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Cloud Computing Pricing and Deployment Efforts

Navigating Cloud Computing Pricing and Deployment Efforts: Exploring the Public-Private Landscape

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01

Introduction

Cloud Computing

What is it?

Explore the boundless power of cloud computing and its transformative impact on businesses and individuals.

What has it Solved

Why cloud computing is essential for modern businesses, enabling efficiency, scalability, and innovation.

Solution to Everything?

Is cloud computing the ultimate solution for all your technological needs?

Host Company

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Comparing Cloud Providers
Unveiling the Key Differences

Services

How do the various cloud providers compare to each other in terms of pricing, service selection, and more?

Usage

How easy is it to deploy an develop an application for a cloud provider

AWS

Azure

GCP

02

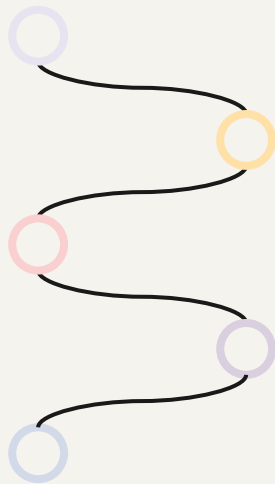# Background

The History of **Cloud Providers**

1990s
The idea of virtualizing computing emerged

Early 2000
Google introduced the first PaaS platform

Present
Cloud computing market was valued at USD 483.98 billion in 2022

Early 2000
AWS launched the first IaaS platform on the market.

2005
Salesforce launched Salesforce Customer relationship management (CRM) which is the first SaaS platform

Pricing Models

On-demand
Pay exactly for the resources that were consumed.

Reserved
Reserve the cloud resource in advance for a specific period of time.

Spot
Bid on unused resources to a lower price.

Hybrid
Combine different pricing models.

Deployment Efforts

- Containers
- Migration
- Compatibility
- Automatic Deployments
- Deployments happen multiple times a day
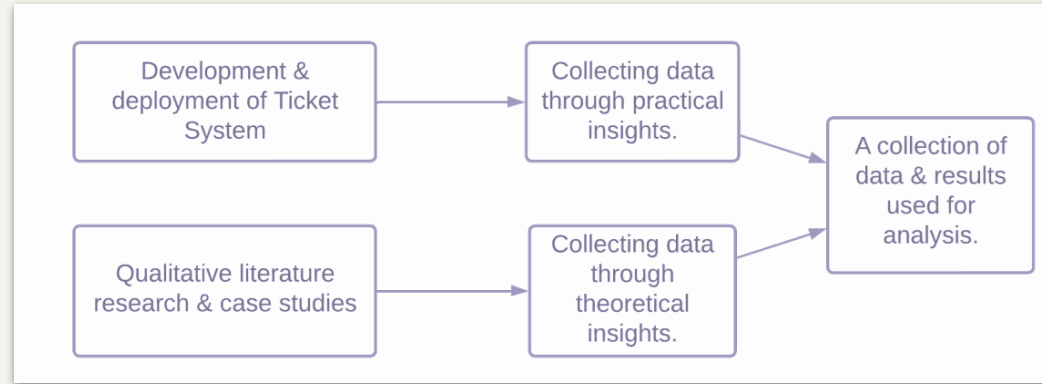
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Approach

Approaches

Case Study (Ticket System)
Get a good insight of the actual deployment & pricing

Qualitative & Quantitative Research
Collect insight and data through other case studies and collecting data from various cloud providers

Case **Study**

Ticket System
Uses the most popular cloud services

Pricing
Using estimations of the program usage it is possible to compare the different providers against each other

Deployment
Be able to get insight into the actual deployment steps and structure

Data **Collection**

Documentation

What type and how good?

IC

Instance computing, what types is offered and pricing

SC

Serverless computing, how flexible are their plans

Storage

Solutions for storing data

Database

Database solutions for handling small to high workloads

04

Result

Case Study: **Deployment Efforts**

65

AWS
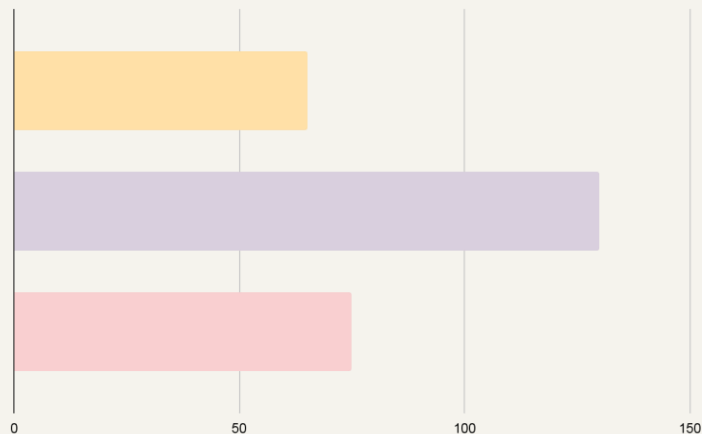
Lowest deployment efforts.

