Migrating to the Cloud

How to leverage commercetools and the Google Cloud infrastructure to increase agility and drive business

Executive Summary

Moving workloads to the cloud offers many benefits for brands and retailers. According to Gartner[1], "Enterprise adoption of public cloud is growing to the point that public cloud is an expected approach to IT". With the adoption of public cloud infrastructure comes increased business agility, broader geographic distribution, and scalability.

[...] Gartner's latest IT spending forecast shows that spending on data center systems is forecast to be $195 billion in 2019, but down to $190 billion through 2022. In contrast, spending on cloud system infrastructure services (IaaS) will grow from $39.5 billion in 2019 to $63 billion through 2021[2].

Accordingly, businesses with a legacy, on-premise infrastructure are increasingly looking for efficient, organized ways to move to the cloud. Through cloud service providers such as Google Cloud, and retail platform specializations such as the commercetools commerce API, the market has become mature enough for organizations to transform their legacy infrastructure and move their applications to a cloud-based environment.

[1] Ji, Kevin, Build the Right Justification for Moving to the Cloud, Gartner Research, https://www.gartner.com/en/documents/3715018/build-the-right-justification-for-moving-to-the-cloud, 2018-07-27
[2] https://www.gartner.com/smarterwithgartner/cloud-shift-impacts-all-it-markets/

Why Cloud?

Although there might be professionals in the market who use "cloud" as synonym for being modern and advancing digital capabilities, putting one's applications in the hands of a public cloud vendor is not a means to an end. Here are the three most important business considerations:

Better business agility

As one of the primary reasons organizations choose to migrate to the cloud is to speed up development time and increase business agility. In the old on-premise world, it could take weeks, or even months, to have server hardware ordered, put into a data center and provisioned with all the necessary software, all before deploying your custom applications. This latency has the potential to kill motivation at an early stage; waiting to launch a new feature ready to go public can be quite a frustrating experience.

What's more is that under those circumstances, you can (or cannot!) react to new initiatives by your competitors. They might be targeting a new audience or test-driving a new business idea while your devops team is still busy installing the OS or getting the network up to speed. This is both a frustrating, business-critical problem.

Being able to start a new virtual machine with a few clicks, deploy your application and have it seen and tested by a large fraction of your audience helps to foster growth and innovation. It enables a lean and iterative approach to software development and lets hosting and delivery be the on-demand commodity it should be.

Finally, having access to cloud-based resources can alter the way in which software is built in the first place - think microservices. One of the most important features of those is isolation; ideally they should not share any resources such as databases. Also, if a microservice goes down, it shouldn't take all the others with it. In a traditional hosting environment, it would be quite a task to guarantee this kind of separation, especially if there's a diversity in front and backend technologies. What if your basket microservice was a Ruby application, the inventory service uses Perl and the price service was a Java solution?

In a cloud environment, even a "zoo of microservices" can be separately hosted, monitored and maintained, and together with strategies such as serverless, enable a whole new paradigm of software development.

Geographic distribution and availability

Cloud solutions have become a prerequisite for success in global business. If you are a retailer addressing multiple locales around the world, it is important to have an infrastructure in place which enables fast response times for your customers. Imagine you are based in Europe and would like to target audiences in the US and APAC. Running your own data center, say in London, might result in higher latency, and therefore a poor experience for someone from Sydney using your apps or websites.

About the author

Since 2001, Dr. Roman Zenner works as an author, consultant, and speaker in e-commerce. He has written several books on web shop software and regularly publishes articles in professional magazines and blogs. Dr. Zenner runs shoptechblog. de as well as the podcast ShopTechTalks. Furthermore, he speaks at conferences, teaches university classes and moderates expert panels.

In his work, Roman focuses on next generation commerce technologies and explores what retail will look like in a post-web world. Since 2015, he is a full-time employee of commercetools GmbH, working as an Industry Analyst.

Dr. Roman Zenner

About commercetools

commercetools is a next-generation software company that offers a cloud-based, headless commerce platform, providing the building blocks for the new digital commerce age. Founded in 2006 commercetools is one of the fastest growing enterprise software companies in Europe with 190 employees at its European and US offices serving international brands such as Bang & Olufsen, Carhartt WIP, C.H. Beck, Cimpress and Express.

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