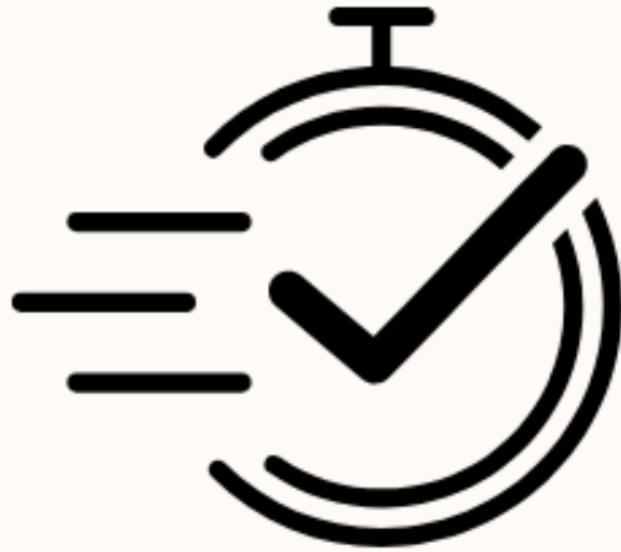
Capacity



**NO MORE GUESSING
CAPACITY**

- Provision and scale resources to meet your exact needs
- The ability to resize resources makes AWS elastic

Speed and agility



**INCREASED SPEED
AND AGILITY**

- Rapid environment setup
- Lower cost of failure

Save money on datacenters

- AWS manages infrastructure



**SAVE MONEY ON
DATACENTERS**

Go global



**GO GLOBAL IN
MINUTES**

- Deploy applications to multiple regions quickly

Let's practice!
AWS CONCEPTS

Introduction to the AWS Well- Architected Framework

AWS CONCEPTS



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What is the Well-Architected Framework?

The Well-Architected Framework provides cloud architects with strategies and guidelines for building resilient, scalable, and secure architectures on AWS

The six pillars



SECURITY



**COST
OPTIMIZATION**



**PERFORMANCE
EFFICIENCY**



SUSTAINABILITY



**OPERATIONAL
EXCELLENCE**



RELIABILITY

Security

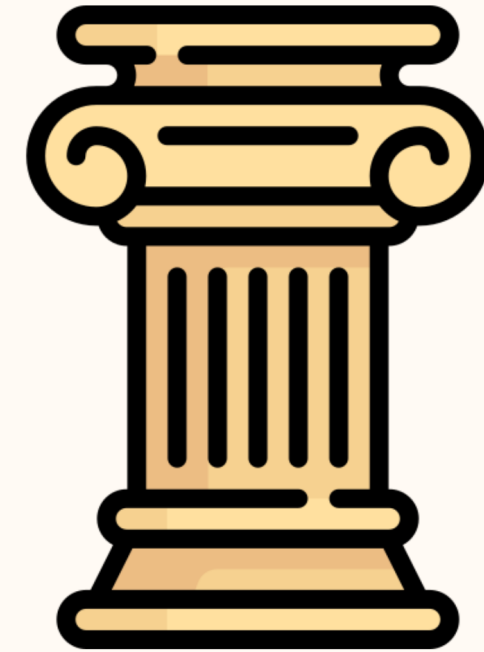
- Protecting data, systems and assets
- Confidential data through robust identity and access management
- Controls to detect and mitigate security threats



SECURITY

Cost optimization

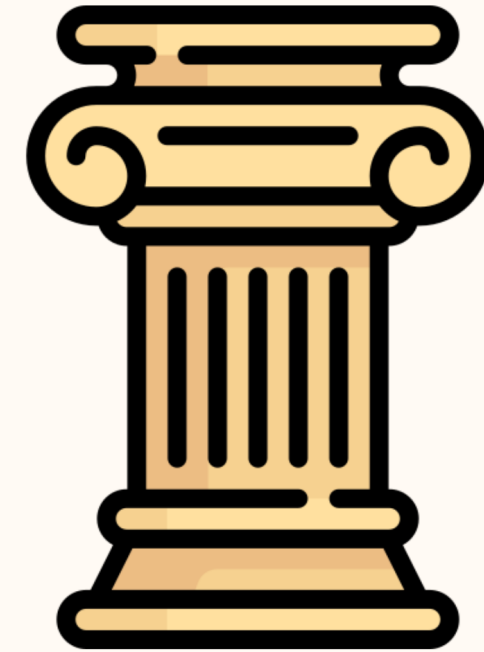
- Avoid unnecessary expenses
- Cost-effective decisions to ensure value on your cloud investment



**COST
OPTIMIZATION**

Performance Efficiency

- Compute resources used effectively
- Optimal performance to meet demands
- Efficiency as workloads evolve



**PERFORMANCE
EFFICIENCY**

Sustainability

- Minimize environmental impact of running cloud
- Aligning your cloud strategy to your corporate environmental goals



SUSTAINABILITY

Operational Excellence

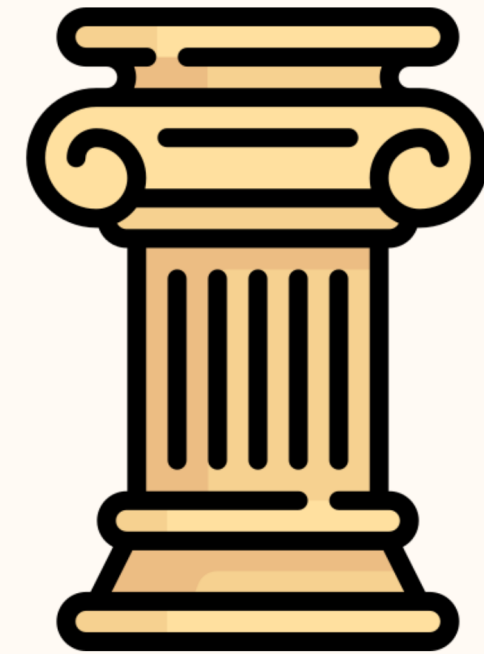
- Organize teams around business outcomes and implement observability for actionable insights
- Automate where possible
- Make frequent, small, reversible changes and refine operations procedures frequently
- Anticipate failure and learn from all operational events and metrics
- Use managed services



**OPERATIONAL
EXCELLENCE**

Reliability

- Automatically recover from failure
- Test recovery procedures
- Horizontal scaling
- Stop guessing capacity



RELIABILITY

Let's practice!

