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Migrating E-Commerce Platform to AWS: Quick Wins

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Gart Solutions

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The migration of an e-commerce platform to the AWS cloud involves relocating the existing infrastructure and application components to the cloud environment.

It allows the platform to take advantage from the scalability, security, and cost-effectiveness of the AWS cloud.

The main objective of migration to AWS

The main objective of this migration is to modernize and scale up the e-commerce platform, enhance user experience, and improve overall business efficiency.

The process involves analyzing the current infrastructure, designing a suitable AWS architecture, and migrating the data and applications to the cloud. The migration is executed in a phased approach to minimize downtime and ensure business continuity.

The result

The result is an e-commerce platform that leverages the latest cloud technology to deliver a high-performance, reliable, and secure online shopping experience.

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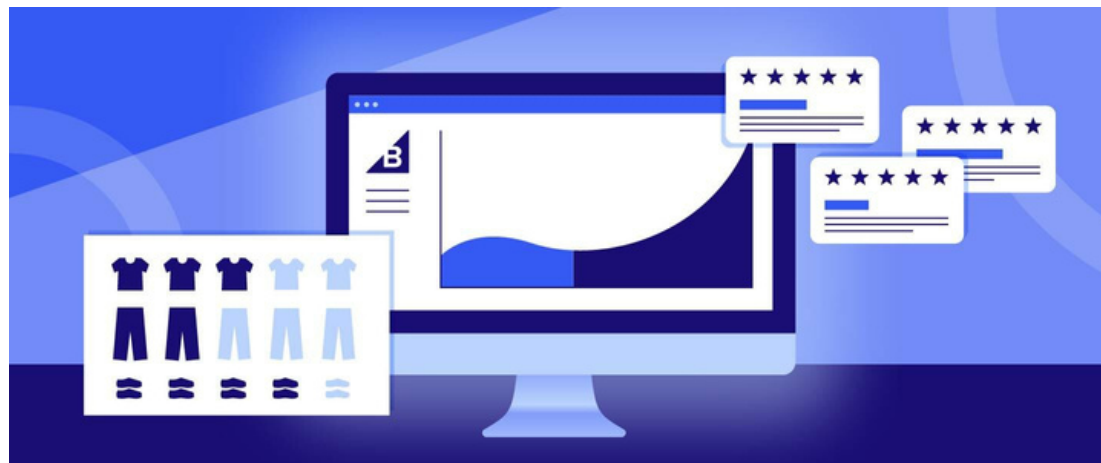
Concerns of on-premise setup for e-commerce companies

Keep solution on local infrastructure – a common case for mature companies or small businesses who are moving to the next level of growth.

Below are some common pain points faced by e-commerce businesses during an on-premise setup:

- Substantial Initial Investment: On-premise solutions necessitate a hefty initial outlay for hardware, software, and foundational infrastructure.

- Endless Upkeep: Sustaining an on-premise setup is a costly affair that demands ongoing upkeep, enhancements, and specialized technical support.

- Scalability Constraints: Scaling an on-premise setup to cater to the growing demands of a business can withstand a challenge and calls for significant investment in supplementary hardware and resources.

- Security Vulnerabilities: On-premise setups are exposed to both physical and cyber risks, which can compromise confidential information and put the business at peril.

- Rigidity and Inflexibility: On-premise setups can be unwieldy and lack adaptability, hindering swift response to changing business needs or market trends.

- Integration Obstacles: Integrating an on-premise setup with other business systems and applications can be convoluted and time-consuming.

- Technical Acumen: An on-premise setup requires a high level of technical savvy, making it challenging for businesses without in-house IT support.

- Downtime: An on-premise setup is prone to downtime caused by hardware failures, power outages, and other unexpected events, which can have a detrimental impact on the business.

- Restricted Accessibility: On-premise solutions can limit remote access to the e-commerce platform, making it challenging for businesses to manage their store from multiple locations.

- Technological Obsolescence: On-premise setups can quickly become outdated as technology evolves, requiring frequent upgrades and migrations to stay current.

What can be done?

Downtime reduction

Minimizing downtime to maintain customer trust and ensure that the platform is always available to customers.

Automated processes

Reducing manual labor and increasing efficiency by automating repetitive tasks and processes.

Increased scalability

The ability to handle growing traffic and sales as the business grows without being held back by infrastructure constraints.

Improved data management

Supporting business growth by effectively managing and organizing data, allowing for better decision-making and analysis.

Improved security

Protecting customer data and maintaining compliance with security regulations to maintain customer trust.

Seamless integration

Improving workflow by seamlessly integrating the e-commerce platform with existing systems and processes.

Faster page load times

Improving the user experience by reducing page load times, increasing customer satisfaction, and reducing bounce rates.

Increased cost efficiency

Reducing costs by optimizing and automating processes, freeing up resources for other business initiatives.

Increased reliability and availability

Minimizing loss of sales by ensuring high availability and reliability of the platform, even during unexpected events or outages.

