



CASE STUDY: MICROSERVICES & SCALABLE HOSTING

Featuring



# Case Study for Microservices and Scalable Hosting

Microservices have become massively popular among developers worldwide. The technology refers to an architectural style that develops a single application as a set of small services. It allows the development team to create and manage larger and more complex applications conveniently.

Microservices provide a wealth of benefits, including increased scalability, greater reliability, and reduced costs. So, more development teams are building applications by following the specific architectural style. However, there are some challenges, including complicated resource scaling and inconvenient billing for hosting.

In this case study, you will be looking at how Lexmodo, a Canadian e-commerce platform overcomes the challenges effectively with Togglebox App Hosting (PaaS).



**Lexmodo** is a hosted ecommerce platform. It helps businesses to develop and launch e-commerce websites quickly.

## App Hosting Environment

- **MySQL & Elasticsearch** for Datastore
- **Golang** microservices
- **Vue.js** frontend.

## Leadership

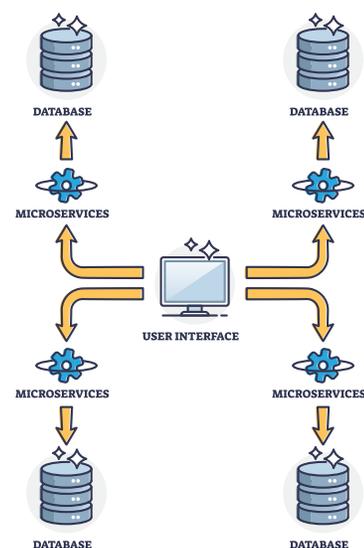
Jeff Lew, CEO

Mido Ghoneim, CTO

## What are microservices?

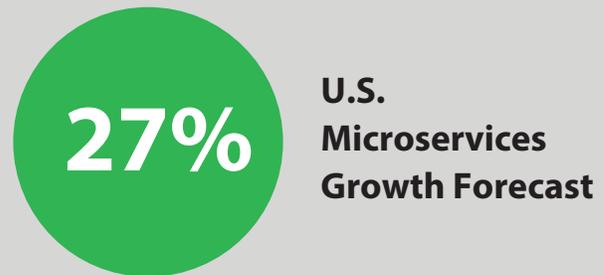
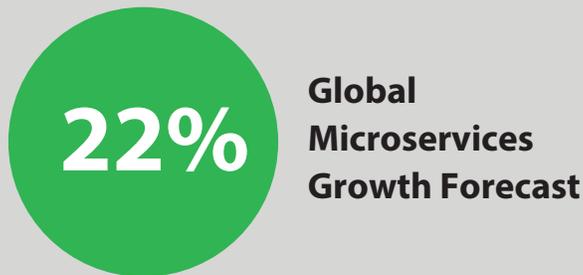
Microservices are an architectural approach in which a web application is built with small independent components or services. It enables developers to update the code, add new functionality, and scale services easily.

The services each have their own technology stack. So, your team can use different stacks and programming languages for different components. The components can communicate with each other over well-defined APIs. They can also be scaled independently of one another. So, you don't have to scale the entire application for a single feature that is facing too much load.



## What are the advantages of microservices?

- **Easy to maintain:** Breaking an application down into smaller fragments makes it very easy for your team to build and maintain web applications.
- **Independently deployable:** Microservices are independently deployable. It enables your team to make continuous improvements and release app updates faster.
- **Independently scalable:** As the number of users increases, you can scale the resources only to the most needed microservices, rather than the entire web application.
- **Software stack agnostic:** Different development teams can work together on a single microservice with different software stacks. They enjoy the flexibility in choosing the technology that fits well with their skillset and the project requirement.
- **Reduce downtime with fault isolation:** If a single microservice fails, it will not affect the entire application. You can isolate the failure only to the specific service. As a result, you can prevent cascading failures that can cause the web application to crash completely.



## What are the disadvantages of microservices?

- **Difficult for global testing:** Testing a web application with the microservice structure can be quite challenging. The components are distributed. So, you can't test the entire system from their individual machines.
- **Complex communication between services:** An application can include hundreds of different microservices. Ensuring secure communication between them can be very complex. You have to be very careful with handling requests between the microservices. You might be forced to write extra code to avoid disruption

# Microservices and scalable hosting: Can E-commerce platforms really benefit from Togglebox?

Lexmodo is a hosted E-commerce platform. Its headquarter is located in Vancouver, Canada. It helps businesses to develop and launch E-commerce websites quickly. The platform is set to launch later in 2022.

