Organizations embarking on a digital transformation need to decide how they want to handle their data and what infrastructure makes sense for their goals. Cloud computing is a popular choice, but it has changed a lot over the years, and there are more options than ever before. This guide to modern cloud computing details its advantages and challenges; how to orchestrate your cloud migration; public, private, and hybrid cloud options; and how to choose the right cloud services for your business.

In this Cloud Computing eGuide

The Pros and Cons of a Serverless DevOps Solution

The dream of any product owner is fully customizable production software without the expense of the hardware it rests upon. While not completely free of infrastructure, serverless infrastructure significantly reduces overhead costs by abstracting away physical hosting, physical security, server maintenance, and OS patching. Here's what you need to know to decide if serverless infrastructure is right for you.

Migrating to the Cloud: Which Model Is Right for You?

Cloud computing is a relatively recent trend, and several organizations have opted to migrate their services and data to the cloud. Which of the cloud computing models available is right for which situation? Let's look at the three options—public, private, and hybrid—and discuss when it's a good idea to use each one.

6 Major Challenges of Cloud Computing

Companies of all sizes depend on cloud computing to store important data. However, significant factors such as cost, reliability, and security must not be overlooked. Here are six common challenges you should consider—and develop plans to mitigate—before implementing cloud computing technology.

The Advantages of Serverless Cloud Providers

Most cloud providers have server-based computing services. But that requires servers to be provisioned and administered, and servers have a fixed capacity to operate within. A new DevOps trend is to go serverless—however, this doesn't mean no servers are used at all. Learn more about this model and its advantages now.

Ensure That Your Current Cloud Solution Will Stand the Test of Time

It's still early in the lifecycle of cloud adoption. This means certain cloud vendors and technologies will fall by the wayside as adoption takes on critical mass. How, then, do you future-proof your cloud solution to make sure you don't make a decision that you'll regret later? Here are three ideas to consider.

Lessons Learned from an Enterprise Government Cutover to the Cloud

As more and more organizations move from datacenters to the cloud, there are some traps that could plague your cloud migrations—and those traps don't differ for cloud migrations inside the U.S. government. Cloud cutover challenges range from configuration management downfalls, to communications failures, to delayed security involvement. Here's what you need to know about migrating to the cloud on a U.S. government project.

Quality Checks to Address Before, During, and After Cloud Migration

While it is a no-brainer that most organizations have either migrated to or are considering a move to the cloud, the stakes for cloud providers and consumers are quite high. Mukesh Sharma details some quality checks to address before, during, and after cloud migration to ensure a smooth transition.

Serverless Technology and Integration with DevOps: An Interview with Glenn Buckholz

Glenn Buckholz, a technical manager at Coveros Inc., discusses methods to gain an understanding of serverless technology, the motivation behind businesses moving to serverless technology, and how a serverless infrastructure changes your testing strategy and bug reports.

Additional Resources

TECHWELL™

The Pros and Cons of a Serverless DevOps Solution

By Glenn Buckholz

The dream of any product owner is fully customizable production software without the expense of paying for the hardware it rests upon. While the cloud and infrastructure as a service (IaaS) partially deliver on this promise, a completely serverless infrastructure would be much closer to this dream. From a product owner's perspective, the possibility of deploying a public-facing application without investing precious dollars and time on infrastructure is tantalizing.

While not completely free of infrastructure, serverless infrastructure significantly reduces overhead costs by abstracting away physical hosting, physical security, server maintenance, and OS patching. Additionally, the flexibility of a serverless implementation is much greater than physical infrastructure, or even IaaS, as you pay only for what you use—at hundred-millisecond increments, on some platforms.

So, what exactly is serverless infrastructure? The answer varies slightly from provider to provider, but here is a short explanation. "Serverless" does not mean the absence of servers; it refers to the fact that the application owner does not need to know much about the underlying servers their software is running on. The serverless infrastructure provider abstracts away all the details about the infrastructure so your team can focus its efforts solely on delivery of new functionality instead of server maintenance.

For instance, a typical static web server is replaced by a blob hosting service, a database instance is replaced by a hosting providers database service, user management is handled by the provider's single sign-on (SSO) and login solution, etc. All your DevOps team has to do is upload your application and content.

You do not need to worry about server patches, upgrading environments, reboots, adding additional resources to handle more load, spinning up additional needed services, or dealing with hardware failures.

Serverless infrastructure also gives us other technical and business advantages. First, you don't need to hire twenty-four-hour on-call