130

GCP

GCP did not provide simplicity.

75

Azure

AWS and Azure was very similar.

The total score of deployment efforts for each cloud provider when deploying the ticket system. Lower score is better.

Pricing: **Theoretical Workload**

- 1000 daily active users
- 30 minutes of use per user
  - 250 API calls
  - 1000 database calls
- 36 KB/day of database data per user
- 10 MB/day of file storage per user
- 50 MB/day of file data per user

Case Study: **Serverless Pricing**

	AWS	GCP	Azure
Request	$20	$40	$29
Runtime	$460	$450	$440
Total	$480	$490	$460

Case Study: **Storage Pricing**

	AWS	GCP	Azure
Storage	$114 000	$114 000	$79 000
Access	$90	$40	$10
Bandwidth	$91 000	$18 000	$18 000
Total	$205 000	$132 000	$97 000

Case Study: **Database Pricing**

	AWS	GCP	Azure
Storage	$20	$20	$20
Runtime	$3 000	$1 500	$4 500
Total	$3 020	$1 520	$4 520

Case Study: **Total Pricing**
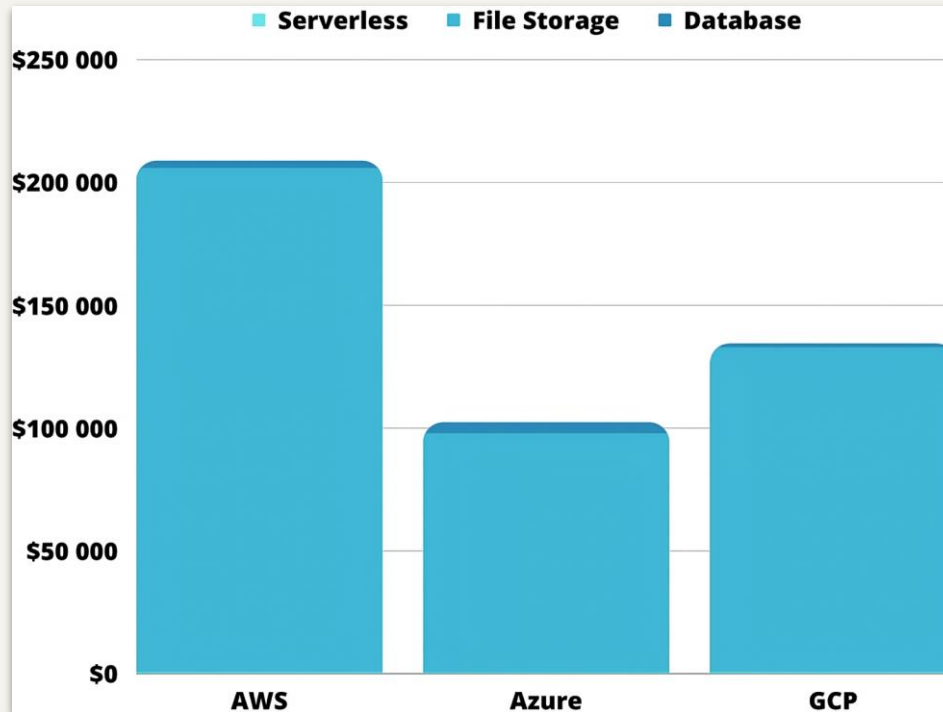
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Conclusion

Summary of **Findings**

Pricing

Hidden costs can drive up the overall pricing of an applications by a lot

Deployment Efforts

All cloud platforms have a relatively similar deployment process; however, certain providers manage to stand out

Private vs Public Cloud

Private

Allows for more customization and can in many cases be more secure but at the cost of being more costly

Public

Public cloud allows for a cheaper options that provides high availability and scalability

Future Implications

AI
Machine learning, language processing and computer vision.

Edge Computing
Data processing and storage closer to the source.

Sustainability
Focusing on energy efficiency to lower the carbon footprint.

Cloud Computing Pricing and Deployment Efforts

Thank You!

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