

# E commerce application on IBM cloud foundry

## **Introduction:**

An e-commerce application on IBM Cloud Foundry is a web-based platform that enables businesses to sell products or services online using IBM's Cloud Foundry platform as the hosting environment. IBM Cloud Foundry is a Platform-as-a-Service (PaaS) offering that simplifies the process of building, deploying, and scaling web applications. When applied to e-commerce, it provides a reliable and scalable infrastructure for running online stores.

In this phase, representing the innovation steps of building E commerce application using cloud.

Building an innovative E commerce website using cloud technology involves leveraging modern cloud services and technology to create a scalable, secure and user-friendly online shopping platform.

Here the steps to create a innovative e-commerce website:

### **1.planning and strategy:**

- Business goals, target audience, and unique selling points.

- Determine the selling products , pricing strategy and marketing plan.
- Make strategy and template to your plan.

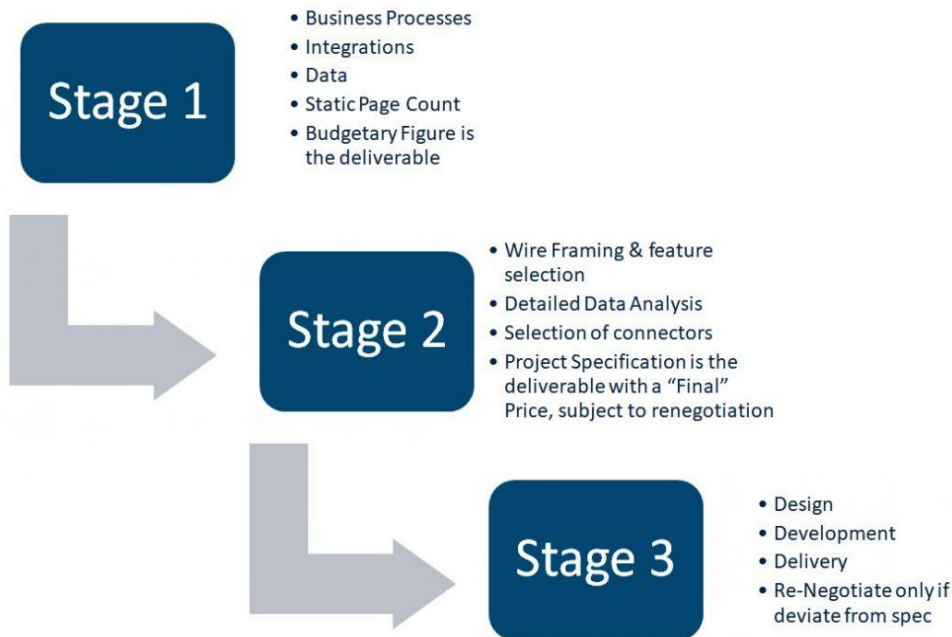


Fig: steps to build effective e commerce website

## 2. Select cloud:

The important step to carry on carefully is selecting cloud.

There are various cloud providers:

- Google
- Amazon web service
- Microsoft azure

And so on.



Fig: various cloud providers

### **3. Website design:**

- Found templates that are attract your website
- The best UI design is more important that represent your Brand.
- Focus on mobile responsiveness that it can acess from any devices.

### **4. set up cloud database:**

- Use cloud-based database like amazon RDS(relational Database services) or Azure SQL database to store product information, customer data, and order history.
- Ensure data security and compliance with regulations like GDPR.

### **5. Implementing Ecommerce feature:**

- Integrate essential features such as product catalog, shopping cart, secure checkout, and payment processing.
- Implement innovative features like personalized recommendations live chat support, and social sharing.

### **6. Building website:**

- Build your website by using languages like PHP, javascript or python.
- Can you frameworks like Django, react and so on.

### **7. Budget and cost management:**

- Monitor and optimize your cloud infrastructure costs to ensure cost-effectiveness.

### **8. Marketing and promotion:**

- Create a marketing plan to drive traffic to your e-commerce site through SEO, email marketing, and social media advertising.

Cloud requires a combination of technical expertise, creativity, and a deep understanding of you target audience.

Let us make an Ecommerce website based on **beauty products**.

## 1. Business strategy:

- Natural beauty products
- Focusing on Makeup artist, models and actors are the target audience.

## 2.cloud selection:

- Google is the cloud provider that here using for the e commerce website.

