

What Is Serverless Architecture, and How Does It Help My Business?

You've heard of [serverless architecture](#) before, but something about the term just doesn't, well, compute. Barring an unforeseen technological breakthrough, won't we always need hardware to run our applications and store our data?

To answer that question, let's take a look at what "serverless" really means—for your team, for your business and for the future of cloud computing. Spoiler alert: servers are here to stay, but you may not have to think about them ever again.

What's so special about serverless architecture?

Not long ago, lots of time and money went into building, testing, deploying and hosting even the most basic applications. Businesses had to purchase expensive hardware, software and data center space that required near-constant maintenance and upgrades. (Remember all those fun patches?) Dealing with servers—configuring, managing, provisioning, scaling—was a fact of life.

Now, many of those businesses have swapped out their aging hardware for virtual machines, either managed on-premises or delivered on a pay-as-you-go basis in the cloud. But while servers may be out of sight, they're not out of mind—far from it. Developers and operations specialists still have a laundry list of server-related tasks every time they deploy code, like spinning up instances, tweaking network settings and monitoring capacity and performance.

And that's where serverless comes in. In this model, a cloud provider takes over the tedious work of managing infrastructure, provisioning servers and configuring networks. Which means coders can spend more time coding, focusing only on their applications' business logic and data.

What are some examples of serverless technology?

"Serverless" really describes a wide range of cloud solutions, like development environments that automatically match compute resources to demand, database services with built-in scaling and backups, and fully managed data analytics platforms. They're all designed to free developers from busywork so they can get back to what they do best.

Often, though, people have something more specific in mind when they talk about serverless architecture: cloud solutions for running code that's triggered by specific events, without the need to manage servers. Event-driven microservices are stand-alone processes that can serve as the building blocks for an application. By breaking up a complex project into bite-sized parts, developers can release updates more quickly, scale compute resources more effectively, and prevent isolated bugs from crashing the entire app.

Microservices work just fine with traditional servers, and the serverless revolution is bigger than microservices alone. Still, these two approaches happen to go great together, and that's why they're often mentioned in the same breath. They've even been hailed as the twin pillars of cloud computing's (not-so-distant) future.

So what does a serverless microservice look like? A thumbnail gets created after an image is uploaded. A document saved to a particular folder is automatically converted into PDF format. A credit card is validated after a user enters payment information. Basically, it's any cloud-based task that can be independently scaled or managed. The key is that microservices focus on business tasks with a small surface area, leading to agility in developing and changing them, along with the ability to compose different microservices into a full-featured application.

How does serverless benefit the business?

As we've seen, serverless architecture significantly lightens the load on application developers and IT operations teams. Instead of sweating the small stuff, they can use their collective brainpower to build innovative solutions that delight customers and move the business forward—anything from [incredibly accurate music recommendations](#) to [light bulbs that ward off intruders](#) to the next [Pokémon GO](#). And since capacity isn't an issue, these ideas grow from prototype to production to planet-scale faster than ever before.

"Not having to manage our own infrastructure frees up our teams to do what they're really good at, which is streaming music and delivering great music recommendations to our customers."

—Spotify

When serverless technology is done right, it lets you and your team decide exactly how much control you want over your day-to-day operations. Maybe you want to leverage a cloud provider's massive computing power while keeping your on-premises servers. Or maybe you'd rather minimize busywork by relying on your provider's infrastructure and delegating most management tasks.

There's another business reason to look beyond the buzzword and give serverless some serious thought. It's extremely cost-effective, and not just because of all those physical servers you don't have to buy and manage. With serverless, you're only billed for the exact time it takes to execute your [function](#)—much finer granularity compared to virtual machines and containers.

I'm interested. What should I do next?

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