Access to real-time data and analytics

Providing real-time data and analytics to make informed business decisions and drive growth.

Benefits of the AWS Cloud

The Amazon Web Services (AWS) cloud offers a wide range of services that can meet all technical and business requirements. Here are some of the advantages of hosting an e-commerce platform on AWS:

- Scalability: The AWS cloud provides dynamic scaling capabilities, enabling e-commerce platforms to respond quickly to changing demand.

- Cost Savings: The AWS cloud offers a pay-as-you-go pricing model, reducing the cost of hardware and maintenance expenses.

- Reliability: The AWS cloud is built for high availability and disaster recovery, ensuring the e-commerce platform is always up and running.

- Performance: The AWS cloud provides high-performance computing resources, ensuring the platform can handle heavy traffic and high volumes of data.

- Security: The AWS cloud implements multiple security measures, providing a secure environment for the e-commerce platform.

- Flexibility: The AWS cloud provides a range of services and tools, enabling e-commerce platforms to customize their infrastructure and application components.

- Agility: The AWS cloud enables e-commerce platforms to quickly deploy new services and applications, increasing their ability to respond to changing market conditions.

- Global Reach: The AWS cloud provides a global network of data centers, enabling e-commerce platforms to reach customers anywhere in the world.

- Integration: The AWS cloud supports integration with a wide range of third-party services, providing e-commerce platforms with additional functionalities and capabilities.

- Innovation: The AWS cloud is constantly evolving, providing e-commerce platforms with access to the latest technology innovations and advancements.

Migration approach

Cloud migration should be well-planned and organized.
The process usually consists of multiple stages, which help business and technical teams be on the same page and provide more observability during implementation and acceptance. Here are some of the main stages of cloud migrations.

- Assessment and planning

Evaluating current infrastructure and determining the best approach and plan for migration.

- Data migration

Moving data and applications from on-premises systems to the cloud.

- Application re-architecture

Re-architecting applications to make the most of cloud capabilities, such as auto-scaling, load balancing, and disaster recovery.

- Security and compliance

Implementing security and compliance measures to protect data and maintain compliance with regulations.

- Testing and validation

Testing the migration to ensure that everything is working as expected and making any necessary changes.

- Go-live

Cutting over to the cloud and decommissioning any on-premises systems.

- Monitoring and optimization

Monitoring performance and making any necessary optimizations to ensure that the cloud environment is running efficiently.

- Continuous improvement

Continuously improving the cloud environment to make the most of new capabilities and technologies.

The AWS benefits and discounts

Cloud migration can bring e-commerce businesses a multitude of benefits.

In the meantime, cloud providers can offer discounts and incentives tailored to the needs of the business.

The AWS Credits

The AWS Credits are promotional codes provided by the Amazon Web Services (AWS) to new or existing customers. These credits can be used towards paying for AWS services and can help reduce costs associated with running workloads on the AWS platform. The credits can be applied to a specific service or used towards a range of services, depending on the type of credit received.

The AWS credits are often provided as part of a free trial, promotional offer, or through an AWS partner program.

Talk to us, and we will help you to get the most out and optimize costs with AWS credits.

The AWS Migration Acceleration Program (MAP)

It is a program offered by Amazon Web Services (AWS) and is designed to provide customers with the resources they need to transition to the cloud quickly and efficiently, so they can reap the rewards of cloud computing. It offers technical assistance, instruction, and tools to assist in the planning, design, and implementation of migrations.

The goal of the program is to help customers move to the cloud as quickly and smoothly as possible, so they can take advantage of the benefits of cloud computing.

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Case Study

How Gart Solutions optimized costs and operations for a cloud-based SaaS
e-commerce platform

Location
Netherlands (and global market

Industry
Retail, E-commerce

Partnership period
March 2021 - present

SERVICES

Technical Consulting

CI/CD pipeline development

On-premises to the cloud migration

Third-party integrations

EXPERTISE DELIVERED

Cloud native services

Cloud Solutions

DevOps

TECHNOLOGIES

AWS   Azure

Kubernetes

Client background

Our client, a cloud-based SaaS e-commerce
platform headquartered in the Netherlands allows
e-commerce businesses simplify recurring billing,
optimize customer experience and provide
comprehensive compliance with different payment
solutions on a global level.

The client provides e-commerce and subscription
management solutions for monetizing digital goods
and online services across various industries. The
platform is a hub that manages connected devices
and transmits their data to third-party services, that's
why a legacy on-premises architecture was now
efficient.

Business challenge

The client needed to modernize the functionality
of their legacy SaaS e-commerce platform —
improve its efficiency, user experience, optimize
costs and accelerate time-to-market. Also, to
move the SaaS platform from on-premises to the
cloud.

Value delivered

Gart Solutions has helped customers make their
SaaS platform more economically efficient by
restructuring its architecture with the most up-
to-date cloud development techniques and
technologies. We have also enabled the customer
to avoid being tied to a single vendor by
implementing various third-party integrations
that raise platform's monitoring capabilities and
improves product offering.