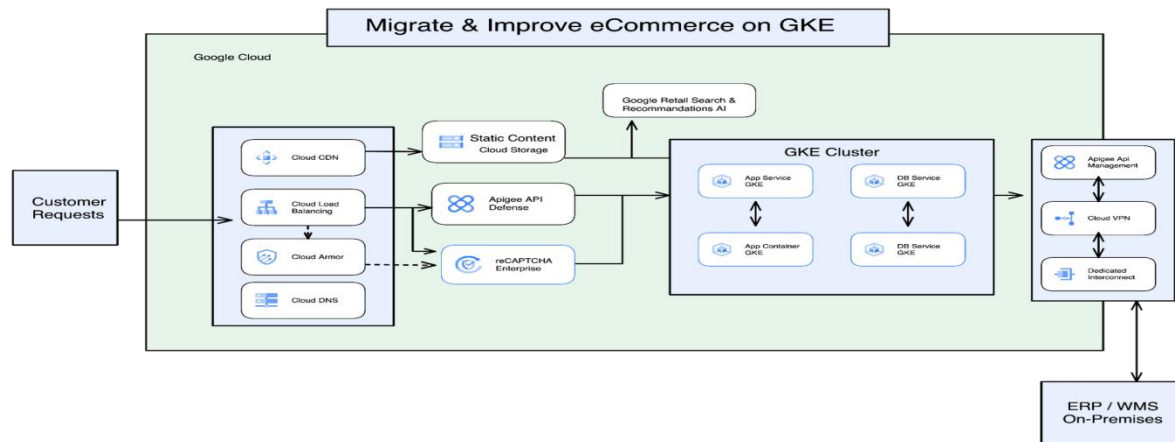
## 3.Google cloud:

With the build-your-own approach, you assemble your own solution using building blocks from Google Cloud, including [AI/ML tools](#) and [data management tools](#). There are three main ways to implement this approach:

**a. Migrate your existing solution as-is** by hosting your existing solution in Google Cloud instead of running it in your own data center. This minimizes the changes required to get to the cloud, but you don't get the benefits of a microservices architecture.

**b. Migrate (and improve) your existing solution to a microservices architecture** that uses containers and managed services in Google Cloud. This approach requires more changes than migrating your existing solution as-is. But once you've migrated, you'll realize the benefits of a cloud-native, containerized architecture, including easier maintenance, improved flexibility, and scalability. Here is a

sample architecture for migrating and improving your commerce platform using GKE.



## b. Modernize the architecture completely

Let's say you have migrated to Google Cloud using GKE or Compute Engine. Or maybe you are building an entire modernized commerce platform from scratch. How would you then progress to a modernized fully containerized microservices architecture? Well, you can check out the complete architecture in this [video](#), but here is a summary.

Think about implementing the platform with smaller services separated into four layers:

- **Presentation layer** - Your single-page application (SPA) builder and content.
- **Services Layer** - Services such as session, search, account, inventory, orders, and so on.
- **Storage layer** - Your storage choices for the services. These can vary based on the type of service, for

example: [CloudSQL](#) or [Cloud Spanner](#) for inventory and products, and [Firestore](#) for user sessions.

- **Cache layer** - Your transient cache, which can use Memorystore to access recently queried data without querying the storage layer again.

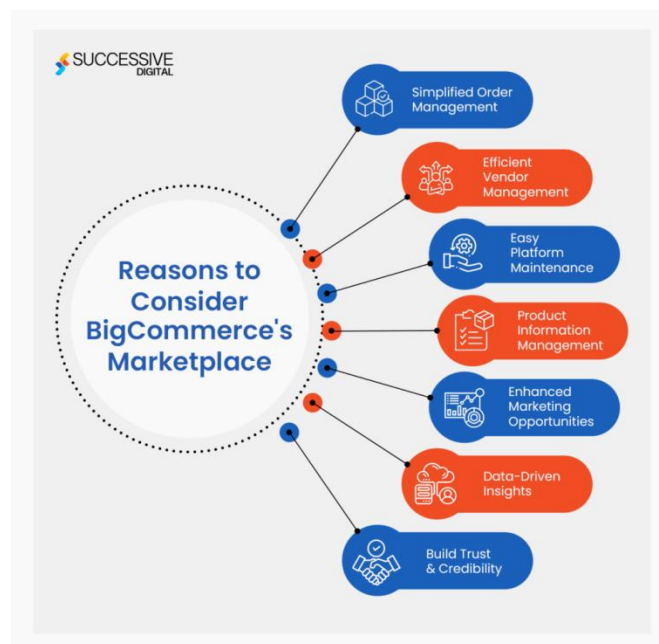
In addition to being the most flexible option, this architecture has many benefits, which include enabling your organization to:

- Independently develop and scale microservices to accommodate traffic spikes and lower TCO.
- Add/deploy new services at any time without affecting any other services.
- Have different teams working on different services in different languages.
- Establish a closed loop between the data platform and the commerce platform to better understand customer behavior and offer personalized experiences.