Lexmodo utilizes MySQL and Elasticsearch for Datastore, Golang for microservices, and Vue.js for the frontend.

**In the past we used private clouds, but we realized the setup is limited, and scalability is complicated.**

*Mido Ghoneim CTO, Lexmodo*

In the past, the development team used private clouds. However, they noticed some major limitations with the system setup. As the number of users grew, they needed the ability to scale separate components of their app. However, they found it to be very complicated with the private clouds. Also, the system setup server options only came in LEMP solutions or unmanaged servers with a basic Linux OS. As a result, hours were wasted installing and configuring the servers when that time could have been spent elsewhere.

Lexmodo had been searching for a solution. Fortunately, they came in contact with Togglebox. After being introduced to the benefits, they decided to give it a try. It took little time for the development team to realize the true power of the Togglebox. With innovative features, like real autoscaling and pay-per-use billing, the hosting platform enabled Lexmodo to overcome their challenges and focus on growing their application.

Let's take a look at how Togglebox helped Lexmodo.

## How has Lexmodo benefitted by using Togglebox?

### Pay-for-use billing

Togglebox's App Hosting (PaaS) platform bills hourly based on actual usage, so Lexmodo knows they are never overpaying for resources. This goes hand in hand with the automatic resource scaling. Also, hourly costs are broken down by service, which allowed Lexmodo to determine which services are driving costs. The pay-per-use billing model enabled them to always have the power they need without overpaying.

As a result, Lexmodo managed to build out more economically. They never had to worry about paying unexpected overages that could have killed the business, and never had to guess which services experienced increased demand.

## Microservices

Lexmodo is running Go on its microservices. Togglebox App Hosting (Paas) provides support for their microservices with zero code changes. This allows Lexmodo to deploy easily and with zero lock-ins—which is always preferred. The easy-to-use Deployment Manager allowed the Lexmodo team to deploy their files effortlessly by using GIT or SVN, and enables them to automate updates for regular maintenance.

Lexmodo also found that the built-in templates for various applications helped them to get new environments running fast. This was a big improvement from the Private Clouds. Saving time at this step gave them more time to focus on growing key parts of the application rather than worrying about configuring the servers correctly.

## Autoscaling

The autoscaling capabilities of the Togglebox App Hosting (PaaS) platform are incredibly powerful. This key feature allows the Lexmodo systems to automatically scale under any workload. There is no need to manually scale servers horizontally or vertically—Simply set your upper and lower scaling limits and let the automation handle the rest.

To configure autoscaling you simply define your upper and lower limits for horizontal and vertical scaling. Horizontal scaling controls how each node scales resources up and down. Vertical scaling controls how extra nodes are added and removed.

And, with pay-per-use billing all pricing changes are also automatic. You only pay for what you use within your limits.

## Togglebox Support

Lexmodo values how easy it is to access Support on Togglebox, whose Support teams are available 24x7x365 in real time through Live Chat. Whenever there is a crisis, like a misconfiguration, server overload, or network issues, they always find a helping hand from Togglebox Support without long waits.

With Togglebox, the developers didn't have to open up a ticket and wait for days to receive a response. Instead, they received an instant response from the support agent via live chat. As a result, they got a quick solution to their issue. It's one of the big reasons for Lexmodo to keep relying on Togglebox for years.

## Should you use Togglebox?

**Togglebox App Hosting (PaaS) provides a wealth of features.**

- It offers autoscaling for scaling the resources under any workload automatically.
- It boasts automatic load balancing that works without coding changes.
- It allows you to deploy effortlessly by using GIT or SVN with automatic updates right from the control panel.
- Its pay-for-use pricing model helps you to avoid making unnecessary purchases.
- Services are easy to set up and get running out of the box, which saves valuable development time.
- The customer support service is amazing. They are available 24/7/365.

**Contact us today for a free consultation at [sales@togglebox.com](mailto:sales@togglebox.com) or call us toll free at 866-663-4759**