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Case Study

How Gart Solutions optimized costs and operations for a cloud-based SaaS e-commerce platform

Implementation

Gart Solutions team has moved the client's SaaS platform from on-premises to the cloud, making it cloud-agnostic and able to work with any cloud environment by redeveloping and replicating the platform's architecture in Kubernetes for AWS, Azure, and Minikube.

To further streamline and automate the development and deployment process, our DevOps engineers have built CI/CD pipelines for GitLab from scratch and implemented automated testing based on the rules created by the client's tech team.

Moreover, the platform's monitoring and analytical capabilities have been increased by integrating Elasticsearch, Graphite, Grafana, Graylog, and Prometheus. This enables monitoring of both the platform's cloud resources and the connected IoT devices, making it possible to manage their use and track their performance.

Value delivered

Optimized costs and expanded functionality by building a new cloud platform.
The client achieved sustainable benefits for business by migrating their on-premises infrastructure to the cloud, building efficient CI/CD pipelines, and integrating various third-party services.

- Optimized costs by migrating the platform to the cloud and limiting the amount of required expensive on-premises resources;

- Added more flexibility and avoided vendor lock-in by making the platform cloud-agnostic;

- Improved platform efficiency by streamlining platform deployment and development with CI/CD pipelines built from scratch;

- Extended the client's product offering by adding various third-party integrations with expanded the platform's monitoring capabilities;

- Enabled better expense management by allowing to monitor and adjust the use of cloud resources.

Conclusion

This whitepaper presented the business drivers for migrating any e-commerce platform to the AWS Cloud along with its strategies and approaches.

Migrating eCommerce software on AWS provides a secure and scalable foundation for delivering great digital experiences for customers.

Here are some benefits in numbers our clients get after migration to the cloud:

- Cost Savings: up to 70%
- Availability: up to 99,95%
- Infrastructure Performance: x4 with the same cost
- Speed of Delivery: up to 400%

Need experts to make your e-commerce platform cloud migration successful?

Gart Solutions has comprehensive experience in AWS cloud migration and can provide you with the guidance you need.

Check out the details in this document and book a call.
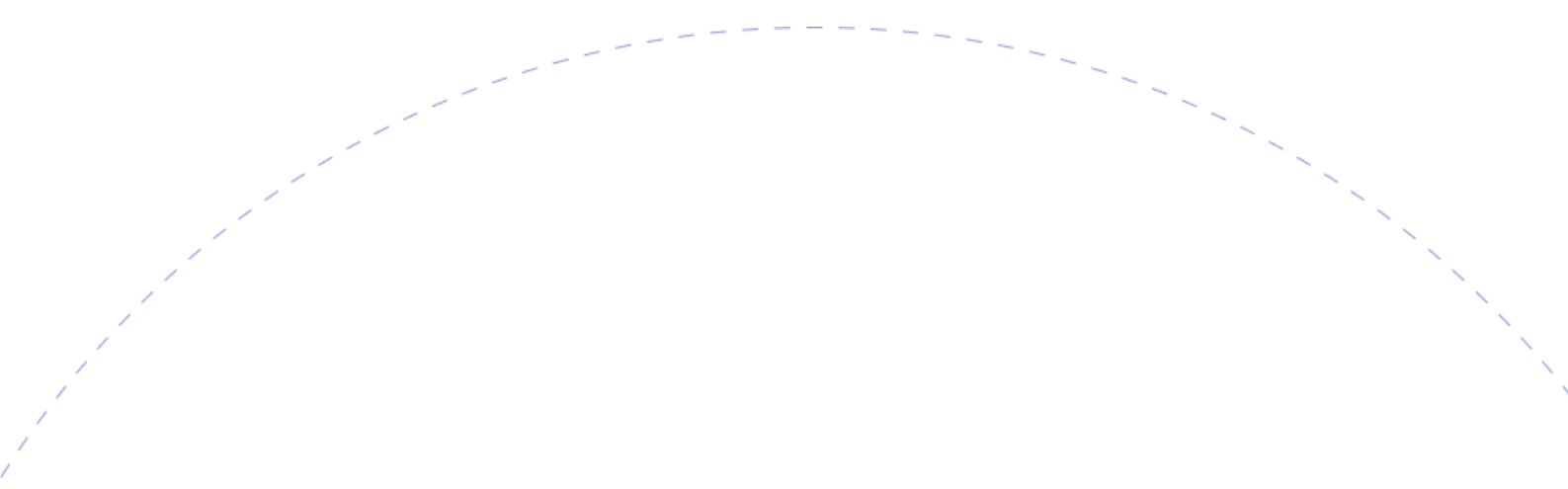
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Get in touch with us!

GART Solutions is a Cloud and Devops services agency that provides businesses with infrastructure setup, automatization, cloud migration, cloud native development, CI/CD, and more.

We work to solve your tech challenges on time and budget and provide infrastructure with the endurance it needs to let you focus on what matters the most – growing business.

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