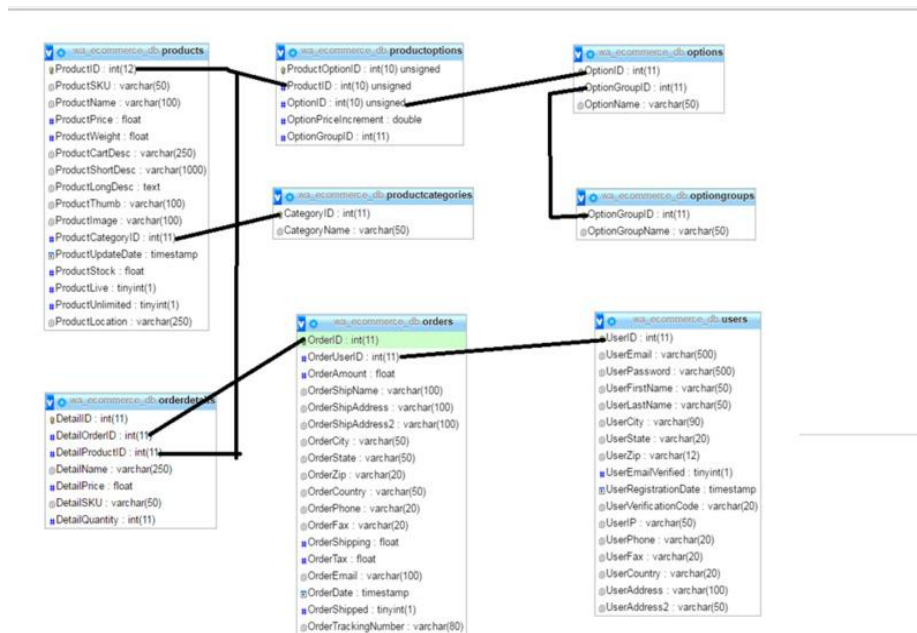
## service (SaaS) solution on Google Cloud

- The off-the-shelf approach uses an existing SaaS solution, such as Shopify or BigCommerce, that is hosted on Google Cloud. This approach works best if you don't need much customization. You can take advantage of Google Cloud features and capabilities, including Analytics 360, to get insights about your customers and analyze the data generated by your solution.





## 4.Databases




## 5.Attractive UI/UX:

AN intelligent, clutter-free and user-friendly UI/UX strategy will increase a shopper's screen time.


It encourage customers to explore more products .

Sample E commerce Website “**Beautify**”

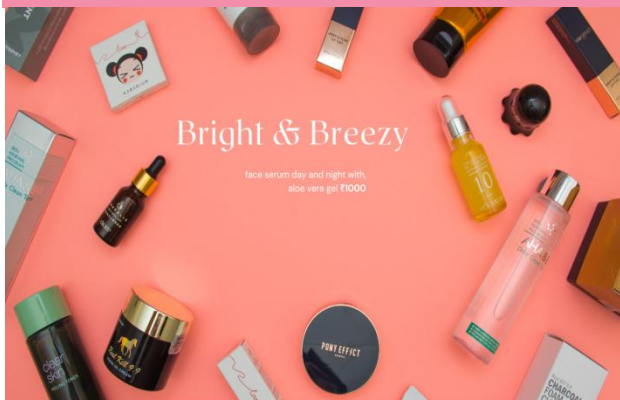


## Fresh, Fun, Female

Lookbook



Esha coordinates in  
Organic Red. ₹1500



## Spring *Forward*

Get first dibs on our  
limited Beautify

SIGN UP

XXX CLOTHING COMPANY  
123 Anywhere St., Any City,  
Any State, Any Country  
[www.reallygreatsite.com](http://www.reallygreatsite.com)

## **Conclusion:**

For e commerce companies,the cloud offers a scalable and flexible solution to meet evolving business needs.Rather than purchasing and managing physical infrasturucture to store and manage data and applications,the cloud enables business to quickly and easily scale their resources up or down as needed

A cloud based e commerce tool is a software service that allow you to create ,manage,and scale your online store without having to install,update or maintain any software on your own servers