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Introduction to Cloud Migration

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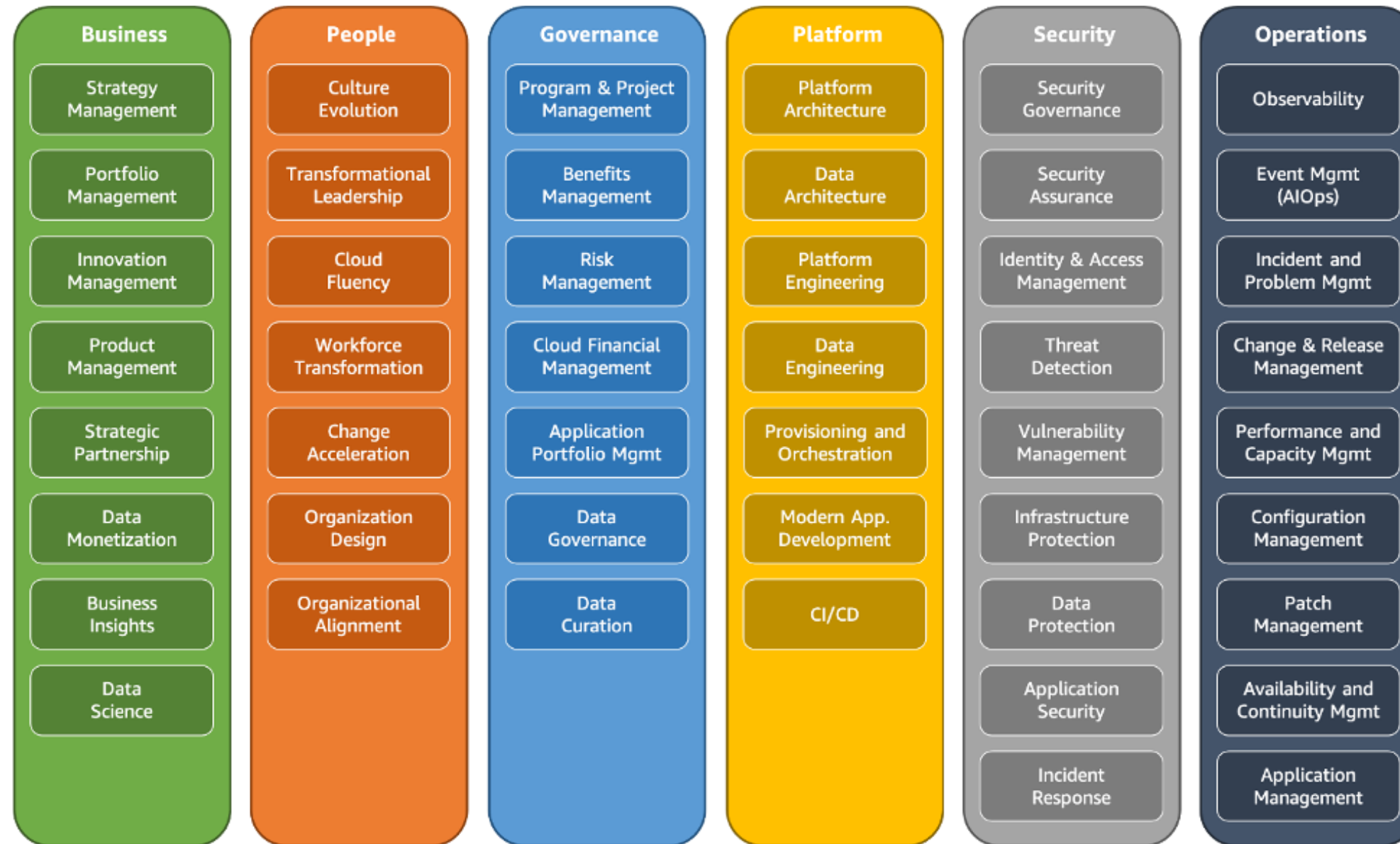
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Migrating to the cloud

- Moving your organizations data, applications, and workloads to the cloud
- Benefits:
 - Significant cost savings
 - Increased flexibility
 - Improved scalability
- AWS Cloud Adoption Framework (AWS CAF)
 - Structured approach to help organizations design and implement a migration strategy



The six perspectives



¹ <https://docs.aws.amazon.com/whitepapers/latest/overview-aws-cloud-adoption-framework/foundational-capabilities.html>

Benefits of the Cloud Adoption Framework (CAF)

- Reducing Risk: ex. backing up data and defining transfer protocols



Benefits of the Cloud Adoption Framework (CAF)

- **Improving ESG Performance:** Goal is to implement sustainable cloud solutions.
- Optimize usage, reduce waste, lower energy consumption



Benefits of the Cloud Adoption Framework (CAF)

- **Increasing Revenue and Operational Efficiency:** Automate migration operations leading to greater operational efficiency



Common migration strategies



AWS Database Migration Service (DMS)

- Replicating existing databases with minimal disruption
- Fully operational during transition



AWS Snowball

- Physical data transport for large-scale migrations
- For moving data quickly and securely

Let's practice!
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